

(1) பக்கங்களின் எண்ணிக்கை 40

(2) புதுக்கித் திருப்பிய நாள் 06/9/88

(3) ஆதரங்குறிப்பவர் கருக்கொப்பம்

16/6/88

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

மு. கோப்புத் தாள் எண். 3484(W) துறை

அரசாணை எண்.

மு. கோப்புத் தாள் எண்.

அச்சகம்

பலவகை

நாள் :

20 12 1987

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

ஆவண. கா-1-18,008-18-6-87.

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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following despatch from the Right Honorable Viscount CROSS, Her Majesty's Secretary of State for India, to His Excellency the Right Honorable the Governor in Council, Fort St. George, dated India Office, London, 24th November 1887, No. 10, Public Works :—

With reference to my Public Works despatch, No. 6, dated 19th May last, in which I informed your Excellency that I had determined to submit the question of the best position for the entrance to Madras Harbour for the consideration of a special committee, I have now to acquaint you that the results of the committee's deliberations have been communicated to me in the accompanying report.

2. While offering no remarks upon its contents, I forward the report for your information. I have thought it proper to request the Consulting Engineer for the Harbour to furnish me with any remarks he may wish to make on the recommendations of the committee, and on the receipt of his reply I will again address your Excellency as to the steps which should be taken in consequence of the recommendations contained in the committee's report.

ORDER—dated 20th December 1887, No. 3484 W., Public Works.

Communicated to the Chairman, Harbour Trust Board, and the Marine Department—
continuation of the undermentioned proceedings :—

G.O., No. 1590 W., dated 14th June 1887.
" " 1765 W., " 1st July "
" " 1898 W., " 14th " "
" " 2978 W., " 7th Nov. "

(True Extract.)

Captain, R.E.,
Under Secy. to Govt., P.W.D.

To the Chairman, Harbour Trust Board, with copy of report.
" Marine Department, with copy of report.

Exd. J. Masses.
Spare Copies

BUILDINGS AND
CIVIL WORKS.

Govt. of Madras.

PUBLIC WORKS.

Dated December, 20th.

Recd.

Enc.

G.O., 20th Dec. 1887, No. 3484 W.

DECEMBER.

Madras Harbour

Despatch from the Secretary of State communicating, with remarks, report of the special committee on the question of the entrance to the —, communicated to the officers concerned.

No.

Government of Madras.

PUBLIC WORKS DEPARTMENT.

To

Secretary
The Under-Secretary of State for India
India Office, London.

Cotacmand, July 15, 1887.

Sir,

I am directed to state that the following telegram was despatched to the Right Honble the Secretary of State for India on the 1st July 1887.

"Please telegraph as soon as anything definite is settled regarding position entrance Madras Harbour."

(50) 20. H.

20/7/87

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3

To the UNDER SECRETARY OF STATE FOR INDIA

Sir,

In compliance with the instructions contained in your letter of 8th April, we have examined thoroughly into the subject of the position of the entrance to Madras Harbour, in connection with the work of reconstruction now in progress.

We have taken evidence upon this highly complicated subject, and beg to report as follows :—

It is agreed on all hands that, owing to the frequently disturbed state of the water, the facilities for landing and embarking passengers, cargo, &c., offered by the harbour, are very much restricted, nor would it be feasible, for the same reason, to use without serious interruption, wharves and jetties along the shore line, or to keep in safety within it, such improved lighters, tugs, and other harbour craft as would greatly increase its value as a trading port. Much cargo is said to be lost overboard in the process of transhipment, and, for want of tugs, no sailing vessels use the harbour at all.

The confused sea within the harbour is attributed, by all who have given evidence, to the nearly constant swell from the eastward which runs in through the present entrance, and, being deflected from the side walls, causes what is variously described as a "nubby sea" or "joggle of a sea," and in bad weather as being like "a boiling pot." In consequence of which it is the opinion of many of the most experienced captains that, excepting for the distance from the shore, loading and unloading could be as advantageously done outside as inside. During the cyclone of November 1891 the greater portion of the craft within the harbour were wrecked before the walls gave way.

The swell, which is the source of so much trouble at Madras, appears to be generated in the Bay of Bengal, and, as it approaches the harbour, advances ordinarily in a line parallel with the coast, but is occasionally deflected as much as 30° each way.

It is contended by the Madras Harbour Trust Board that the remedy for all the defects in the present harbour lies in closing the eastern entrance and opening one elsewhere. Captain Taylor, the Port Officer, who was charged to represent to us the views of that Board, goes so far as to say that the one thing needful is smooth water, that smooth water can only be got by closing the present or eastern entrance, and that no engineering difficulty nor expenditure, however great, should be allowed to stand in the way of such a change being made, and that without it "the harbour will never be worth having."

We have carefully considered the different proposals for remedying the defects in the present harbour.

In order to render this Report as clear and comprehensive as possible we have caused the three accompanying drawings to be prepared.

Drawing No. 1 exhibits the projects (numbered I., II., III., and IV.) described in a report on the different proposals for a north-east entrance, dated 2nd May 1887, and addressed to the Chairman of the Madras Harbour Trust Board by the Superintendent of the Harbour Works. These proposals were referred to by different witnesses in the evidence taken in the course of our inquiry.

Drawing No. 2 contains a plan of the harbour in its present condition, and also three sections which we have had prepared in order to illustrate, as clearly as possible, the changes which have taken place in the depths immediately to the northward and southward of the harbour within the last few years.

Drawing No. 3 shows, by red colour, the position, aspect, and covering arm of the new north-east entrance, which we have to recommend for adoption.

The proposal to open the harbour at the south-east corner, whether alone or in conjunction with another opening at the north-east corner, we feel bound to dismiss. Our calculations, founded upon soundings taken and submitted to us by Mr. Parkes, more especially a comparison of those taken in 1886 with those taken in 1882, show that, so rapid and regular is the encroachment of the sand on the south side, that, if continued at the same rate, which we have strong reason to apprehend will be the case, within twenty years the depth of water at the south-east corner will be reduced to four fathoms.

The present, or east entrance, we believe to be the easiest and safest for ingress or egress, but not only does it admit the sea in the manner described, but we are of opinion that the time is not very far distant when the depth at this entrance will be so far reduced as to become too shallow for the larger class of vessels frequenting the port.

The designs on which the harbour is being reconstructed include reducing the width of the present entrance from 550 to 450 feet; the opinions of nautical men differ as to whether the reduction is advisable from the navigating point of view, but all concur in thinking that the alteration would not have a sufficiently quieting effect on the state of the water inside.

A proposal has been brought before us to protect the present entrance by constructing a detached breakwater to the eastward of it. This appears to us a difficult and costly operation; a breakwater outside would not, we believe, prevent the entrance of sand into the harbour.

The alternative is an opening in the north-east corner with a covering arm. This is the plan favoured by the Madras Board, and to this we have given our most careful consideration.

The opinions of the captains of steamers frequenting the port differ materially. Some see considerable difficulty and danger in taking an entrance so placed, others see none. We give it as our opinion that, although it may not be so easy of ingress, and ships may be detained outside more frequently than at present, the increased difficulty is not sufficient to condemn it.

Experience alone can prove whether the harbour reconstructed, with the east entrance closed, and an opening made in the north-east corner, with a covering arm, will prove a safe anchorage during a cyclone. One captain only says that he would rather risk staying in than go out under such circumstances, while others look upon such a harbour as "a trap" from which there would be no escape. The Port Officer expects to be able to move ships about as in a dock, and the pilot thinks that, with warps and the assistance of a tug, ships could be taken out on the approach of a cyclone. Our view is, that we should be indisposed to risk remaining in the harbour until it has been proved that vessels can lie there in safety during cyclones, but while admitting the doubt, especially if the harbour is crowded, we see no reason why, with proper appliances, ships should not be got safely out on receiving warning.

Having carefully weighed all the evidence we have been able to collect, which comprises the views of all classes interested, or who have had opportunities of forming an opinion, we pronounce in favour of an entrance at the north-east corner, with a covering arm, and that the entrance on the east face be closed up.

Of the four plans submitted to us by the Madras Harbour Trust Board we give the preference on nautical grounds to Plan III., but with an addition to the length of the covering arm. What the precise length should be can be best determined by experience. We are of opinion, however, that the overlap should not be less than 600 feet, and need not be more than 800 feet.

According to an approximate estimate which we have obtained from Mr. Parkes, the cost of completing the harbour with a north-east entrance, if the overlap be 600 feet, will be Rs. 22,81,345, and, if the overlap be 800 feet, Rs. 25,36,611, in excess of the cost of completing the harbour on the design adopted in 1884, with an east entrance 450 feet wide, estimated

by Mr. Parkes in August 1884 to be Rs. 45,90,051, out of which about 21½ lakhs had been expended up to 31st March last.

It appears, therefore, according to the estimates put before us by Mr. Parkes, that the expenditure to be incurred as from 31st March last, in executing the work according to our recommendation (shown in red colour on Drawing No. III. annexed to this Report) will amount to about 47½ lakhs of rupees with an overlap of 600 feet, and to about 50 lakhs of rupees if it should be found necessary to make the overlap 800 feet.

In this estimate it is assumed, that the *débris* of the old work will be removed to a depth of 36 feet below low water of lowest tides throughout the new entrance, which depth we regard as a minimum, and we are distinctly of opinion that not less than this should be sanctioned.

We have the honour to be,

Sir,

Your obedient servants,

(Signed) NOWELL SALMON.

JOHN COODE.

G. S. NARES.

19th October 1887.

3464
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MADRAS HARBOUR

Nº 1.

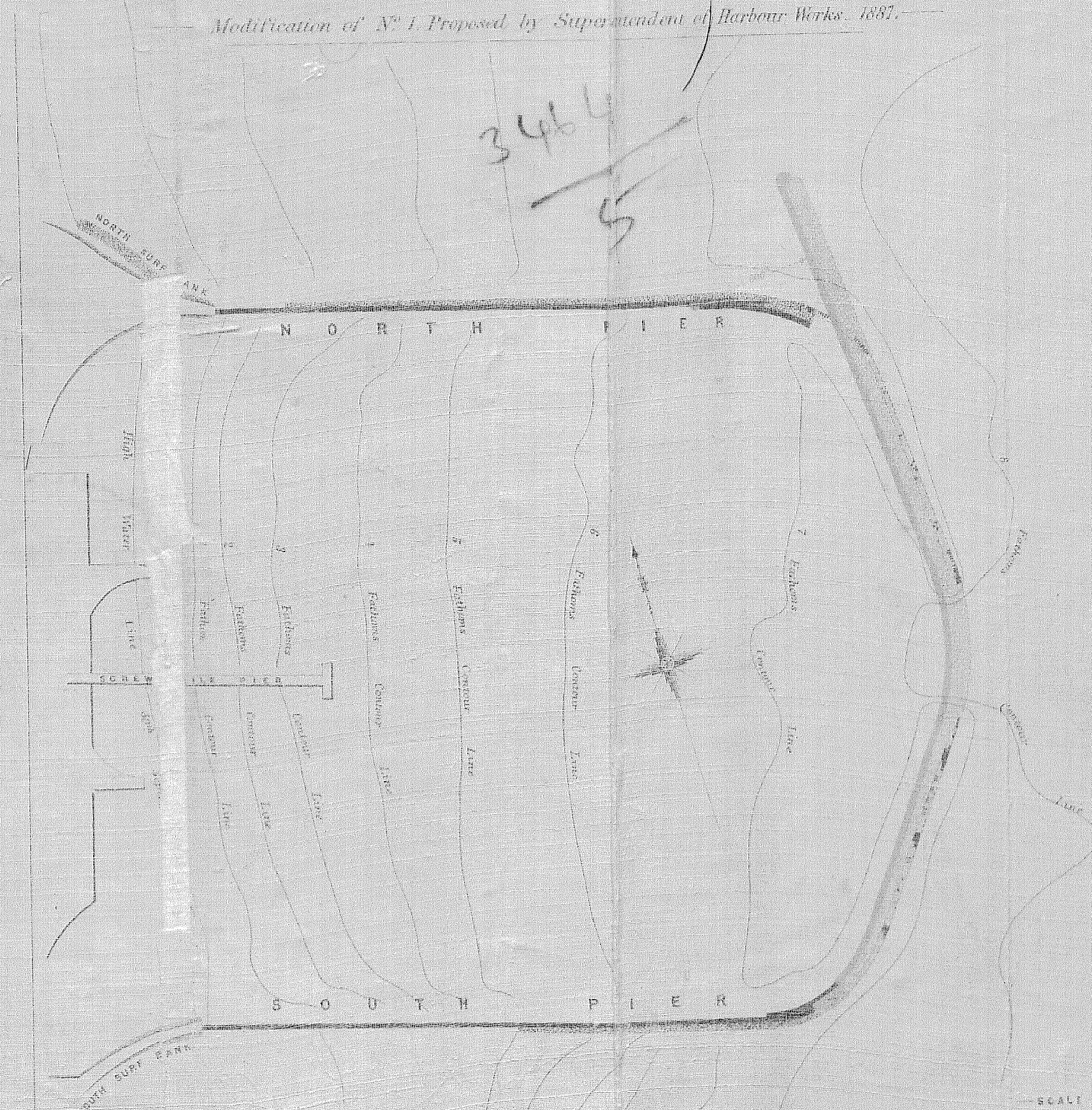
Proposal of Special Committee in Madras, 1883.



To accompany Report of Committee, appointed by Viscount Cross
Proposals for Entrance referred to in Letter from the Chairman of

Nº 2.

Modification of Nº 1 Proposed by Superintendent of Harbour Works, 1887.



SCALE

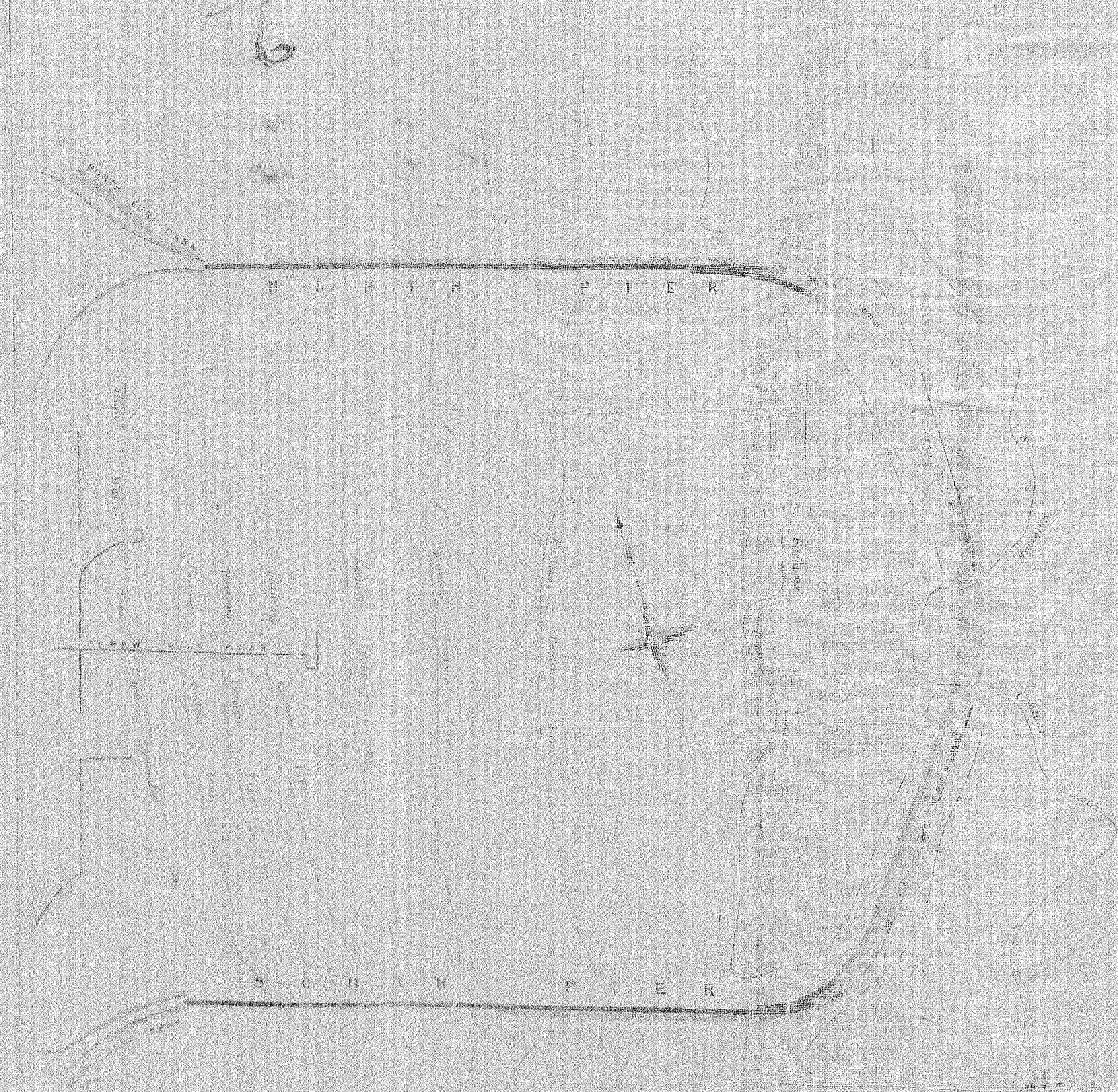
by Viscount Cross April 1887, to consider the question of the Entrance
 the Chairman of Madras Harbour Trust Board, dated May 4th 1887.

Drawing 1

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N^o 3.

Alternative Proposal by Superintendent of Harbour Works 1887.

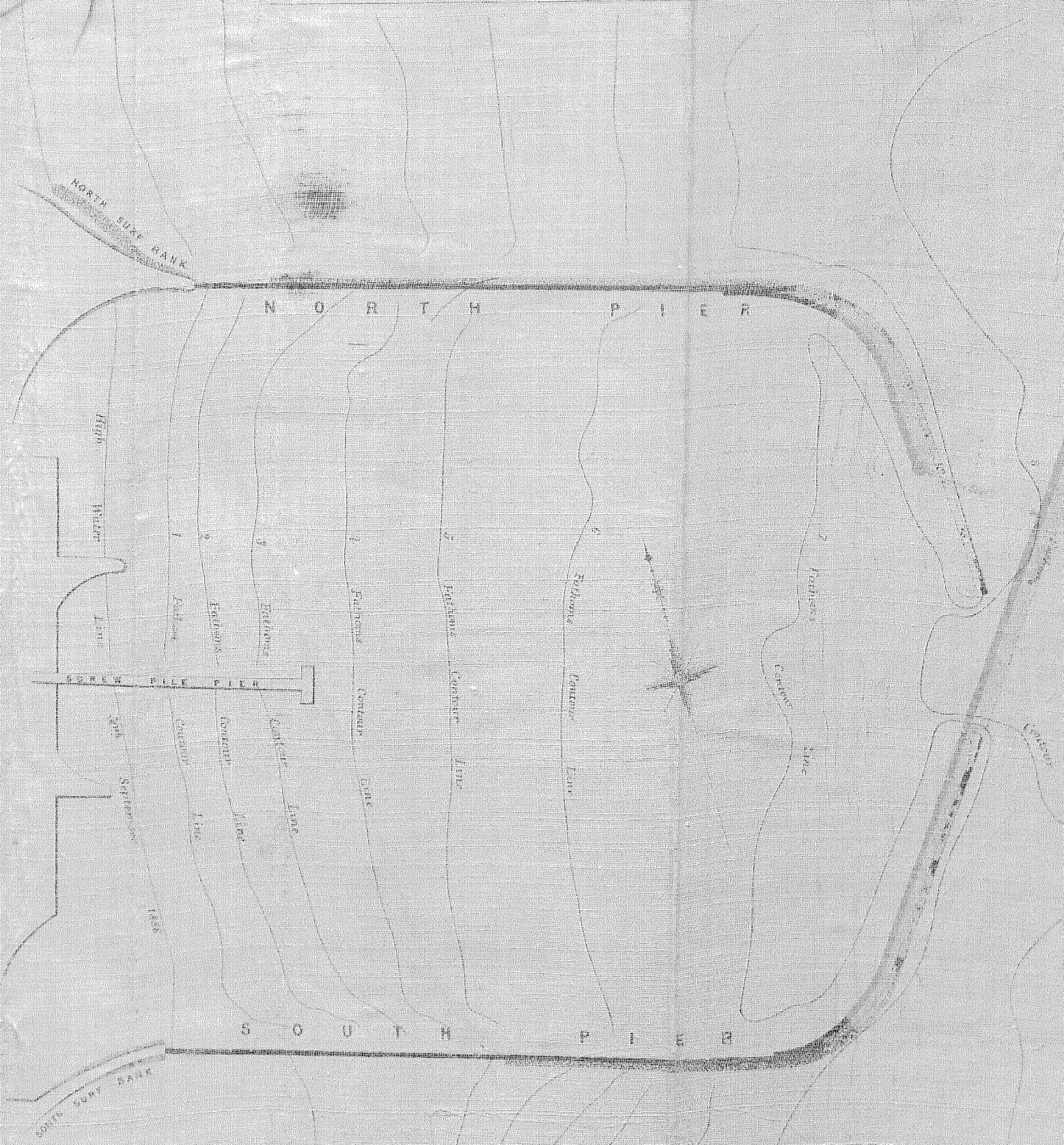


1887.

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N^o 4.

Alternative Proposal by Superintendent of Harbour Works 1887.



in fathoms show depths in fathoms below De Havillands Mean Sea Level, September 1886.

Scale 1 inch = 1000 feet

ated by Viscount Cross

April 1887, to consider the question of the Entrance

rawing N^o 2.

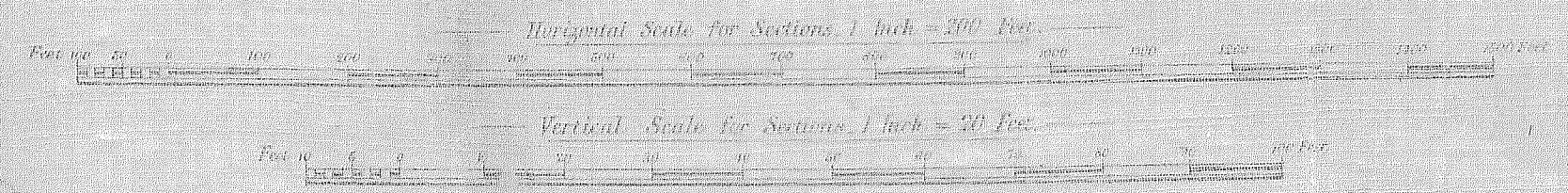
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TO

SECTION ON LINE A.B. (800 feet North of North Pier)

MEAN SEA LEVEL (De Havilland)

Two Fathoms Line
Three Fathoms Line
Four Fathoms Line



SECTION ON LINE C.D. (300 feet South of South Pier)

MEAN SEA LEVEL (De Havilland)

Two Fathoms Line
Three Fathoms Line
Four Fathoms Line

SECTION ON LINE E.F. (1360 feet South of South Pier)

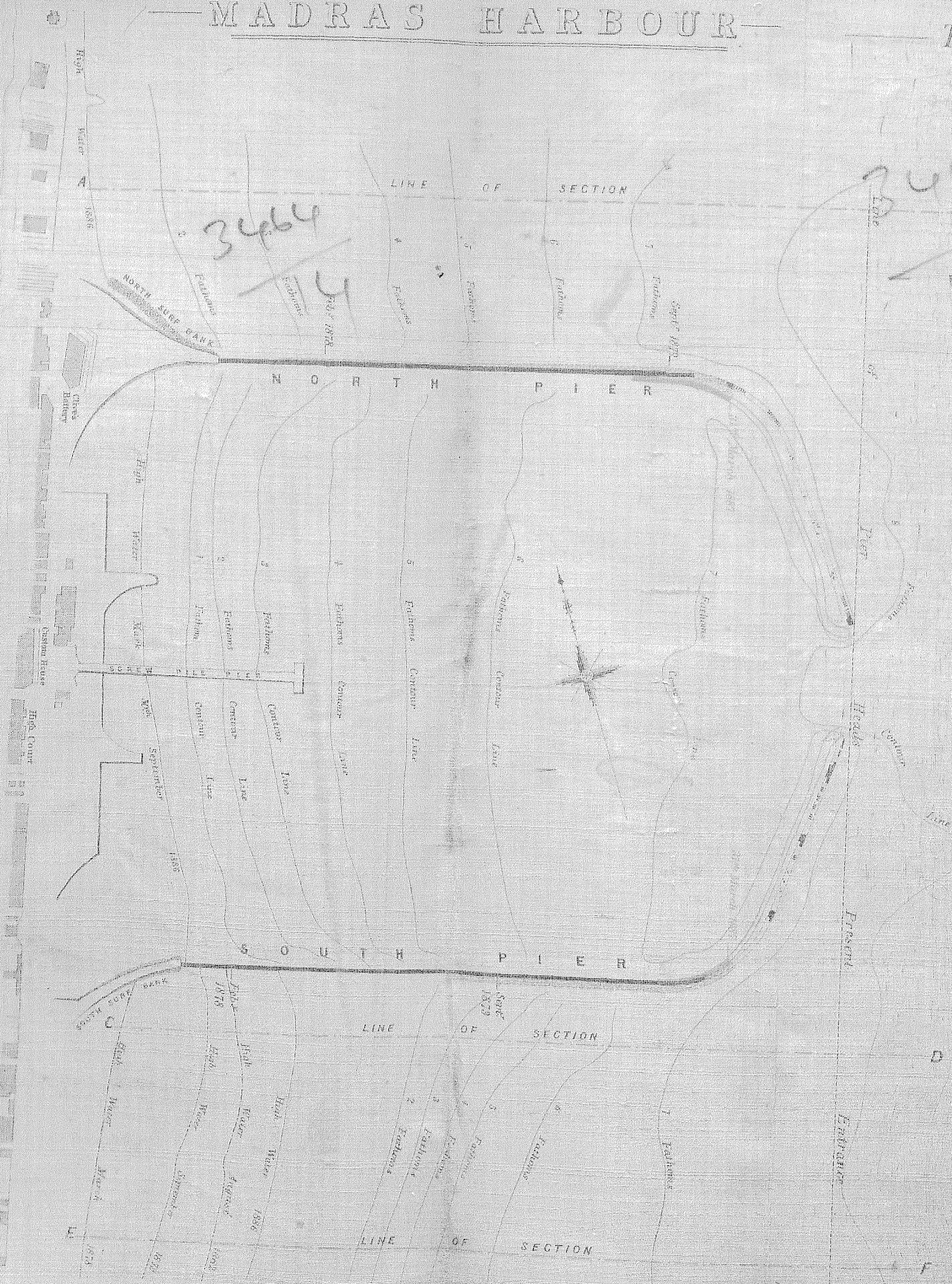
MEAN SEA LEVEL (De Havilland)

Two Fathoms Line
Three Fathoms Line
Four Fathoms Line

MADRAS HARBOUR

To accompany Report of Com.

BLACK TOWN



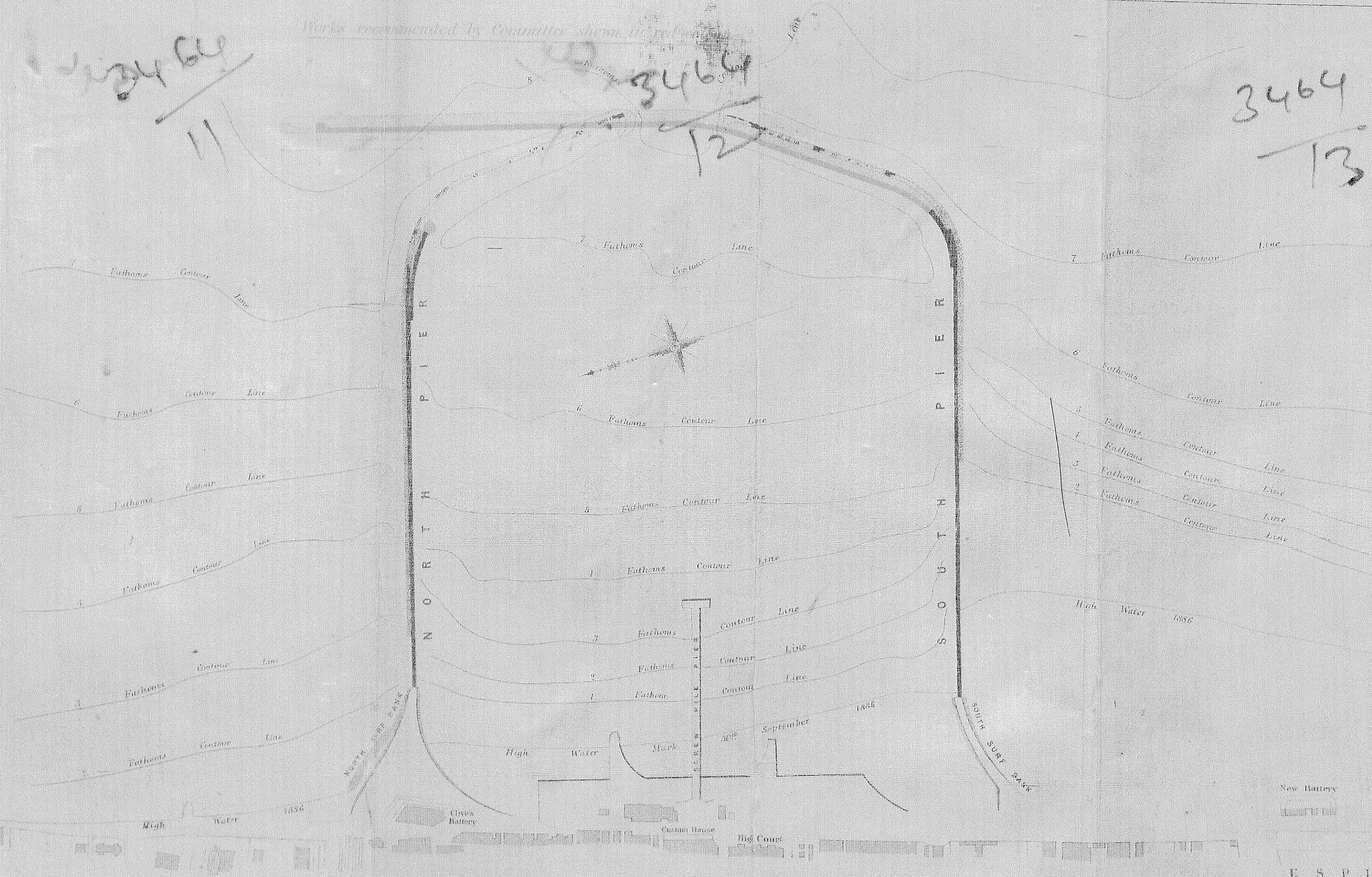
NOTE. Contours in blue show depths in fathoms, with the exception of those in red which show depths in feet.

MADRAS HARBOUR

Drawing No.

To accompany Report of Committee, appointed by Viscount Cross April 1887, to consider the question of the Entrance.

Works recommended by Committee shown in red ink



NOTE. Contours in blue show depths in fathoms below De Havillands Mean Sea Level, September 1886.

B L A C K T O W N

E S P L A N A D E

SCALE

1922.

Public Works

No. 10.

x No 1590 W 8/4-6-87.

India Office.

London, 24th November 1887

3464
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My Lord,

With reference to my
Public Works Despatch, No. 6,
dated 19th May last, in
which I informed your
Excellency that I had
determined to submit the
question of the best position
for the entrance to Madras
Harbour for the consideration
of a special Committee, I
have now to acquaint
you that the results of
the Committee's deliberations
have been communicated
to me in the accompanying
report.

2. While offering no
remarks upon its contents,
I forward the report for
your information. I have
thought it proper to

His Excellency.

The Right Honorable, request the consulting
The Governor in Council, Engineer
Fort St. George.

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Engineer for the Harbour
to furnish me with any
remarks he may wish to
make on the recommendations
of the Committee, and on
the receipt of his reply
I will again address Your
Excellency as to the steps
which should be taken
in consequence of the
recommendations contained
in the Committee's report.

I have the honor to be,
My Lord,

Your Lordships most obedient,
humble servant,

[Signature]

N ^o 786.5 W a/p 16.3.87	N ^o 1098 W a/p 16.7.87
" 1001 W a/p 16.4.87	" 2358 W a/p 19.87
" 1179 W a/p 29.10.87	" 2975 W a/p 1.11.87
" 1283 W a/p 11.5.87	
" 5 W a/p 11.5.87	
" 1282 W a/p 12.5.87	
" 1383 W a/p 20.5.87	
" 10 W a/p 10.9.87	
" 1517 W a/p 7.6.87	
" 1000 W a/p 16.6.87	
" 1765 W a/p 1.7.87	
" 1981 W a/p 14.7.87	

Public Works
24th November 1897
The
Letter to Lord St. George
p 10

Go 1590 W apt 14 June 1887
 " 1765 W apt 14 July
 " 1898 W apt 14 July
 " 2998 W apt 14 July

Henry
4. 12. 07

Chambers H. B. D.
with copy of Report
Harold D. J. D.
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Lodge, 201 (2. 87)

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20 Dec 340411

Madison Harbour

Respectfully from the Secretary
of State concerning the
presently report of the
Special Committee on
the question of the
entrance to the —,
and to the officers
concerned.

20 Dec 340411
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