(1) Number of pages 70

(2) Date of repair 30/11/87

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W. DEPARTMENT

G.O. No. 1053(W) **Press.**
~~**B.P. No.**~~ ~~Mis.~~

Dated 24-4-1886 ~~198~~.

Copy

Not to be folded or roughly handled.

24TH APRIL 1886, No. 1053 W., PUBLIC WORKS.

1053

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following letter from J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, Madras, to the Chief Secretary to Government, dated 31st March 1886, No. 2930:—

No. 162, Marine, dated 20th April 1885.

With reference to the G.O. as per margin, I have the honor to submit the accompanying plan and estimate, amounting to Rs. 1,254, for setting up the new 4th order dioptric light at the Hope Island light-house. There is an item of Rs. 300 in the estimate for extra scaffolding for temporary lanterns, which will not be necessary, as it has already been notified that the light will be extinguished while the new lantern is being fitted. Less this amount, I beg to recommend the estimate for early sanction, the expenditure to be debited to Port Funds, Cocanada.

No 630 C., Marine.

Approved, and transferred to the Public Works Department.

(By Order.)

(Signed) E. S. LAFFAN,
Under Secretary.

9th April 1886.

ORDER—dated 24th April 1886, No. 1053 W., Public Works.

The estimate, amounting to Rs. 1,254, for setting up the new 4th order dioptric light at the Hope Island light-house, is reduced to Rs. 954 with reference to the remarks of the Master Attendant in his letter above recorded, and sanction is accorded to the reduced amount.

	RS.
Works	954
Establishment	219
Tools and Plant	10
Total ...	1,183

2. The question of providing funds, as shown in the margin, will be considered in the Financial Department.

3. This sanction has been registered as Excluded Local, No. 3 W. of 1886-87, and classified as Miscellaneous Public Improvements, Original Works.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, I Circle, with two enclosures.
" Examiner, Public Works Accounts, with the estimate for note and return to Superintending Engineer, I Circle.
" Financial Department.
" Marine "

Exd. E. Fernandez.

Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1886} Madras.

PUBLIC WORKS.

Dated April, 24th.

Recd. *Encl.*

G.O., 24th April 1886, No. 1053 W.

APRIL.

Hope Island Light-house

An estimate of Rs. 954 for setting up the new 4th order dioptric light at the — sanctioned.

1053/1

3rd December 1884, Nos. 529, 530, Marine.

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

Read—the following papers:—

From J. E. O'CONOR, Esq., Assistant Secretary to the Government of India, Department of Finance and Commerce (Separate Revenue, &c.—Commerce and Trade—Lights and Light Dues), to the Chief Secretary to Government, dated Simla, 2nd October 1884, No. 3739.

I am directed to forward a copy of a despatch from the Secretary of State, No. 42 (Public Works), dated the 7th August 1884, and its enclosure, in which General Fraser advocates a much more frequent and systematic inspection of lighthouses on the Indian coasts than that which he understands to have hitherto been carried out by officers who are qualified for such duties by possessing the necessary engineering and nautical knowledge.

2. I am to request that the Government of India may be furnished with a report showing the existing system of inspection of lighthouses in the Madras Presidency, as well as with such remarks and suggestions as the Government of Madras may wish to make in connection therewith.

Enclosures.

From Her Majesty's Secretary of State for India, to the Government of India, dated 7th August 1884, No. 42.

I transmit, herewith, for the information of your Excellency's Government, copy of a letter* which has been addressed to this office by Lieutenant-General A. Fraser, R.E., C.B., late Secretary in the Public Works department to the Government of India, on the subject of the disappearance of the Krishna and Akyab lighthouses, with the erection of both of which structures he was professionally connected.

2. In this letter, which calls for the very serious attention of your Excellency's Government, you will observe that General Fraser advocates a much more frequent and systematic inspection of lighthouses on the Indian coasts than that which he understands to have been hitherto carried out by officers who are qualified for such duties by possessing the necessary engineering and nautical knowledge, and I shall be glad to be informed of your views on this suggestion, as well as on the question of the course to be followed in giving the needful protection to the coast on the eastern side of the Bay of Bengal, and the expediency of reconstructing the oyster reef lighthouse, and the system of construction to be adopted if it is thought necessary to restore it.

3. I would also draw your Excellency's special attention to the last paragraph of General Fraser's letter, in which he points out certain dangers to which, he believes, the lighthouse on the Alguada Reef to be at present exposed.

4. I request that full reports may be furnished to me on the points above mentioned, to place me in a position to obtain the opinion of the most competent authorities in this country on any part of the subject which, on further consideration, it may appear desirable to submit to them.

* Dated 30th June 1884.

From Lieutenant-General A. FRASER, R.E., C.B., late Secretary to the Government of India, Public Works department, to the Under Secretary of State for India, dated 30th June 1884.

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Madras, to the Chief Secretary to Government, dated Madras, 24th October 1884, No. 9921.

Administrative department.

With reference to the papers from the Government of India, relating to a proposal from General Fraser as to the frequent and systematic inspection of lighthouses on the Indian coasts, forwarded with endorsement, No. 2317, dated 15th October 1884, I have the honor to report that most of the British lights of this Presidency are situated at the different ports, where they are under the immediate charge of the Port officer, and any formal inspection is therefore unnecessary in their case. The seven lighthouses located out of port limits are in charge of competent Superintendents, men who can read and record barometrical readings, answer a reference, and are able to act independently of advice in case of emergency. They are situated at a convenient distance, so that the Superintendent can refer to the nearest Port officer, who is, besides, in constant communication with the lighthouse Superintendent, regarding the supply of stores and other requirements, which are duly attended to. As often as circumstances will permit, they are visited by me personally, but for necessary repairs the nearest officer of the Public Works department is always available. It will thus be seen that all that is necessary for the care and supervision of the lighthouses are fully provided for, and nothing further is called for, so far as the lights of this Presidency are concerned.

Order—dated 3rd December 1884, No. 529, Marine.

The Government do not concur in thinking it wise to leave the very important business of inspecting lighthouses in the hands of local officers unchecked and uncontrolled by the periodical visits and inspection of some professional officer of high standing.

2. In future, the Government desire that the Chief Engineer (or a competent officer of the Public Works department) shall periodically visit the lighthouses in the Madras Presidency, in the company of the Master Attendant, and report upon their condition. Such visits should be made as frequently as may be necessary with respect to the conditions affecting each lighthouse; but every one should be visited once at least in the course of the year.

(True Extract.)

E. F. WEBSTER,
Chief Secretary.

To the Public Works department, } with copy of General Fraser's report.
" Master Attendant, Madras, }

Endorsement—dated 3rd December 1884, No. 530, Marine.

Copy to the Government of India, Department of Finance and Commerce.

E. F. WEBSTER,
Chief Secretary.

Exd. J. Wright.

Pros: of the Madras Govt.

Read the following:—

1053/3

Appendix to Marine G.O., No. 529, dated 3rd December 1884.

From Lieutenant-General A. FRASER, R.E., C.B., late Secretary to the Government of India, Public Works department, to the Under Secretary of State for India, dated 30th June 1884.

Although no explanation of mine can remove the distress I feel at the destruction of works with which I, as an engineer and adviser to the Government of India, have been intimately connected, I beg to offer some observations on the subject of the loss last month in a cyclone of the lighthouse on the Oyster Reef of Akyab. This serious misfortune has followed the disappearance, seven years ago, of the somewhat similar building which had been erected on the Krishna shoal. Both were on screw piles, both were recommended by me, the designs were generally approved by me, and one (that on the Krishna shoal) was put up under my personal direction; and the following remarks are necessary, in order that the Government may be able to consider how far my judgment, in recommending the erection of these structures on these particular points, may have been in error, and to what extent it should trust again in similar buildings under similar conditions.

2. With a view of arriving at a just estimate of the considerations which influenced my judgment in this weighty matter, I must ask the Government to go back with me for a moment thirty years—to the time (1854) when Lord Dalhousie was Governor-General of India. This noble Lord, foreseeing the strides which British Burma was likely to make in commercial prosperity, saw at the same time, in the Alguada Reef, a great danger to ships in their approach to, and departure from, the coasts of the province. His Lordship, having at the close of the Burmese war expressed himself, in terms noted in the margin, satisfied with the manner I had dealt with Rangoon as Executive Engineer under the lead of Major Hugh Fraser, R.E., the then Chief Engineer, did me the honor of selecting me, at the recommendation of that officer, to undertake the work of building a lighthouse on that dangerous reef. I had then no experience of such works, and Lord Dalhousie, noting this, desired that I should be sent home for the purpose of inspecting works of a similar character in England and abroad, first making a general survey of the reef and its neighbourhood.

Military department of Government of India, No. 457, of 16th December 1854, conveys "to Lieutenant Fraser, the Executive Engineer, an expression of the approbation with which the Most Noble the Governor-General in Council views the zeal and ability he has displayed in forming the new cantonment in question."

3. I made this general survey at that time, but some State financial difficulties intervening it was determined to postpone the works on the reef. In the meantime some specially important and large operations in building barracks and in otherwise improving the condition of the European troops in the garrison of Fort William, Calcutta, were required, and in these Lord Canning, the then Governor-General (1855), took personal interest. I was moved to forego the furlough, for which I had applied, in order to undertake these works. This I did, and when they were sufficiently in train towards completion,* the Governor-General expressing himself completely satisfied (His Excellency often personally visited my works) with my proceedings in Fort William, found himself able to forward the desire of his great predecessor by sending me, early in 1857, to England to fit me for the work which Lord Dalhousie had had at heart.

4. The result of my deputation to England was embodied in a report, dated October 1857, which I submitted to the Honorable the Court of Directors, but owing to the occurrence of the Mutiny it was not till 1859 (I being then Under Secretary to the Government of India in the Public Works department) that Lord Canning recorded the observations I have transferred to the margin. I extract these observations and those of Lord Dalhousie because they show (1) that, at whatever inconvenience, experience *was* then considered necessary in this class of work; and (2) that the heads of the Government had fair reason, from works already executed with success, for their confidence in my ability to carry out perhaps the most difficult of all engineering works, in a country where all labor had to be instructed, and all material had to be obtained from abroad.

Extract letter of 16th December 1859 from the Secretary, Government of India, with the Governor-General, to the Officiating Secretary to the Government of India, Public Works department, Calcutta :—

"2. The Governor-General is of opinion that this work (the Alguada Reef lighthouse) should now be commenced at once, and he comes to this conclusion not merely on account of the importance of the work in itself, but because by further delay we risk the loss of an officer who was especially deputed to England to study the subject.

"3. Though Captain Fraser's services as Under Secretary in this department (Public Works department) are very highly valued, and their loss will be seriously felt, it is necessary that he should now resume the duties originally confided to him."

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* I have some pride in noting here that, in dealing with Rangoon and Fort William, I carried out the chief works, which resulted in rendering the two most notoriously unhealthy stations for British troops in the East, those which became thereafter more healthy for Europeans than any other places in the plains of India.

5. During the period between December 1859 and April 1865 (when the Alguada Reef lighthouse was lighted) I thought it my duty to employ myself not only on the special work for which I had been fitted by the Government, but in seeking to utilise the experience gained in England on lighthouse work generally, by suggesting measures for fully protecting the trade with Burma, which was advancing at a rate which probably even Lord Dalhousie had not anticipated. These suggestions resulted in my building (1) the stone lighthouse on Double Island, showing a light of the first class, as a guide for vessels making for the port of Moulmein; (2) the iron lighthouse on Table Island, of the Great Coco group, Andaman Islands, which also shows a light of the first class, to facilitate the navigation of the Preparis Channel. I subsequently arranged, before leaving Burma, for a lighthouse on screw piles; (3) the China Bukeer, showing a first-class light; and (4) for a second of similar structure on the eastern grove, showing a specially designed light, as "land-fall" lights for the Rangoon river. I further had (5) the Savage Island light, used to facilitate entering Akyab Harbour, improved from an apparatus furnished with common oil lamps to a third-class ordinary dioptric light. I was thus, in return for the experience the Government had allowed me to gain in Europe, enabled to add six lights to the 20 which previously lighted both sides of the Bay of Bengal, and, with *two exceptions*, had made the entire coast on the eastern side of that bay practically safe, as regards *land-fall*, to ships trading on that side from Chittagong to Acheen head.

6. The *two exceptions* noted in the last paragraph required to be dealt with in order that ships might be completely guarded against all the prominent dangers of the entire British Burma coast. *The one* was the Krishna shoal and Baragon flat, the junction of which formed the turning point from the Bay of Bengal to the Rangoon river, and Gulf of Martaban on its western side, the light in Double Island forming the guard on its (the Gulf's) eastern side. *The other* was the Oyster Reef, which required to be lighted to render safe the northern and western approaches to the harbour of Akyab. In thick weather ships attempting to make Akyab were always in more or less fear, according to the time at which sun or stars had been last seen, of this reef, which was all the more dangerous from the fact of its being only just a-wash at low water.

7. By the cyclone of 1864, and previous years, immense damage had been done to ships lying in the Hooghly off Calcutta, by reason of the insufficiency of the moorings, and the Government of India had lost more than one lightship with all hands on board in these disastrous winds. I had thus had my attention called to works with Mitchell's screws and screw piles. My plan for mooring the shipping was approved by the Secretary of State (*see* letter from your office, dated 18th January 1867, to my address), and the work was successfully carried out. I believe the only danger to ships now lying in the Hooghly from a cyclone, as regards moorings, is the comparative weakness of the ships' own chains. I suggested also screw-pile jetties for Calcutta, which were afterwards carried out with, I believe, complete success.

8. I found, moreover, that no *solid* building could be erected, on either of the points which, as I have shown, remained to be lighted for the complete protection of ships making the coasts of British Burma, at any reasonable cost, if it could be done at all. I, at all events at that time, did not see my way to any successful result from any amount of expenditure in this direction.

With the knowledge of the loss of life which had occurred by the destruction of such vessels,* I was equally undesirous of recommending a lightship at points which in either case, to my mind, would have involved the putting of a ship on a dead lee shore, and its inevitable destruction, with all hands, in case of a severe cyclone.

9. As a lighthouse require the attendance of not more than three or four keepers, my decision was largely influenced by the smaller loss of life which would ensue, on any accident occurring, than would be the case in respect of a lightship which would require eight or nine times the number of men to manage her.

10. Again, I was influenced by the much smaller cost of maintaining a lighthouse which, including interest on cost, was not above half that of maintaining a lightship (*see* also on this point the report of Captain A. Dundas Taylor, I.N., No. 73, D.B., dated 14th February 1877, to the Government of India, Department of Revenue, Agriculture, and Commerce, on the subject of the substitution of lighthouses for lightships in the Hooghly and its approaches).

11. A third point which swayed my judgment in favor of the lighthouse was the superiority of the light in power, elevation, and steadiness over that borne by a lightship.

12. The way I put to the Government the result of my considerations is shown in the following extract of a memorandum which I prepared for the Lieutenant-Governor of Bengal

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* Even the best cared for lightships on British coasts are liable to destruction. This is the latest example extracted from a report in the *Morning Post* of the 22nd June 1884:—

"Sinking of the *Girdler* Lightship.

"A Lloyd's telegram from Dover states that the P. and O. steamer *Indus* from London to Sydney, laden with a general cargo and 400 passengers, ran into and sank the *Girdler* lightship on Friday night. The crew of the lightship were taken on board the *Indus* and landed at Dover." It might easily have been otherwise with the crew had there been unfavorable conditions of weather.

(Sir A. Eden): "On the substitution of lighthouses for lightships" at the Sandheads, dated 27th March 1879 (after the loss of the screw-pile lighthouse on the Krishna shoal):—

"21. From the figures given in the margin it will be seen that, by substituting lighthouses for lightships, the Port (Calcutta) funds will save £7,625 a-year, with better lights and less risk to human life. Accidents may occur, but there is plenty of money to repair damages, and accidents are less likely to occur to lighthouses than to lightships. The risk must be accepted, but the risk is less with lighthouses than with lightships." All my previous reports (which I have not by me) adopted the same tone.

Was I justified or not in adopting this tone? I really cannot feel sure that, even now were I in a position to be consulted, I should not recommend as strongly as I did then the erection of lighthouses of this class in positions where *weight* cannot, by reason of absence of adequate foundations, or in consequence of excessive cost and danger in construction, be opposed to the impact of the sea, or where lightships on a lee shore would be subject to cyclones. I must leave to the Government the decision on this question, being, however, certain that whatever the decision may be, it cannot either deepen or alleviate the regret I feel at the event which I am now deploring. The only feelings which give relief to my mind on the subject are that—

(1) If these dangerous points had not been marked at all, which but for me they probably would not have been, the loss by wrecks of life and property for the eight or nine years of increasing trade during which these lighthouses stood would have been very considerable.

(2) I should have incurred greater risk of life by placing lightships in these positions. But I could not again recommend construction on such points of a coast as I have noted of such lighthouses as those on screw piles, unless the Government followed the recommendations I previously gave in respect of *their care*.*

13. It is necessary now to observe that I had nothing to do personally with the construction of the lighthouse on the Oyster Reef beyond a recommendation of a structure, the design for which I had *generally* approved, on screw piles specially strengthened for that position. I knew nothing of the precise spot selected for its position (a matter here of deep moment), but it was built under the direction of Colonel W. S. Oliphant, R.E., who was at the time Chief Engineer of British Burma, and of Mr. H. M. Mathews, M.I.C.E., a Civil Engineer of great ability, who was then Executive Engineer of the Rangoon Division of Public Works. I do not doubt, therefore, but that it was properly constructed, and, from these competent officers adopting the design, I may assume that they found nothing faulty in it.

14. Before, however, leaving Rangoon permanently for the North-Western Provinces in 1870,† I placed very distinctly before the Government my view of how these structures should be built and cared for. I said in effect that it was impossible, with any sense of safety, for the Government to spend large sums of money on their construction without making adequate arrangements for their care and maintenance in efficiency. I don't for a moment presume to say that such care as was possible, by such officers as were available in such sea transport as the exigencies of other service might from time to time be placed at their disposal, was not exercised. But what I do say is that there has been no care taken of these important works when built directed by that continued experience which both Lords Dalhousie and Canning considered essential as to their construction; that no systematic inspection, repair, or protection of the buildings and their surroundings by persons having full knowledge of all the circumstances and conditions of each work has been undertaken, or indeed has been possible under the system adopted—a system which involves the constant removal of officers, inexperienced in the first instance in this class of work, just as they begin to know something of the works and the conditions affecting them; a system which limits their power of inspection to the time when perhaps the only steamer available for the general service of the local Government can be placed at their disposal.

15. The Chief Commissioner, in submitting my final report regarding the British Burma lighthouses to the Government of India with his letter, No. 821-104 C.I., dated Rangoon, 8th October 1869, said:—

"Paragraph 7. Colonel Fraser points to the satisfactory financial condition of those lighthouses that have been for some time in operation. He would abolish as a separate charge ‡ all light dues, make the works Imperial works, supervise them by Imperial establishments, and maintain them from Imperial funds. These are, indeed, portions of the propositions* put forward many years ago by him for the consolidation of the various managements of the lighthouses around the coast of the empire under one central board of management." A reference to my report noted in the margin, and to that mentioned by the Chief Commissioner as having been forwarded to the Government with his above letter, will show what my proposals were. It may not have been consistent with the policy of the Government to adopt them, but of this I am certain, that unless a department, combining engineering and nautical knowledge (and not only knowledge, but engaging the sympathy of official nautical officers), with a power of keeping and transmitting the results of experience gained in this class of work, and of providing proper means of transport for inspectors and material and labor for the repair of damage, be organised, great sea lights will be very much left to the mercy of the waves and the winds, while the valuable apparatuses which have in many cases been provided will never be kept up to that state of efficiency which distinguished the Scotch and French lights and those under the Trinity Board of England. I endeavoured, without success, to utilise my experience in establishing such an arrangement, and when I look down the list (1882) of lights on the coasts of India, and see the nature of those exhibited as described in the numbers in the list noted in the margin, I cannot help feeling, considering also the many other dangerous points requiring attention, that there would be ample field for the operations of such a department, while surely the cost of its care of works already executed would be more than compensated by a comparative freedom from disaster. Any how the system I have described as existing is not fair to the constructors, whose reputation may be compromised; it is not fair to those who, though most anxious to do their duty, cannot look after the works properly; it is unfair to the Government itself, inasmuch as it prevents its maintaining in efficiency these important adjuncts to the safety of the commerce upon which the prosperity of the State depends, while it must share with every one the discredit of preventible disaster.

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* Paragraph 42 of my report on the Savage lighthouse, dated 13th March 1865. My letter to Secretary to the Government of India, No. 39-59C., dated 5th June 1865, said:—

"But it would be better, in my opinion, to do nothing than to go to the expense of alteration or restoration, and, indeed, of building any new lighthouses at all, unless the Government are prepared to admit the necessity of, and meet the extra expense consequent on, having this and all their lighthouses properly visited and cared for by competent people."

† I had refused in 1863, I may here remark, the offer of the Government of India to appoint me Chief Engineer and Secretary to the Government of Bengal in the Public Works department, in order that I might devote my special experience to the completion of the lighthouse on the Alguada Reef and other works of cognate character. I thus lost a chance of promotion which did not recur till 1870.

‡ Substituting a tonnage due as in France.

* See report to the Honorable Court of Directors of East India Company mentioned in paragraph 4.

Nos. 15, 16, 20, 22, 26, 28, 29, 30, 32, 42, 43, 48, 49, 56, 77, 81, 82, 83 (84 False Point was before 1880 a wretched light, although it was the chief "land-fall" light in British India. It was altered at my suggestion), 93, 94.

16. I have only to refer to the papers accompanying the despatches from the Government of India to the Secretary of State, No. 54, dated 30th November 1877, reporting the disappearance of the Krishna Shoal lighthouse, to show the want of care (of the kind I insist upon) to which these structures have been, and no doubt still are, subject. From those papers it would appear that, subsequently to the date I visited the lighthouse in 1870, about two years after it was built, and in which year I finally left the province, no soundings to test scour had been taken, although that was one of the special instructions I left in the light-house. I also requested that at suitable times, before and after each monsoon, soundings should be taken all round the lighthouse to the distance of a mile from it as a centre. I don't believe myself that scour alone could have caused the destruction of the building, still, if it had been ascertained that great scour *had* been going on for some time, measures might have been taken to move the light or divert the scour, or, at all events, to remove the light-keepers. It had not been found difficult, I believe, to move the "China Bukeer" lighthouse of similar character from the shore into two fathoms at low water.

Inspection was made apparently annually only, and that probably when it was least important. This was not nearly enough; and the older the lighthouse grew the more frequent should have been its inspection.†

In November 1875 (cyclone time) "the structure of the 'Krishna Shoal lighthouse shows considerable wear in the clasps and braces,' and other deterioration of the bracing is described, apparently caused by the trembling motion given to it by the water striking against it." This would go to show that the bracing had been for years wearing.

Then, again, in October 1876 "the structures was in good repair down to high-water mark," but nothing is said of the structure down to low-water mark; and there was a rise of 9 feet between low and high-water at full and change, or to the ground. The piles themselves might have been wearing under the influence of a silt-bearing six-knot tide, and it would have been easy to have ascertained this by waiting for low-water, when there *ought* to have been only 3 fathoms to the ground.

If asked, General Hyde will probably inform you that the strength of an iron structure of this character depended on its rigidity; and if from a constant "trembling motion" any parts worked loose, the whole thing was open to damage, or even destruction, by a force which might have no effect upon it if rigid.

17. Turning again to the subject of the loss of the Oyster Reef lighthouse, the piles had not been screwed down the full depth I designed, and the floor of the building was consequently between two and three feet higher above the ground; but the screws could not be got in further, it was said, and the greater height would hardly effect stability. There is, however, a curious

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† *See* my "Rules and Instructions," Appendix C, of my report forwarded to Government of India, with letter quoted in note, page 5.
"Rule VIII.—Each lighthouse shall be visited at least *once a month* by a visiting officer, when possible."
This appendix was deposited in the Alguada Reef lighthouse.

coincidence of time during which this and the Krishna Shoal lighthouse stood. The first was lighted in 1876, and the lighthouse was carried away in 1884. The Krishna Shoal structure was lighted in 1869, and it disappeared in 1877.

The strain on the former from its position, although a more substantial structure, would be greater than on the latter; "the trembling motion," in fact, would be more forcible; and if inspection and repair were not effective, would be open to succumb about the same time as the latter. This leads me to the "uneasy" feeling (a feeling that I had expressed in 1865) that the primary cause of disaster was the same in both cases, *i.e.*, ineffective inspection and consequent ineffective repair. In the absence of certain knowledge, the loss of the Krishna Shoal lighthouse was attributed to scour. This could hardly have been the cause in respect of that on the Oyster Reef. But "the trembling motion of the water" in its effect on the braces would, more or less, be similar in each case; and if the braces or other parts had worked well, further cause of disaster need not be looked for. But I shall be able to judge better on this point if you will send me the record of inspection and repair of the Oyster Reef building from the time of its erection. While on this subject I may as well extract the following paragraph (37) from my report of 1865 before alluded to on "the Savage" lighthouse, as it gives my opinion as to the alternative to be adopted if it were decided that a lighthouse on the Oyster Reef should not be erected:—

"If a lighthouse is not to be put on the Oyster Reef, then I am of opinion (first) that 'the Savage' lighthouse ought to be raised, so that the centre of the light shall b 150 feet above high-water mark, which would make the light visible from the deck of a ship 20 miles off; (second) that a new light apparatus of the first order, and of a description suited to the arc of the horizon required to be illuminated, be procured, for which, as the present lantern would be too small, (third) a new lantern would be required." The report referred to gave other details, which, however, it is not necessary here to refer to. I only give the extract in case it should prove necessary, in the absence of a light on the Oyster Reef, and the danger of putting a lightship there, to adopt some, though inferior, protection to shipping visiting Akyab.

18. Finally, I would dwell for a moment on one more point, which is, perhaps, of still greater importance to the Government and to me than any which has been hereinbefore discussed; and that is, the state of the lighthouse on the Alguada Reef, or rather of the rock on which it, a column of 4,000 tons in weight, has stood since 1863. The column was practically completed in that year, although it was only lighted in 1865. In July 1881 I wrote to Mr. Bernard, C.S.I., the Chief Commissioner, about possible encroachments by the sea on the foundation, and I recommended protection in a certain direction (I sent him a plan and proposal) which I thought would prove dangerous if the sea was cutting at all. In April 1882 I heard from Colonel Scott-Moncrief, R.E., the then Chief Engineer, who said among other things that "the fissure" of which I had written "is cutting in through, I believe;" and as from his statement it seems to have cut in some 8 or 9 feet since 1859 when I examined it, and there is only some 4 or 5 feet left between the end of the fissure and the foundation of the lighthouse, in 10 or 15 years' time one may calculate that, if nothing be done, the sea will again be master of the situation. As all the officers have probably changed since I wrote in 1881, may I request the favor of your drawing the attention of the Government of India to the matter? The protection required would probably be easily carried out with concrete in bags as a coffer dam, behind which, in the fine weather, "the fissure" may be dealt with at no great cost. But it is worth doing at any reasonable expense, as it will be very difficult to find on the reef an equally good position for a lighthouse. It is besides a monument worth preserving, if only in memory of the great Governor-General who saw its necessity and ordered its construction, or in that of the noble man under whose auspices, at a very difficult period of his administration, I had the honor of carrying it out, and who, as Colonel Yule will tell you, found time personally to encourage me in my very difficult and anxious task.

L053
b

Order thereon No 164 Wd/ 20th Jany/85

Communicated for information and guidance to the officers concerned. Every light house within each Circle should be inspected once at least during each year by the Supdg: Engineer.

(True Extract)

C. Unwin. Major R.E.

Under Secy. to Govt. P.W.D.

To

~~The Chief Engr. P.W.D.~~

- Supdg: Engineers

Exr. - P.W. Accts

~~P.W.D.~~

Govt. of {1884} Madras.

MARINE.

Issued

Recd. 21.1.85. Encl. 1

G.O., &c., 3rd December 1884,
Nos. 529, 530.

DECEMBER.

Lighthouses.

Passing orders regarding the periodical inspection of the — in the Madras Presidency.

attached 21.1.85

With order

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

Read—the following paper:—

From J. H. TAYLOR, Esq., Lieut., R.N.R., Master Attendant, Madras, to the Chief Secretary to Government, dated Madras, 10th December 1884, No. 11300.

Administrative department.

I have the honor to state that the best plan of utilizing the fourth-order dioptric light, supplied erroneously for the Madras Pier from England, is to exhibit it at the port of Gopálpur. Mr. J. V. P. Minchin has been so good as to permit the lantern being placed on the top of his house, which is a good position for exhibiting the light, and at a small cost, the work can be carried out. This, however, will be only temporary, pending the construction of the new Custom-house and Marine office buildings, and the plan should include erection of the light on top of the same. If the Government approve of the above proposal, I solicit that orders may be passed directing the Executive Engineer, Gopálpur, to adopt the necessary steps in the matter. The present flagstaff light at Gopálpur may be transferred to Vizagapatam or Mainpaud, in the Tinnevelly district, about which I shall address Government hereafter. There is no red light at present on the north-east coast.

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Madras, to the Chief Secretary to Government, dated Madras, 23rd March 1885, No. 2577.

Administrative department.

I have the honor to furnish a report upon the recent visit with the Honorable Colonel Shaw-Stewart to the port of Cocanada on the 17th February last.

2. The work of extending the groynes is being carried out and appears to be well and faithfully executed, but the stone is small, and although the largest portions of it are selected for the sea slope, yet there is great reason to fear that a heavy sea, such as can be raised in stormy weather, even in this shallow water, would do great damage. It is reported that larger material cannot be obtained from Sámalkót or Dowlaishweram, but the question of concrete remains, and blocks of two or three tons similar to some of the wave-breakers on the Madras pier might be formed on the top of the work and slipped down to the base of the sea slope. The receipts from the toll on goods are in excess of the present outlay, so that, without any further demand on the trade, an increased sum might be advanced to render the work more secure. Estimates might be called for. The Honorable Colonel Shaw-Stewart will, no doubt, express his own opinion on this subject. The new dredge has not yet got to work owing to some technical difficulties, but a few days will see them overcome. The water on the bar is no worse than before, but the period of our visit being spring-tides, it was not passable by steam launch at dead low water. But it has to be remembered that this difficulty is common to nearly all ports; particularly in London the quays are not approachable to lighters except at certain times of tide, and docks are only open at high water. In connection with these groynes a small matter seems to have exercised the minds of the local members of the groyne committee, but it is one easily adjusted. Before the new work was commenced, the ends of both old works had been damaged, and a sum of money was sanctioned for the purpose of repair and the work entrusted

to the former port officer. It was partly carried out, but by what appears to have been a misconception, the balance of the money was returned to Government and the work proceeded with on the new terms. The Committee take exception to this and contend that Government should restore the old work out of port funds. I will submit the details and estimates for orders of Government as soon as I can receive them.

3. While treating on this subject, I must beg leave to draw the attention of Government to a change that has taken place in the constitution of this committee. It was proposed by me originally, and approved by Government, to be the Chairman of the Chamber of Commerce, one other European, the Port Officer, and one native gentleman, for which M.R.Ry. Ramakistna was chosen. In the final orders on the subject, the election of the members was vested in the chamber, and during a temporary absence of Mr. Ramakistna the chamber proceeded to elect another of their European body, so that there is no native representative whatever, though the largest portion of the trade is in native hands. As I read over the final orders, they might, if Mr. Ramakistna had resigned, have elected another native gentleman, but they adopted another reading. I was waited upon by a number of native merchants of the highest intelligence, who, among other matters, drew my attention to this affair and expressed their regret that neither Government nor their fellow European merchants considered their interests worth representing. I promised to invite attention to it, and now beg respectfully to do so. The present body consists of Mr. Bryce, chairman, Mr. MacNab of the same firm, Mr. Simpson, and the Port Officer. Now, the chairman having a casting vote, it follows that Messrs. Hall Wilson are the board. No better men could be desired in the abstract, but the body is no longer representative, and, as all the passenger traffic and much of the general trade fall to them as British India Steam Navigation Company's agents, it is hardly possible but that their opinions may be colored by their own requirements. I would not, however, recommend any change in this body, which might seem ungracious, but respectfully urge that two native gentlemen be added—Mr. Ramakistna being one and the other elected by the native merchants—and that on future occasions of vacancies the election of European members be made by the chamber, and that of natives by the native mercantile community. This method would restore the equilibrium and be no doubt satisfactory. The other matters treated of by the native gentlemen were minor questions of jetties, conservancy, &c., which were settled by me with the port officer.

4. A troublesome inconvenience connected with the port is now in a fair way of being remedied. The distance at which ships anchor, 4½ and 5 miles from Cocanada, renders the communication by signal difficult and uncertain and impossible in the morning, when the glare on the sun and early mist prevail. It is now found that the lighthouse at Vakalapudi can obtain signals from the ships at all times and transmit them to Cocanada along the land where no impediment exists. A telescope has been supplied to the light-keeper, and a bamboo staff erected on the top of the lighthouse. All that is now required is a set of flags and a small increase of Rs. (10) ten a-month to the keeper's pay, for which I solicit sanction. He has an old worn-out set which were condemned at Cocanada.

5. The lighthouse at Vakalapudi is in good order, and the new machinery lately supplied is slightly different from the old in some adjustments, which are being corrected at the Dowlaishweram shop.

6. The lighthouse on Hope Island is in good condition, but some repairs are required for the offices and keeper's huts, for which estimates will be supplied. The light is an old country-made affair of six burners and brass reflectors showing all round the horizon; only one, therefore, bears directly to seaward. It is unquestionably the worst light in this presidency. I would, therefore, ask permission of Government to replace it by the new fourth order dioptric light sent by mistake for Madras pier. I had applied for leave to transfer this light to Gopálpur, but, having now had opportunities of judging of the relative capacities of lights in this neighbourhood, I consider the present Gopálpur light sufficient for its purpose, and I will only renew my application as per margin for a higher power at Santopilly. The change of lanthorns on Hope Island can be easily effected.

No. 7694, dated 3rd September 1880.
No. 9658, dated 15th October 1884.

7. In crossing from Cocanada to Hope Island, we could make but little use of the steam launch, which soon took the ground, the rest of the journey being performed in a small open canoe, which was pulled and pushed through mud by a party of fishermen. On former occasions I had always been able to sail to Hope Island, but the creeks seem now to be filling up, and, when the mud becomes more solidified, I trust the silting of Cocanada Bay will cease altogether. There is, however, no possibility of the anchorage being brought nearer.

8. The fitting of the new Priestman dredge is now arranged, and work will soon be recommenced. The old vessel had better be sold for the value of its materials, and all establishment and energy directed to the new one. In a few days the accounts of Cocanada for the past year will be balanced and submitted to Government. The port enjoys a high position among its fellows in the presidency, but its expenses have exceeded its receipts, and, now that a general reduction of out-port dues is sanctioned, an equitable settlement of its affairs will have to be arrived at.

9. The wants of the port at this present time may be shortly summed up:

A better light on Hope Island, which is fortunately immediately available, and an iron water-tank for the lighthouse here, which is about to be supplied.

At least four new mud punts, one of which is already in hand, with a view to test the relative cost.

A small anchor boat for the dredge.

Some small expense connected with the friction gear of the new dredge.

Quarters at Vakalapudi for light lascars, who at present have only mud huts always needing repairs.

Repairs to quarters and offices at Hope Island.

A set of flags for Vakalapudi and an allowance of Rs. 12* monthly for superintendent and lascar for signalling. On this head I may observe that, when the new light and kerosene-oil lamp are established at Hope Island, a reduction of at least one lightkeeper can be made in that direction. The establishments of such stations as "Hope Island," Point Divi, Santopilly, Hare Island, Muttum, &c., must always appear large, but they have to get supplies from distances—often by boat; allowance must be made for sickness or accident and unforeseen causes generally. But I believe the light expenses are lower in this presidency than any other.

	RS.
*Superintendent of lighthouse	10
One lascar	2
Total ..	12

10. In conclusion, I would here mention that it struck both the Chief Engineer and myself, on our inspection of the lighthouses at the northern ports, that the superintendents in charge very seldom employed their spare time in utilizing the land belonging to the lighthouses for gardening purposes and raising some sort of produce for their consumption as a help in subsisting themselves, and, on this being pointed out to the superintendent of the Vakalapudi lighthouse, he said that he had put down some cultivation, but was ordered by the civil officer of the station to remove it with the warning that, if he did so again, he would be charged kist. Probably the absence of gardening at the other lighthouses is attributable to a similar cause, and I would therefore respectfully suggest that the Government may be pleased to instruct Collectors of the several districts to encourage, as far as possible, the utilizing the compounds already attached to lighthouses for cultivation without making any charge for kist.

Order—dated 20th April 1885, No. 162, Marine.

The Government consider it very desirable that the native community who, it is understood, are largely interested in the trade at Cocanada, should be duly represented.

The Chamber of Commerce will accordingly be requested to consider whether a native gentleman could not be added to the list of members now serving on the local board.

2. The supply of a new set of flags to the Vakalapudi light-keeper is sanctioned, but the proposal to raise his pay and to entertain a lascar should be separately submitted, with the prescribed proposition statement, for consideration.

3. The new fourth-order dioptric light may be placed in Hope island light-house.

4. The Government of India will again be addressed in regard to the Santopilly light.

5. The tenth paragraph of the Master Attendant's letter will be considered in the Revenue department.

(True Extract.)

Chief Secretary.

To the Chamber of Commerce, Cocanada.
" Master Attendant, Madras.
" Public Works department.
" Revenue department.

Ed. J. Wright.

1055/9

G.O. Marine No 164 of 20.4.85.

" P.W. " 72 R.W.D/23. 3-85

(4) Acc 3919

Govt. of (1885) Madras.

MARINE.

B

~~Communicated to the Exctly Engr I Circle for con tinuation of G.O. No. [illegible] May 1885~~

E.S.C

Ch. 3833

Despy 1-5-85

Issued C. [illegible] 2/5

Recd. 2-5-85 Encl. 2/5/85

G.O., 20th April 1885, No. 162.

Ch 3833

C.S. 4.5.85

No 113 Ed/ May 13th 85

APRIL.

Cocanada.

Passing orders on a report submitted by the Master Attendant of his visit to the port of Cocanada with the Honorable Colonel Shaw-Stewart, Chief Engineer, on 17th February last.

1053/10

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

Read—the following papers :—

Note by the Chief Engineer, Public Works department, dated 13th March 1885, No. 527-C.

During my recent tour the undermentioned lighthouses were inspected by me in company with the Master Attendant of Madras :—

Pulicat.	Vakalapudi.
Armeghon.	Santopilly.
Hope Island.	Gopálpur.

2. The lighthouses at Point Divi and Calingapatam were not inspected on this occasion. There appears to be some difficulty in making Point Divi from the sea, and a day was wasted in trying to sight it, but without success. The Calingapatam lighthouse was passed during the night. The light appeared to be in perfect order, but time did not admit of an inspection. These two lighthouses will now be inspected by the Superintending Engineers in company with the port officers concerned.

3. Full details of the lighthouses inspected are given in the accompanying statement.

Chepauk,
13th *March* 1885.

(Signed) J. SHAW-STEWART, Col., R.E.,
Chief Engineer, Public Works Dept.

Enclosure.

Statement to accompany the Note by the Chief Engineer, Public Works department, dated March 1885, on Lighthouses.

Lighthouse.	Class of light.	Height of centre of lantern above mean sea level.	Distance at which light is visible.	Remarks.
		FEET.	MILES.	
Pulicat ..	Fourth order; catadioptric; fixed; white.	68	14	The object is to mark position of the Pulicat shoal. The light is placed on the top of a masonry tower, and is in excellent order, but requires provision of a spare lamp. During the storms in December 1884 the exterior of the lighthouse and adjoining buildings sustained considerable damage, and no time should be lost in executing the needful repairs.

Statement to accompany the Note by the Chief Engineer, Public Works department, dated March 1885, on Lighthouses—*continued.*

Lighthouse.	Class of light.	Height of centre of lantern above mean sea level. FEET.	Distance at which light is visible. MILES.	Remarks.
Armeghon . .	Fourth order; dioptric; revolving; flashing once in twenty seconds; white.	107	14	The object is to mark position of the Armeghon shoal. The light is placed on the top of a masonry tower and is in excellent order. The revolving apparatus works well. The buildings are generally in good order, but the outside of the tower was slightly damaged during the late monsoon, and some of the steps leading up to the lantern require repair with cement. The lightning conductor should be moved to the outside of the tower. In the Superintendent's house the floor requires repair, and verandahs should be added on east and west sides as suggested in 1880 by His Grace the late Governor. The lascar's huts were blown down during the recent storms, and it might be well to provide them with permanent quarters both here and elsewhere. Care should be taken to select sites not liable to be flooded.
Hope Island.	Country made; reflecting light with 9 reflectors; fixed; white.	83	10	The object is to mark position of Point Gordawere. The light is placed on the top of a masonry tower and is in fair order, but it is thought that the importance of the position demands a better and a stronger light, and it is proposed to replace the existing inferior light by an English-made dioptric light of the fourth order, now available at Madras. The lighthouse is generally in good order, but the platform on which the lantern rests is not so secure as it should be. It would be well to renew it, probably with iron girders; and this should be done when the light is changed. The adjoining buildings are also in need of some repair, and the oil godown should be recoated with cement. The lightning conductor is in need of slight repair. Additional water tanks are required for the use of the superintendent to store drinking water, which is not procurable on the island.
Vakalapudi.	Fourth order; dioptric; revolving; flashing once in ten seconds; white.	80	14	The object is to mark entrance to the Cocanada anchorage. The light is placed on the top of a masonry tower and is in excellent order. Part of the revolving apparatus was under repair at Dowlaishweram at the date of inspection, and the light was being turned by hand. The adjoining buildings are in good order, but the lascar's quarters are only temporary sheds of the meanest character, and should be replaced, here and elsewhere, by permanent buildings.

1055
11

Statement to accompany the Note by the Chief Engineer, Public Works department, dated March 1885, on Lighthouses—*continued.*

Lighthouse.	Class of light.	Height of centre of lantern above mean sea level. FEET.	Distance at which light is visible. MILES.	Remarks.
Santopilly . .	Fourth order; catadioptric; fixed; white.	169	14	The object is to mark position of the Santopilly rock, a dangerous reef, distant some 6 miles from the coast. The light is placed on the top of a small square tower, built on a rocky hill a short distance from the beach. The light is in good order, but the iron work of the lantern has not been properly looked to and is beginning to suffer from rust Two spare lamps should also be provided. The lightning conductor should be carefully examined. It is understood that it is at present carried no further than to the top of the rocky hill outside the lighthouse, and provision should be made for leading it into damp soil. Considering the object of this lighthouse and its position, it is thought that a stronger light than that now in use should be provided. It is distant 6 miles from the danger it is intended to mark; and when the nature of that danger is considered—a large reef covered at low tide with from 7 to 10 feet of water,—it might be well that the light should have a radius larger than 14 miles. The best position for the light would without doubt be on the reef itself, but to erect it there would be matter of great difficulty, involving large outlay. This is, however, a point for consideration in the Marine department.
Gopálpur . .	Country-made; reflecting light; fixed; white.	85	10	The object is to mark position of the Gopálpur anchorage. The lantern is at present exhibited from the top of the flagstaff, but it is intended to combine a lighthouse with the new marine and customs buildings, for which estimates have lately been called.

No. 528 C.

Transferred to the Marine department with advertence to G.O., No. 529, dated 3rd December 1884 (Marine).

Chepauk,
13*th March* 1885.

(Signed) J. SHAW-STEWART, Col., R.E.,
Secretary to Government,
Public Works Department.

To the Chief Secretary to Government, with statement.

From J. H. TAYLOR, Esq., Lieut., R.N.R., Master Attendant, Madras, to the Chief Secretary to Government, dated Madras, 24th March 1885, No. 2614.

Administrative department.

In returning the inspection notes of the Chief Engineer, Public Works department, on certain lighthouses, forwarded with endorsement, No. 641, dated 18th March 1885, I have the honor to state that I cordially endorse the Honorable Colonel Shaw-Stewart's report. It will be noticed that as regards Santopilly, I have some time ago in the correspondence as per margin recommended a second-class dioptric light, and as regards quarters so much needed for light-keepers, it would in most cases be advisable to allow them to be built under the supervision of the light superintendent, who would necessarily be constantly on the spot

No. 7694, dated 3rd September 1880.
" 9658, " 15th October 1884.

2. In respect to the change of light at Hope Island, this must, of course, be carried out by the Public Works department.

Order—dated 20th April 1885, No. 164, Marine.

Recorded.

2. The necessary estimates for giving effect to the several suggestions in the Chief Engineer's statement should be prepared by those concerned.

3. In separate proceedings, the transfer to Hope island of the spare dioptric fourth-order light has been sanctioned, and the Government of India has again been addressed regarding the Santopilly light.

(True Extract.)

Chief Secretary.

To the Master Attendant, Madras.
" Public Works department.

Exd. J. Wright.

1053/12

Rc 3833

B. No. 1104 W. d/ 11 May /85

Communicated to officers concerned, in continuation of Memo No. 529 C. d/ 13 March 1885.

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Govt. of (1885) Madras.

MARINE.

8 L.C

Issued —

Recd. 30/4/85 Encl.

G.O., 20th April 1885, No. 164.

B. No. 1104 W d/ 11 May 85

APRIL.

~~Cocanada~~ Light houses

Passing orders on a report submitted by the ~~Honorable Colonel Shaw Stewart~~, Chief Engineer, P.W.D. ~~of his recent visit to the port of Cocanada~~ on his inspection of on the reach coast.

DC
11/5/85

Supdg Engr. I Circle
II "
IV "

12th November 1885, No. 2702 W., Public Works.

Ic 3
13

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following letter from the Superintending Engineer, I Circle, to the Chief Engineer, Public Works Department, dated Dowlaishweram, 23rd October 1885, No. 1530 G.D. :—

With reference to G.O., No. 1104 W., dated 11th May 1885, I have the honor to submit an estimate, amounting to Rs. 586, for the repairs to the Hope Island light-house and the adjoining buildings.

2. As regards the renewal of the light, directed in your notes of inspection of the 13th March 1885, I have the honor to submit for orders letter No. 79, dated 6th June 1885, from the officer in charge of the Government Workshops, Dowlaishweram, to the Port officer, Cocanada, and which was received with the Executive Engineer's endorsement, No. 246, dated 12th instant, describing the conditions in which the new fourth order dioptric light was received by him.

Enclosure.

From Captain C. C. RAWSON, R.E., Executive Engineer, in charge of Government Workshop Division, to the Port Officer, Cocanada, dated Dowlaishweram, 6th June 1885, No. 79.

With reference to your letter, No. 665, dated 21st May 1885, I have the honor to inform you that the cases containing the light for Hope Island light-house were received in good order on the 26th ultimo.

2. On the 1st instant they were carefully unpacked by the foreman-fitter of the shops in the presence of the Deputy Superintendent, Sub-Conductor Bennett.

3. From my own inspection of the cases, which I made on the same morning (Mr. Bennett having stopped the unpacking immediately that he discovered that the contents of the cases were damaged and sent for me), I have no hesitation in saying that the articles were disgracefully packed.

4. The gun-metal frame containing the glass prisms was packed so that it could move slightly in the packing case containing it; the result is that all the glasses are smashed to pieces.

5. The plate-glass windows were all packed in a very strong case, but many of the sheets had not a sheet of paper between them; one of the panes is broken.

6. Of the 97 chimneys received four are broken; this is nothing remarkable.

7. Out of the eight iron standards for the rails of the gallery, the tops of the three are broken off, the copper weathercock and zinc oil-pump are so much bent and twisted that I can only suppose that they have been forcibly jammed into a case too small to hold them properly.

8. In your letter you state that the cases were put on the canal boat in good condition; they certainly arrived here in good order; the damage cannot have occurred on the canal, as the boxes would never be moved from the time they left Cocanada until they arrived here.

9. As requested in my telegram of 1st you came to Dowlaishweram on the 4th and saw the articles, and I think will agree with this report.

10. I retain the articles pending further instructions.

No. 246.

Copy forwarded to the Superintending Engineer, I Circle, for information, with reference to his No. 1446 G.D., dated 6th October 1885.

12th October 1885.
(Signed) C. C. RAWSON, Captain, R.E.,
Executive Engineer.

ORDER—dated 12th November 1885, No. 2702 W., Public Works.

The estimate, amounting to Rs. 586, for repairs to the light-house and its adjoined buildings at Hope Island, is sanctioned.

2. This sanction has been registered as Excluded Local No. 25 W. of 1885-86, and classified as Miscellaneous Public Improvements, Repairs.

	RS.
Work ...	
Establishment	586
Tools and plant	135
... ...	6
Total ...	727

3. The question of funds will be considered in the Financial Department. The total sum required is shown in the margin.

4. Letter No. 79, dated 6th June 1885, from the Executive Engineer, Godávari Eastern division, to the Port officer at Cocanada, describing the condition in which the new dioptric fourth order light was received from Madras, will be communicated to the Marine Department.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, I Circle.
" Examiner, Public Works Accounts, with the estimate for note and return to Superintending Engineer, I Circle.
" Financial Department.
" Marine "

Exd. J. Henricus.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1885} Madras.

PUBLIC WORKS.

Dated November, 12th.

Recd. *Encl.*

G.O., 12th Nov. 1885, No. 2702 W.

NOVEMBER.

Light-house and adjoining buildings at Hope Island

Orders sanctioning estimate for repairs to —.

Administrative Department.

p1

163/15 No. 2930

MADRAS,
Marine Office,
31st March 1886.

CONSULT NO. 280

From
J. H. TAYLOR, Esq., Lieut., R.N.R.,
Master Attendant,
Administrative Department,
Madras,

To
The Hon'ble C. Forster Webster
Chief Secretary to Government,
Marine Department,
Fort St. George.

Sir,

No. 162 Marine, dated April 20th 1885.

With reference to the G.O. as per margin, I have the honor to submit the accompanying plan and estimate, amounting to Rupees (1254) one thousand two hundred and fifty four, for setting up the new 4th order dioptric light at the Hope Island light-house. There is an item of Rupees (300) three hundred, in the estimate for extra scaffolding for temporary lanterns, which will not be necessary, as it has already been notified that the light will be extinguished, while the new lantern is being fitted. Less this amount, I beg to recommend the estimate for early sanction, the expenditure to be debited

to

to Port Fund, Cocanada.

I have the honor to be
Sir
your most Obedt Servant
J. Taylor
Master Attendant
Administrative Department

MM

P. 56 – 27 – 1 – 86 [illegible]
P. 364 – 23 – 8 – 85
[illegible] 331 – 12 – 8 – 85
– 260.61 – 23 – 6 – 85
P. 162 – 63 – 20 – 4 – 85
O.W. G.O. No 270 28 W 12.11.85
G. No 268 W 29.1.86.

Rs 630 C[illegible] [illegible]/86

Approved [illegible] referred to the P[illegible]orks Department.

By Order
[illegible]
Under Secy.

Marine (1886) DEPARTMENT. [illegible] 28[illegible]

CURRENT NO. 230 (2)

From
THE MASTER ATTENDANT,
ADMINISTRATIVE DEPARTMENT,
Madras,

To
THE CHIEF SECY. TO GOVERNMENT,
MARINE DEPARTMENT,
Fort St. George.

No. 2930

Dated 31 March 1886.
Received [illegible]

No. [illegible]

B.H.
15/4/86

B. No 1863 W. 12.8.85
" 164 W. 20.1.85
No 102 C. 17–1.85
G. No 701 W. 19.3.85
" 1101 [illegible] 11.5.85
Marine [illegible]
Nos 312 . 312 A. 21.7.84
B. No 2026 W 21.9.85

D[illegible] 4/7

[illegible]
19.4.86

Subject.

Forwards Plan and Estimate for setting up a new Light at Hope Island, and requests sanction to the amount of the Estimate, less Rs 300

Y
Ver B

C. 6/4
R. 8/4 [illegible] 17.4.86 R. 14.4.86

Financial Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

proceedings from the Public Works, Department dated 12th November 1885, No. 2702, W.

Endorsement from the Public Works Department dated 21st January 1886, No. 279C.

Letter from the Master Attendant, dated 27th January 1886, No. 641.–

With reference to letter from the Superintending Engineer, 1st Circle, No. 2034 G. D. dated 11th instant, forwarded with your endorsement No. 138.C, dated 26th idem, I have the honor to inform you that the new lenses indented for from England were received in December last by the P. and O Steamer "Pekin", and sent on at once to the Executive Engineer, Dowlaishwaram, through the Port Officer, Cocanada. I would suggest that the funds required for the repairs to the Hope Island lighthouse, viz Rupees (727) seven hundred and twenty seven, be ordered by wire to be placed at the disposal of the Public Works Department.–

Order

Order thereon 28 January 1886, No. 92 Mus

A grant of Rs 727 from Port Funds is placed at the disposal of the Public Works Department for the purpose specified in para 3 of G. O 2702 W, dated 12th December 1885.

The grant will be communicated to the Executive Engineer by Telegram from the Public Works Department.—

(True Extract)

W. Wilson

Ag Chief Secretary

To

The Public Works Department with encls retd.

~~Master Attendant.~~

Accountant General.

Marine Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

Letter from the Master Attendant, Madras, of 6th May 1885 No. 3,685.

In para 2 of my letter to Govt. No 2,577 dated March 23rd last recorded in G.O. Marine No: 162 dated 20th ultimo, I referred to the repairs partly carried out to the old works of the Cocanada groynes.

Disposed of in No. 113 C of 13-5-85 [illegible]

2. The grants sanctioned for the repairs were as follows:—

x Not Communtd

As per G.O. Marine No. 6 dated January 8th, 1883 for the North groyne, Cocanada — Rs 500

— Do — Do. No 433 W, Public Works dated February 8th, 1883 for South groyne, Cocanada — Rs 3,333.

Out of the latter sum Rupees (2238—1—10) two thousand two hundred and thirty eight annas one and pies ten were expended and

and the balance Rupees (1094-14-2) one thousand and ninety four annas fourteen and pies two was remitted to the Treasury. The Estimate for completing the repairs in question now submitted is for a similar amount, viz Rupees (1094-14-2) one thousand and ninety four, annas fourteen and pies two and I solicit that the Government will be pleased to sanction the same.

Order, 16th May 1875, (No. 209 Mis)

The Estimate now submitted will be sanctioned against Port Funds.

(True Extract)

Chief Secretary

To

The P. W. Dept

" Accountant General

" Master Attendant

1053
19

No. 102 C

P. W. Department

Memorandum

Adverting to G. O. 529 d/3d December/74 (Marine) the undersigned is directed to request that the Public Works Department may be furnished with a complete list of the light-houses of the Madras Presidency, the periodical inspection of which is considered necessary.

Col: R.E.
Secretary to Govt: P.W.

Chepauk
17th January/75

To

The Chief Secy. to Govt:
Marine Dept:

P.W. Department

No. 102 C d/17th January /85

105/21

Memorandum

Vide also
Library No
R.A.–

Advertising to G.O. 529 d/3rd December/84 (Marine) the undersigned is directed to request that the Public Works Department may be furnished with a complete list of the light-houses of the Madras Presidency the periodical inspection of which is considered necessary

(sd) J.L.S.
W

To
The Chief Secretary to Govt – ✓ desptd 17-1-85.
Marine Department –

G.O. Marine Nos. 529, 530 d/ 8-12-82

G.O. No. 312 W of June 1877 –

No. 102 Cay 17-1-

22/1.

1053/21

f. 383 - 00 - 0 - 12 - 84
f. 312 - 10 - 11 - 2 - 84

No 580 of 1883

CURRENT. No. 47

Marine

1885.

Public Works Department.

MASTER ATTENDANT, AD[illegible] DEPARTMENT
22 JAN 85
MADRAS

No. 102C

Dated 17 Jany 1885.

Despatched

Received

134/85

SUBJECT.

Calling for a List of Light Houses of the Madras Presidency, the periodical inspection of which is considered necessary.

No 138 of 21st January /85

Forwarded to the Master Attendant for report

R. Renson
Chief Secy

Telephone (?)

1053
27

Recd. 11.00 a.m.

From

The Master Attendant

To

The Chief Engineer.

Chief Secretary to Govt. telegraphs from Ooty. Plan and estimate Hope Island light house approved and transferred to P.W. Department on the 9th instant. Supg. Engineer Godavari awaits sanction and allotment of funds. Please issue immediate orders, as Hope Island light according to notice published, is to be extinguished from 1st May and work of new light begun.

—

Reply.

Despd.

The draft order sanctioning the estimate will be despatched to Ootacamund for approval today.

D.W. 17/4/86

6. 17.4.86 12.44

105 3 4

7605

C. A. W. C No 7605

Please point out to the Marine Dept. that the docket on G.O. 23.4.85 - No. 164 - should have been -

---

Light house

Passing orders on a report submitted by the Chief Engineer P. W. Dept. on his inspection of ______ on the east coast -

---

W

7.5.85

The docket as it stands is altogether misleading should be corrected.

H.S.

This has been pointed out to the Marine Dept.

[illegible] that [illegible]

P.W. Dept copies are
corrected

C.S.
7.5.85

R.K.

Please see our G.O.
No. [illegible] of 11/5/85 and have
the dockets corrected ac-
cordingly. The Oty copies
just received have been
corrected.

Ed.S.
11/5

Corrections made

D.P.
23/5/85

7605

Dew

113 E
13-5-85

(7)

1053/24

Submitted

Perhaps E.W. would
like to note on
this letter (in contn
of his previous
note of 13th May
1885) before it is
commn to Marine
Dept.

H.B.

W. I presume a copy of this
report may go to the Cocanada
Groynes Committee (through Marine Depmt)
in view to their arranging with S.C.
circle for the supply of stones from the
new quarry.

Ed.

3.[illegible].85

Yes - drawing special
attention to last part
of para 3.

5.4.8

7605

: Marine . 3.12.84

No. 529.

1083
27

With advertence to above a list of all the lighthouses in the Presidency should be obtained - as soon as possible.

15.1.85

To W

Please see page 85 of the Presidency Administration Report for 1882.83 in which a complete list is published.

C.S.
15.1.85

I think it would be well to refer to Marine Dept. for a complete list - with advertence to G.O. No. 529.

16.1.85

1083/27

For C. No. 7507

MEMORANDUM.

Communication to officers concerned
REQUESTED for ~~reference~~ the undermentioned paper:—

G. O. in the Marine Deptt. Nos 321 and 322
dated 30th July 1885   (5 spare copies)

Frank Bird
Second Assistant
Public Works Department

GOVT. OFFICE, P. W. D.,
31st August 1885.

To

The Chief Assistant
Public &c Deptts
Ootacamund

9.85

1053/27

No. 268 W d/ Jany: 29. 1886
B

Communicated to the S. E. I Circle with advertence to his letter No. 2034 G.D. d/ 28th January 1886.

2. The allotment granted is as follows:—

Works	586
Establishment	135
Tools & Plant	6
Total Rs	727

13 May

S.E. I Circle
Ex. P.W. A.

Desp'd. 2-2.86.

Telegram (deferred)

To
S.E. I Circle
Dowlaishweram.

Your 2034 G.D. of eleventh current. Funds allotted

Telegram Desp'd

29/1/86

---

[8]

Govt. of 188 Madras.

To

The W.D.

29 JAN 86

Proceedings, dated 28/1 1886
No. 92 M

Subject.

No. 268 W d/ Jany 29. 1886

Placing at the disposal of P.W.D. a grant of Rs 727 for repairs of Hope Island Light

---

1653/24

Telephone.

From
The Master Attendant
To
The Dy. Chief Engineer—

Please ask Secy. to Govt. P.W.D. only to wire sanction direct to Supg: Engineer, Godavari, informing me when he has done so.

W.

This refers to estimate for putting up a new light at Hope Island Lighthouse. The file, with a draft sanction, is being despatched to you today.

17/4/86

17.4.6.

1053
29

[illegible]

G.O. No 433 W. 8.2.83
722 W. 23.3.83
1756 W. 29.7.83
113 E. 13.5.83
1104 W. 11.5.83

Cnos 3919 & 4683

No 1863 W d/ 12th August/85

Comd for the
[illegible]ation of the
S.E. I Circle in
Contn of G. O. No
1756 W of 29th July
1885.

Ed
31.7.85

+ abst shown for
cocanada groynes

6.8.85

Maj
S. E. I C.
Desd 12/8/85
14/8
B. 10.8.83
14/8/5
Reimbursed 31.7.85
27.5.85
13/8
17/8

---

(9)

Acc 4680

[c]

Govt. of {1885} Madras.

To

The Public Works Deptt.

No 1863 W d/ 12th August/85

Recd 6/5/85

Proceedings, dated 16th May 1885.
No. 209 Mis: Marine.

Subject.

Sanctioned the estimate for the repair of Cocanada groynes against Port Funds.

~~Await receipt of orders on~~ 1.10.85 13.5.85

29.5.85

No. 2 034 G.O.

1033/30

FROM,

THE SUPERINTENDING ENGINEER
FIRST CIRCLE.

TO,

THE CHIEF ENGINEER
PUBLIC WORKS DEPARTMENT.

DOWLAISHWARAM, 11th January 1886.

SIR,

With refer[illegible]e to G.O. No 2702W dated the 12th November/85 sanctioning an Estimate for repairing the Light house, at Hope Island, I have the honor to inform you that funds have not yet been allotted for the work, and I therefore request that you will be so good as to obtain an allotment of funds for the same in order that it may be Commenced.

I have the honor to be
Sir
Your most obedt Servt
C. Carson
for
Supdg Engineer 1st Circle

RP

1053/31

P. W. Dept.

To be returned with reply.

Inc. 34
732/85

FROM,

THE SUPERINTENDING ENGINEER
FIRST CIRCLE.

TO,

THE CHIEF ENGINEER
PUBLIC WORKS DEPARTMENT.

DATED
DESPATCHED 11th January 1886.
RECEIVED

No. 2 0349 D.

ENCLOSURES. Nil

Light house at Hope Island.— Requests that funds may be allotted for repairs to—

No. 279 C of 21st January 1886.

Referred to the Financial Department, in continuation of G.O. No. 270 2 W dated 12th November 1885.

Under Secy. to Govt. P.W.D.

20.1.86

With disposal

Administrative Department.

10/13
37

MADRAS,
No. 1075. Marine Office,
10th February 1885.

From

J. H. TAYLOR Esq., Lieut., R.N.R.,
Master Attendant,
Administrative Department,
Madras,

To

The Honorable E. Forster Webster,
Chief Secretary to Government,
Marine Department,
Fort St. George.

Sir,

In returning reference No. 138, dated January 21st 1885, I have the honor to subjoin a list of lighthouses, the periodical inspection of which is considered necessary

Calingapatam lighthouse
√ Santapilly —— Do
√ Vakalapudi —— Do
√ Hope Island —— Do
Point Divi —— Do
√ Armeghon —— Do
√ Pulicat —— Do
√ Negapatam —— Do
Pamban —— Do

Tuticorin

Tuticorin lighthouse
Muttam ——— D°
✓ Cochin ——— D°
✓ Calicut ——— D°
Tellicherry ——— D°
✓ Cannanore ——— D°
✓ Mangalore ——— D°

I have the honor to be
Sir,
Your Most Obedient Servant

J W Taylor
Master Attendant
Administrative Department

JM

1033/33

No. 103

Marine (1885) Department.

From

The Master Attendant,
Administrative Department,
Madras,

To

The Chief Secy. to Government,
Marine Department,
Fort St. George.

Recorded

17.3.85

18.3.85

No. 1075

13 FEB 85

Dated 10 } February 1885
Received 11 }

Subject.

Gives list of Light-houses requiring periodical inspection.

No 366 / 12 Feby /85

Transferred to the Public Works dept.

Chief Secy

11/2

No. 1053 W

B & R
Works.

1053 / 34

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 24 April 1886

Read the following

rom the Master Attendant, Madras. H. E. No: 2930 d/ 31st March 1886.
ndorsement by the Marine Department. H. E. No: 630 C d/ 9th April 1886.

The estimate amounting to Rs. 1,254, for setting up the new 4th order dioptric light at the Hope Island Light House, is reduced to Rs. 954 with reference to the remarks of the Master Attendant in his letter above recorded, and sanction is accorded to the reduced amount.

2. The question of providing funds as shown in the margin[*] will be considered in the Financial Department.

3. This sanction has been registered as Excluded Local No: 3 – W of 1886-87, and classified as

* Works	Rs. 954
Establishment	219
Tools and Plant	10
Total	Rs 1183

at Miscellaneous Public Improvements, Original Works.

17/4/86

19-4-86

[illegible] /4/86

To the [illegible]

24-4-86

27/4

+ m/s copy sent [illegible]

[illegible] 27/4/86

To + The Supdg. Engr. I Circle with 2 enclos.

+ Examiner of P.W. Accounts

+ Dep 5/5/86 with the estimate for note & return to S.E. I

+ Financial Department

+ Marine Department

A/S. 55/4

J.B. (To The Chief Secy for favor of Counter-initials)

2860.

Govt. of 1886 Madras.

PUBLIC WORKS.

27/4/86

Dated

Recd. Encl.

G.O., 24th April 1886, No. 1053

Hope Island Lighth

An ~~Rn~~ Estimate of Rs 954

for setting up the new

4th order dioptric

light at the —

~~reduced to Rs 954~~

sanctioned.

10/2