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(1) Number of pages 36

50 (2) Date of repair 6/87

(3) Initials of the Referencer Lars

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

J. HD. DEPARTMENT

G.O. No. 221 · 177 — W Press.
B.P. No. Mis.

Dated 21 · 1 · 1884.

Not to be folded or roughly handled

A. Mani

177
1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following papers:—

From G. T. WALCH, Esq., Officiating Superintending Engineer, I Circle, to the Chief Engineer, Public Works Department, dated Dowlaishweram, 19th December 1883, No. 437 V.Z.

I have the honor to forward, herewith, copy of a letter, No. 1763, dated 10th instant, from Vizagapatam division officer, and its enclosures, and to request orders by telegraph as regards the extension of the Bimlipatam groyne.

2. That groyne was, at the request * of the Master Attendant, Administrative Department, made only 150 feet long, but it appears that he now wishes it made 150 feet longer, and for doing this the estimate † now sent provides.

* See his letter, No. 1969, dated 6th March 1883, printed with Proceedings of Madras Government, No. 1924 W., dated 9th July 1883.

† Rs. 3,890.

Enclosure.

From H. E. CLERK, Esq., Assistant Engineer in charge of Vizagapatam Division, to the Superintending Engineer, I Circle, Dowlaishweram, dated Waltair, 10th December 1883, No. 1763.

As requested by the Master Attendant, Administrative Department, Madras, in his telegram, dated the 19th November 1883, to the Port Officer, Bimlipatam, copy enclosed, I have the honor to submit, herewith, plans and estimates, amounting to Rs. 3,890, for extending the groyne 150 feet seawards.

1 Copy of letter.	1 Abstract estimate.
1 Do. of telegram.	1 Specification.
3 Plans.	1 Calculation sheet.
1 Detailed estimate.	

2. I enclose a copy of letter from the Port Officer, Bimlipatam, requesting that the work be commenced at once, and request you will permit me by wire to go on with the work in anticipation of sanction to the estimate and an allotment of funds.

No. 2620 C., Public Works.

Referred, through the Marine Department, for the early approval and countersignature of the Master Attendant.

(By Order.)

(Signed) C. BOWEN, Major, R.E.,
Under Secy. to Govt., P.W.D.

31st December 1883.

From J. H. TAYLOR, Esq., Lieut., R.N.R., Master Attendant, Administrative Department, Madras, to the Chief Secretary to Government, dated 10th January 1884, No. 115.

I have the honor to return the plan and estimate for the extension of the groyne at Bimlipatam, amounting to Rupees 3,890, approved and countersigned, together with the other papers forwarded with endorsement dated 7th instant.

No. 89., Marine.

Endorsement on the above.

Transferred to the Public Works Department.

14th January 1884. (Signed) E. F. WEBSTER,
Chief Secretary.

Order—dated 21st January 1884, No. 177 W., Public Works.

The estimate, amounting to Rs. 3,890, for extending the rough stone groyne in the port of Bimlipatam, is sanctioned.

2. The Accountant-General will be instructed, in the Financial Department, to place the sum of Rs. 2,490* at the disposal of the Public Works Department from Port Funds, on account of the work, for expenditure during the current official year.

	Rs.
* For Works	2,000
„ Establishment	460
„ Tools and Plant	30
Total ...	2,490

3. This sanction has been registered as Local Excluded No. 51 W. of 1883-84, and classified as Miscellaneous Public Improvement, Original Works.

(True Extract.)

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

To the Superintending Engineer, I Circle, with eight enclosures.
„ Examiner, Public Works Accounts, with abstract estimate.
„ Financial Department.
„ Marine Department.

Exd. J. Moses.
Spare Copies

177/2

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1884} Madras.

PUBLIC WORKS.

Dated January, 21st.

Read. *Encl.*

G.O., 21st Jan. 1884, No. 177 W.

JANUARY.

Stone Groyne in the Port of Bimlipatam

Estimate, amounting to Rs. 3,890, for extending the rough —, sanctioned.

No. 4376 Z

FROM,

THE SUPERINTENDING ENGINEER
FIRST CIRCLE.

177/7

TO,

THE CHIEF ENGINEER P. W. Department
FOR IRRIGATION.

DOWLAISHWERAM, 19th December 1883.
Despd 22nd December 83

SIR,

I have the honor to forward herewith copy of a letter No 1763 10th Instant from the Vizagapatam Division Officer, and its enclosures & to request orders by telegraph as regards the extension of the Bimlipatam groyne.

2. That groyne was at the request of the Master-Attendant Administrative Department made only 150' long but it appears that he now wishes it made 150' longer & for doing this the Estimate* now sent provides.

I have the honor to be,
Sir,
your most Obedient Servant
C. Levalet
Offg Supg Engr 1st Circle.

1969-6/3/83 printed with Gl Dr. G 1924 W 9/7/83.

*Rs 3890

JK

No. 2620 C dated 31st Dec 83

From

The Supg Engineer
1st Circle

To The Chief Engineer
P.W.D.
Madras

Dated 19th
Desp 22nd December 83
Recd

No 437 V.Z
Enclosures Two

Bimlipatam Groyne
Extension of the—
Requests Orders regar=
=ding the—by telegraph—

Referred, through the Marine department, for the early approval and counter signature of the Master Attendant—

/ By order /

C. Owen, Major R.E.
Under Secy to Govt
P.W.D.

To The Marine Dept

Referred

No. 1763.

From

The Executive Engineer
Vizagapatam Division

To

The Superintending Engineer
First Circle
Dowlaishweram

Dated Vizagapatam Dt Office
10th December 1883.

Sir,

Encls. 2.
1 Copy of letter
1 do of Telegram
3 Plans.
1 Detailed Estimate
1 Abstract do
1 Specification
1 Calculation sheet

I have the honor to submit herewith plans and estimates amounting to Rs. 3890 for extending the Groyne 150 feet Seaward.

2. I enclose a copy of letter from the Port Officer Bimlipatam requesting that the work be commenced at once and requests you will permit me by wire to go on with the work in anticipation of sanction to the estimate and an allotment of funds.

I have &c
(Sd) A. E. Clerk
Asst Engr in charge
Vizagapatam Division

(True Copy)
Offg Supg Engineer 1st Circle

As requested by the Master Attendant Administrative Department Madras in his telegram dated the 19th November 1883 to the Port Officer Bimlipatam Copy enclosed,

Marine 23 Jan/83 No 387 Mis.

188

Public Works Department.

MASTER ATTENDANT, ADMIN. DEPT. 8 JAN 84 MADRAS

CURRENT No. 2

No. 2620 C
Dated 31st December 1883
Despatched
Received 8 Jan 84 321/84

SUBJECT.

Regarding the Extension of the Binlipatam groyne.

Special

Forwarded to the Master Attendant for information Chief Secy.

Administrative Department.

MADRAS,
Marine Office,
10th January 1884.

No. 115-

177/42

From

J. H. TAYLOR, ESQ., LIEUT., R.N.R.,
Master Attendant,
Administrative Department,
Madras.

To

The Honourable E. Forster Webster.
Chief Secretary to Government,
Marine Department,
Fort Saint George.

SIR,

I have the honour to return the plan and estimate for the extension of the groyne at Bandipatam, amounting to Rupees (3890) three thousand eight hundred and ninety, approved and countersigned, together with the other papers forwarded with endorsement dated 7th instant.

I have the honour to be
Sir
Your most Obedient Servant
W Taylor
Master Attendant
Administrative Department

Recd 23rd July/83 No 387 Misc.

P 4/5

Enclosure to
No 890/14 Jany/84

Transferred to
the Public Works
Department.

Secretariat
Chief Secy.

14/1

Rejected 9.7.83.
"Withdrawn 3.8.83

Marine (1884) Department.

P.W. No. 321

From

The Master Attendant,
Administrative Department,
Madras,

To

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

No. 115

Dated 10 Jany 1884
Received 13
Rec'd 15
Cy. No. 7 of 1884 Marine

Rec'd 12 (3 plans)

Subject.

Returning countersigned Plan and Estimate for extending Groynes at Bunlipatam.

Entered

P. W. Secretariat.

C. No. 321.

Note by Budget Section.

177/13 D

Work

Remarks and References.

Extending Groynes at Bunlipatam. Vizagapatam Division —

Fund Local Excluded
Service Head Misel. Public Imprts
Departmental Head Original Works
Amount of estimate ... ... Rs 3,890
Expenditure in previous year ... ... ,,
Allotment in current year ... ... ,,
Balance required to complete ... ... ,,

Total Rs...

Note of available funds.

The present estimate should be treated as Supplemental to that sanctioned in G.O. No. 1924 W of the 9th July 1883 for Rs 5,980.

The grant required from Local funds will be —

For work	———	Rs 3,890
" Establishment	— "	895
" Tools and Plant	— "	58
		4,845

Budget Clerk.

Worth
16/1

Note by Budget Section.

177/3

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

From J. H. TAYLOR, Esq., Lieut., R.N.R., Master Attendant, Administrative Department, Madras, to the Acting Secretary to Government, Public Works Department, dated Madras, 17th October 1882, No. 8883.

BIMLIPATAM.—This prosperous port has throughout the past year been very unfavorably situated with regard to its landing and shipping conveniences.

2. The river mouth has continued open in the furthermost north corner of the bay, and the one least suited to boating operations.

3. I have given instruction to cut the sand-banks near the round tower, in the most favorable place, directly a good opportunity occurs, and I am in hopes the cyclonic weather now reported at Cuttack may furnish such a fresh in the Bimlipatam River as will justify the operation and give help to the trade; but it is very desirable that the mouth should be fixed, if possible, in the best site, and this, in the universal opinion of all local authorities and observers, can be done by running out a moderately long groyne, say 400 feet, from the rocky spit off the round tower straight to seaward. I am of opinion that as this is on the south side of the river, and the action of the sand is the same at all mouths on this East Coast, the analogy of the Madras Harbour Works would obtain here, and erosion be carried on close round the groyne, if a short one, and the desired result be gained. I would, therefore, respectfully recommend that this measure be carried out, and an estimate of its cost be submitted to Government as a preparatory step.

4. It should, in my opinion, be of large stone thrown down irregularly, and obtained from the neighbouring hill. There are some rocks already in position in the same site, and these have not been disturbed within the memory of the oldest inhabitants. If the work rises to three feet above high-water, it will serve the purpose, and when the river mouth is open, the boats can pass readily in and out of the river, and discharge and load at the river bank in perfectly smooth water at all seasons.

5. The merchants, I am credibly informed, would be willing to have a small toll levied on all goods landed and shipped, in order to secure this benefit, as has been proposed at Cocanada; but if the estimate is not large, the expense may perhaps be sanctioned by Government from Port Funds, towards which Bimlipatam has largely contributed without having any assistance hitherto.

6. A rough plan of the port is sent for easy reference.

No. 937 E., Public Works.

Referred to the Superintending Engineer, First Circle, for report, and for submission of an estimate for the work described in paragraph 3 of the Master Attendant's letter.

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Ag. Secretary to Government.

24th October 1882.

From G. T. WALCH, Esq., Officiating Superintending Engineer, First Circle, to the Chief Engineer, Public Works Department, dated Dowlaishweram, 12th February 1883, No. 613 V.Z.

With reference to your No. 937,* dated 24th October 1882, and to G.O., No. 47 W., 8th January 1883, I have the honor to state that on 21st ultimo I visited Bimlipatam and the accompanying plans † and estimates have been prepared in accordance with orders given on the spot.

2. The efficacy of the work I consider doubtful, but as the Master Attendant, Administrative Department, who has more experience about such works than I have, considers it likely to prove useful and as it appears this is also the "opinion ‡ of local authorities and observers," and as the proposed expenditure is small, I recommend that the experiment be made.

3. The estimate does not provide for any stone except such as can be carted and handled by appliances now obtainable at the place; to make the groyne of such masses as would not be liable to be disturbed during really heavy weather would require special and costly plant, and the stone provided for, if well packed, will stand all but heavy weather. After such weather the groyne would have, if it proves useful, to be made up again.

* Returned, herewith, with its enclosure (1 Survey made by Lieut. Taylor, R.N.R.)

†1 Survey plan of port of Bimlipatam Harbour.
2 Sections across sand bank and part of backwater (2 sheets).
3 Levels (Sections) at site of proposed groyne.
4 Specification.
5 Detail and Abstract Estimates.

‡ See paragraph 2 of Captain Taylor's letter with Proceedings of Madras Government, No. 47 W., 8th January 1883.

Memorandum by the Chief Engineer, Public Works Department, dated 23rd February 1883, No. 470 C.

From J. H. TAYLOR, Esq., Lieut., R.N.R., Master Attendant, Administrative Department, to the Secretary to Government, Public Works Department, dated Madras, 6th March 1883, No. 1969.

I have the honor to return the correspondence, plan and estimate for a rough groyne at the port of Bimlipatam, and to remark thereon that I entirely concur in the opinion of the Chief Engineer that there are conditions at that port that remove the case from those where straight sand beach on this coast renders the action of groynes reliable; but I have had great experience of Bimlipatam, having visited it many consecutive years when I commanded ships in the East India Trade, and I am convinced that the rocky spit that now exists was the cause of the river mouth remaining fixed at the old place near the tower from which it was removed by the freshes of the river in a very exceptional season, seeking a more direct opening to the sea. This opening is unfortunately so far from this spit that it has not been acted upon by it, and has maintained itself, in spite of certain efforts to bring back the *status quo*.

2. The drift sand also has been a serious impediment to the re-action. I am confident that a groyne would be the best method to restore comfort to the port, and

I hope it will be adopted. I cannot, however, say that I approve of the idea of a small stone work after the groyne has entered the sea, though for its root from the tower to high-water mark to keep off drift sand and check storm current, it would answer with occasional repair; but I should be sorry to see any stones smaller than those used in the Public Works groynes at Madras, or Sir Arthur Cotton's groynes at Vizagapatam, placed in positions where they will be constantly exposed to wave and current action. I do not know the method employed in placing these stones, but I imagine it requires no plant of any expensive quality. The mode of operation must be well known in the Public Works Department. With a groyne of that sort I believe much good may be effected. I also, on reconsideration, think that I overstated the required length. I should like to see a groyne of 150 feet from high-water mark left for a season or two. I think that might suffice, and a portion of the reserved estimate might be used in helping to close the present mouth when the new work is ready. Bimlipatam has never had anything done for it, and when its river is open, it enjoys facilities for rapid despatch of steamers and general landing and shipping that no amount of money available could obtain for Vizagapatam.

I believe they average about one ton weight.
J. H. T.

No. 580 C., Public Works.

The present proposals of the Master Attendant, with a copy of the Chief Engineer's memorandum, No. 470 C., dated 23rd February 1883, are forwarded to the Superintending Engineer, First Circle, for early submission of a revised estimate.

2. The method of lifting large stones with chains and by distributing the weight is so well known and universally applied, that no special remark is called for.

3. The collection of materials should proceed in anticipation.

4. The return of the papers now sent is requested.

(By Order.)

(Signed) J. PENNYCUICK, Major, R.E.,
Deputy Chief Engineer, P.W.D.

10th March 1883.

From G. T. WALCH, Esq., Officiating Superintending Engineer, First Circle, to the Chief Engineer, Public Works Department, dated Dowlaishweram, 18th March 1883, No. 689 V.Z.

With reference to your memorandum, No. 580 C., dated 10th March 1883, I have the honor to request instructions as to what is to be the limiting size of the stones to be used in the Bimilipatam groyne.

2. The place where they will have to be quarried is about a mile away; from this they will have to be brought in the small carts of the country (unless of course special plant is to be provided, which I understand is not intended), and they will have to be carted or carried over some 200 or 300 yards of heavy sea sand.

1 Master Attendant's letter No. 8883, dated 7th October 1882.
4 Plans.
1 Report.
1 Survey plan (by Taylor, Esq.)
1 Detailed Estimate.
1 Abstract "
1 Letter No. 613 V.Z., dated 12th February 1883.
1 Master Attendant's letter, No. 1969, dated 6th March 1883.
1 Memorandum No. 470 C., dated 23rd February 1883.

3. My specification, which has not been approved, provided for one-third of the stones being 3 cubic feet and they would weigh between 400 lb. and 500 lb. ; half, not less than 2 cubic feet which would weigh about 300 lb., and the remaining one-sixth, not less than ½ cubic foot or say 75 lb., the last being required, I thought, for filling interstices.

4. As said in my letter, it is perfectly impossible without special plant to place stones the weight of which will prevent their being displaced in really heavy weather ; and this being the case, I provided for such sizes, as I considered could be fairly easily handled and roughly *built*, not merely thrown down at random.

No. 703 C., Public Works.

Referred to the Superintendent, Madras Harbour Works, for favor of his opinion as to the weight and size of the stones which, under the circumstances, he would recommend to be used, having in view the experience gained on the Madras Harbour Works.

(Signed) R. H. SANKEY, Colonel, R.E.,
Chief Engineer, P.W.D.

29th March 1883.

From F. N. THOROWGOOD, Esq., M. INST. C.E., Superintendent, Madras Harbour Works, to the Chief Engineer, Public Works Department, dated Madras, 30th March 1883, No. 59 W.

I have the honor to return, herewith, the papers which accompanied your memorandum, No. 703 C., of the 29th March, in which you ask for my opinion on the size and weight of stones suitable for building a groyne at Bimlipatam.

2. It appears that the proposed groyne would have to bear the full weight of the surf waves from the south and south-east, and I imagine that these would be very similar to the surf waves at Madras during the south-west monsoon. This being so, there can be no doubt that the larger the stones are, of which the groyne is made, the better. I am of opinion that no stones of less than 4 cwt. should be employed, and that the greater part (say two-thirds) of the work should be built of stones weighing 7 cwt. each, or, at the very least, so heavy that three will weigh one ton. The size of such stones would be about 6 cubic feet.

3. I do not consider that any packing or building up of small stones would be of any use against breaking waves.

4. The surf bank of the south pier of this Harbour was a fairly successful work similar to the proposed groyne, and for the southern side of this the stones were not less than 7 cwt. each. Many of them were taken from the old Public Works Department groynes near Clive's Battery.

5. I would venture to remark that the groyne will not stand with slopes of 1 to 1, but that the waves must be allowed to determine what slope will suit them on the south side. I should think that 3 or 4 to 1 slope would be about the angle of the south side of the groyne.

6. The cost of large boulders brought from the neighbourhood of Guindy and deposited by coolies in the south surf bank was from Rs. 1-12-0 to Rs. 2-4-0 a ton, according to size of the boulders.

No. 753 C., Public Works.

Communicated to the Superintending Engineer, First Circle for information and guidance with reference to his letter No. 689 V.Z., dated 18th March 1883.

(Signed) R. H. SANKEY, Colonel, R.E.,
Chief Engineer, P.W.D.

5th April 1883.

177
5/13

G. T. WALCH, Esq., Officiating Superintending Engineer, First Circle, to the Chief Engineer, Public Works Department, dated Dowlaishweram, 3rd June 1883, No. 101 V.Z. :—

With reference to your memoranda, No. 753 C., dated 5th April 1883, and No. 850 C., dated 16th April 1883, I have the honor to forward, herewith, revised estimate,* abstract and detail, for the Bimlipatam Groyne together with the documents† connected with it, named in the margin.

2. In accordance with your telegram, dated 16th May 1883, the Divisional Officer has been ordered to push on with the work with reference to which he remarks : "The present opening, however, is what generally occurs every year during the south-west monsoon and so there does not appear to be anything very urgent to call for the immediate execution of the work."

* Rs. 5,980.

† 1 Plan "Survey of port of Bimlipatam Harbour" dated 4th February 1883, which accompanied former estimate.
1 Enlarged Sketch.
1 Sheet of (Tracing Linen) "Levels for the Groyne," dated 28th May 1883.
1 Specification Report with revised estimate.
1 Chief Engineer's Memorandum, No. 939 E., dated 24th October 1882, with a plan.
1 Chief Engineer's Memorandum, No 470 C., dated 23rd February 1883.
1 Madras Master Attendant's letter, No. 1969, dated 6th March 1883, to the address of the Chief Engineer, Public Works Department.

No. 1159 C., Public Works.

Forwarded to the Master Attendant for countersignature to the plan and estimate, if approved.

Early return is requested.

(By Order.)

(Signed) C. BOWEN, Major, R.E.,
Under Secy. to Govt., P.W.D.

20th June 1883.

From J. H. TAYLOR, Esq., Lieut., R.N.R., Master Attendant, Administrative Department, to the Secretary to Government, Public Works Department, dated Madras, 26th June 1883, No. 5826.

I have the honor to return the letter from the Superintending Engineer, First Circle, No. 101 V.Z., dated June 3rd, 1883, with revised estimate and plan for the construction of a rough stone groyne at the port of Bimlipatam, at a cost of Rupees (5,980) five thousand nine hundred and eighty, both of which are approved and countersigned by me.

2. With reference to paragraph 2, I would observe that the intention and hope of the groyne are that it will fix the mouth, which, for several years, has been very troublesome in its movements : from this point of view it seems very desirable that expedition should be used, in order to secure the present opening before adverse action sets in.

ORDER—dated 9th July 1883, No. 1924 W., Public Works.

The plan and estimate, amounting to Rs. 5,980, for constructing a rough-stone groyne in the Port of Bimlipatam, in the Vizagapatam Division, are sanctioned for early execution.

	RS.
Works	5,980
Establishment	1,375
Tools and Plant	90
Total ...	7,445

2. The Accountant-General will be instructed, in the Financial Department, to place the sum of Rs. 7,445, as per margin, at the disposal of the Public Works Department, from the balance to the credit of Port Funds, for the execution of the work.

3. The Superintending Engineer will furnish the Examiner, Public Works Accounts, with a duplicate of the abstract estimate in proper form.

4. This sanction has been registered as Local No. 19 W. of 1883-84 and classified as Miscellaneous Public Improvement, Original Works.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, First Circle, with six Enclosures.
" Examiner, Public Works Accounts.
" Financial Department.
" Marine do.
" Master Attendant.

Exd. E. Fernandez.
Spare Copies

177/16 17

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1883} Madras.

PUBLIC WORKS.

Dated July, 9th.

Recd. *Encl.*

G.O., 9th July 1883, No. 1924 W.

JULY.

Rough-stone Groyne at Bimlipatam

Plan and estimate for constructing a —, sanctioned with remarks.

177/9a 6

Enclosure in a letter No 437 v. 2 Dated 19th December from the Superintending Engineer first Circle.

No 11573
dated 27 Dec 1883

PUBLIC WORKS DEPARTMENT.

Draft
~~Post~~ Copy of Service Message.

From Madras To Doudaichneram

From Madras Govt. To Supdg Engr 1st Circl.

28th Decr 1883.

Proceed with Extension Kumlipatam Groyne. Orders on Estimate will follow.

Sd/ C. Bowen Hyde Lt
By Chief Engr & Secy

Letter despatched
28 Dec 1883

It is proposed to issue this Telegram Anew. The Returns can then be disposed of in the usual course.

K.S.
28-12-83.

C.J.
28/12

P & D

Telegram

177/15

To S.S. I Circle
Rajahmundry

Your 437 V.3. & nineteenth ultimo.

Estimate for extending Bimlipatam Groyne sanctioned.

Ch C.J.
16-1-84

Disch. 21-1-84

Public Works Department.

No 1775

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 21st January 1884

Read the following

177/16

From the S. E. First-Circle No 437 dy 19 Decr 1883
Endt from the Marine Depr — No 89 dy 14 January 1884.

6

The estimate amounting to Rs 3,890/1 for extending the rough Stone groyne in the Port of Bimlipatam, is sanctioned -

2. The Accountant General will be instructed in the Financial Dept to place the sum of Rs 2490 + ~~1395~~ - at the disposal of the P. W. Dept from Port-funds on account of

* For Works — Rs ~~3890~~ 2490
" Establt — " ~~495~~ 360
" Tools & Plant — " ~~58~~ 30
Total Rs ~~4443~~ 2490

of the work, for expenditure during the current official year.

3. This question has been registered as Local Enclosed by G.I.C of 1883-84, and classified as Miscellaneous Public Improvement, Original Works.

16-1-84

16-1-84

7.C. 18/1

B.Co. 324 W. 8-2-84
" 365 W. 11-2-84.

To The S.E.I Circle, with 8 enclos.
" Exec Engr, with abstract etc.
" Fin. Deptt
" Marine Deptt

(Ch. Secy for comln. inform.)

17

177/17

1153.

Govt. of 1882 Madras.

PUBLIC WORKS.

(17)

Date 2/11

Rep. B.

G. O. 2/87 Jany 1887 No. 177 W.S.

Stone Quarries in the port of Vizagapatam

Estimate Rs 3890, for extending the Quarries — Sanctioned.

60/

Dc 22/1. Pl. 22/1 29/1.

Supdt Govt Press