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MADRAS RECORD OFFICE.**Government of Madras.***Public works* **DEPARTMENT.**

G.O. No. 515

Press

Mis.

440-42

Dated 21/2

1871

Not to be folded or roughly handled

14

*Proceedings of the Madras Government, Public Works Department,
21st February 1871.*

No 440 Read the following letter from the Acting Superintending Engineer, 5th Division, to the Chief Engineer for Irrigation, dated Bangalore, 20th December 1870, No 198 —

I HAVE the honour to submit, for the sanction of Government, a revised estimate, amounting to Rupees 15,330, in the form of a comparative statement, for straightening and improving the Allungal Channel, in the Villapooram Talook of South Arcot.

One Survey Sketch. Four Plans of Sluice Dams One Abstract Estimate „ Comparative Statement „ Specification „ Report	
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2. An estimate of Rupees 12,620 was sanctioned in G. O., No 998, of the 9th April 1870, for the improvement of the Allungal Channel, and an allotment of Rupees 11,000 for this service was made in the Budget of the current official year. A sum of Rupees 3,688-6-4 was expended on the work during the last official year, and a further sum of Rupees 1,864-9-7 has been disbursed on the project during the current year up to the end of October last.

3. The necessity for the supplemental estimate has arisen in consequence of its having been found necessary to make certain alterations in the original design for the reasons explained in the accompanying report by Mr. R. E. Norfor, Executive Engineer, at present in charge of No 1 Range, and whose report conveys all detailed information on the project.

4. The difference between the original and revised estimates shows an increase in the cost of the whole work of Rupees 2,710. To meet this excess, and in order that the work may be completed during the current official year, I have the honour to request that Government will be pleased to sanction the abovementioned amount to be transferred for the purpose named, and as it can be spared, from the grant of Rupees 20,000* for the anicut across the Pooniar River.

* Item No 97 of Budget of 1870-71

5. It appears to me clear that, after the large amount of work that has been executed on this most desirable project, it would be a pity for its beneficial effects to be marred by the contention that would arise were the provisions of the sanctioned estimate to be carried out to the letter. And, as I consider that the course now advocated presents a practical solution of the difficulty, I trust Government will be pleased to approve of the transfer of funds now proposed

From R. E. NORFOR, Esq., Executive Engineer, No 1 Range, South Arcot, to the Acting Superintending Engineer, 5th Division, dated Cuddalore, 2nd December 1870, No 500-A.

WITH reference to the estimate of Rupees 12,620, sanctioned in G. O., No 998, of the 9th April 1870, Item No 95 in Budget of 1870-71,

One Index Map with sections of Channel
 „ Survey and Sections of extension of Channel now proposed
 Three Plans of Masonry works (original design)
 Four „ „ (revised „)
 One Specification Report.
 Three Estimates.

for the improvement of the Allungal Channel, in the Villapooram Talook, I have the honour, in forwarding the plans, estimates, and specifications noted in the margin, to bring to your

notice that it is found necessary to make certain alterations in the original design, which will exceed the estimated cost by Rupees 2,710, and for which I beg you will be so good as to obtain the authority of Government

2. A sum of Rupees 3,688 6-4 was expended on this work in the last official year, and Rupees 1,864-9-7 in the current year up to the end of October last. A little more than half the

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earthwork provided for in the estimate has been executed for these sums, and the ryots of Annangur now raise objections to the project being carried out as originally designed, on the ground that the supply to their tank will be diminished, inasmuch as they will, under the new arrangements, be deprived of the drainage and surplus from several tanks and tangles above the Annangur Tank; and a reference to the survey sketch will show that the objections raised are justifiable, and, therefore, deserving of every consideration, especially as it is quite feasible to supply the Panampett Tank without interfering with long existing rights

3 From time immemorial the Annangur Tank has received the surplus water from the Vatapoory Tangle situated immediately above it (see survey), and this tangle receives the drainage of the Kolatoor and Salamadoo tanks; but, according to the new arrangements, a branch channel is proposed to be cut from the Allungal main to fall into the Vatapoory Tangle and from thence conducted into the Panampett Tank, *damming up* the surplus channel from the Vatapoory Tangle, which falls into the *Annangur Tank*

4 The Annangur Tank is to be supplied by an old oday from the Allungal main. It has always had this *in addition* to the surplus from the Vatapoory Tangle, which the new arrangement will cut off from it, and the ryots under the tank with justice complain very bitterly, and are determined not to allow the work to be proceeded with as originally designed by this department

5 To satisfy all parties a more equitable arrangement is now proposed, which is to allow the Annangur Tank to receive as formerly the drainage of the tanks above it, and for the supply of the Panampett Tank it is proposed to extend the Kolatoor branch channel along the Trunk Road No. VIII for a distance of 800 yards, and from thence the channel is to be carried on in a north-easterly direction for a distance of 1,850 yards, where it will fall into a large oday, which falls into and supplies the Panampett Tank. In this manner the Panampett Tank will receive its supply from the Allungal main without upsetting the existing mamool, of which the ryots are very tenacious

6. These alterations will entail, as I have said, the extension of the Kolatoor branch channel, and at the same time its discharging capacity will require to be increased to meet the extra demand upon it for the supply of the Panampett Tank

7. The bottom width of the Kolatoor Channel, as originally designed, is 3 feet, and it is now proposed to increase it to 9 feet as far as the point where a branch is taken off to the Kolatoor Tank, and from thence it will have a bottom width of 6 feet up to where it terminates at the oday.

8. The above alteration in the design of the channel to supply the Panampett Tank will cost Rupees 1,910 in earthwork in excess of the original estimate, thus —

	RS
Branch Channel to Panampett Tank, which has been abandoned	430
Do to Kolatoor Tank, now to be enlarged	240
Original Estimate	670
Cost of altered design as per Estimate A.	2,580
Difference in increase ..	1,910

9 As the Kolatoor Channel will be enlarged the masonry works across it will have to be altered to suit the increased width of the channel, and a few additional masonry works will be required to pass some small irrigating channels, which cross this branch in its course to the oday, for the purpose of supplying some fields just above the Kolatoor Tank (See Survey)

10 In the original design the channels crossing the Kolatoor branch were passed over by means of four aqueducts (Original Plan No. 9-A), the Kolatoor Channel passing underneath, but the designs for these buildings do not appear to be suitable, and it is proposed to adopt four syphon sluices in their stead (see plan Sheet D), costing Rupees 960, * against Rupees 400 originally sanctioned scheme. In addition to these three more syphon sluices, as per Plan E, will be

* Estimate B.

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required in that portion of the channel proposed in extension of the original scheme. Another syphon sluice and head-sluice, as per Plans F. and C, will be needed at the Kolatoor and Panampett branches respectively

11 The dam and division sluice in the original scheme, Plan No 10, will be slightly altered to suit the increased waterway proposed for the Kolatoor branch. The estimate for this work will be Rupees 460* instead of Rupees 340, or Rupees 120 higher

* Plan A., Estimate B

12 The dam and division sluice in the original scheme, Plan No 12, is also altered, as the branch to the Panampett Tank at first proposed to be taken off at this point is abandoned. The estimated cost of the original design is Rupees 1,150, and the altered plan Rupees 716,† a

† Plan B., Estimate B

saving of about Rupees 434 will be effected in this.

13 Another saving of Rupees 647 can be made at the head of the channel by doing away with the rough stone revetment proposed for the inner slopes of the Allungal main to a length of 300 yards and in its stead it is proposed to plant the banks thickly with nannul grass, which grows luxuriantly. The reason I advocate this is because the stonework cannot be done for under 5 Rupees a cubic yard while the estimate provides only 1½ Rupees, and the thickness allowed for the rough stone work (18 inches) laid on a sandy slope is insufficient, and will not, I think, stand any kind of current.

14 The alterations enumerated above produce the following results as to the original and revised estimates,

	Original. RS	Revised RS
Earthwork and stonework	8,610	9,870
Masonry works	3,050	4,500
Compensation	960	960
	12,620	15,330
		12,620
		Difference... 2,710

and for the authority for this additional outlay I respectfully beg you will be good enough to obtain the early sanction of Government, as it is very important the work should be taken in hand at the end of December or beginning of January.

No. 13.

No. 441. NOTE by the Chief Engineer for Irrigation.

THE revised estimate, Rupees 15,330, for improving the Allungal Channel in South Arcot has been prepared in consequence of the objections raised by the Annangur ryots to the arrangements for the supply of their tank. The circumstances are fully explained in the Executive Engineer's letter, and, though it is not clear that with an improved main channel the supply to the tank in question would not have been ample, it is probably advisable not to interfere more than is absolutely necessary with the old sources of supply of the several tanks, unless it can be demonstrated that an improved supply will be substituted. Such being the case I would recommend the sanction of the revised arrangements at an additional cost of Rupees 2,710.

2. The dividing dams, Plans A., B., and C, should be placed in positions which will admit of a sufficiently substantial bank between the channels. Plan B. is better than the others, but this dam also might with advantage be placed a few feet

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lower down the channel. For none of the dams are aprons provided, and at least a few feet in width of rough stone or of cubes, if less expensive, would seem to be required.

FORT SAINT GEORGE, (Signed) J. MULLINS, Major, R. E.,
21st January 1871. Chief Engineer for Irrigation.

No. 442. ORDER THEREON, 21st February 1871, No. 515.

IRRIGATION, No. 25.

IN Proceedings No 998, dated 9th April 1870, the Government sanctioned estimates, amounting to Rupees 12,620, for the improvement of the Allungal Channel, in the Villapooram Talook of the South Arcot District. The Superintending Engineer now submits, through the Chief Engineer for Irrigation, a revised estimate of Rupees 15,330 for the project, and explains that the excess of Rupees 2,710 is due to the necessity which has arisen for modifying the original arrangements so far as to meet the just demands of the ryots of Annangur, who would be deprived of the drainage and surplus from several tanks above the Annangur Tank if the improvements were carried out as originally designed.

2. Major Mullins recommends that the additional outlay be authorized, and the Government accordingly sanction the revised estimate of Rupees 15,330.

3. As it appears that the expenditure in 1869-70 was Rupees 3,688, and an allotment of Rupees 11,000 has been provided for the project in the current year's Budget, the additional amount required is Rupees 642, which His Excellency the Governor in Council resolves to divert from the assignment for the anicut* across the Pooniar River.

	RS.	RS.
Revised estimate	15,330	
Expenditure in 1869-70	3,688	
Allotment, 1870-71	11,000	
	14,688	
	642	

* Item No 97 of Budget

4. The attention of the Superintending Engineer will be drawn to the suggestions in paragraph 2 of the Chief Engineer's Note.

(True Extract.)

Major, R. E.,

Joint-Secretary to Government.

To the Superintending Engineer, 5th Division.
.. Controller of Public Works Accounts
.. Chief Engineer for Irrigation

Exd. A S. Rodgers

5A
N^o 198. Sup: Engr's Office & D^o
Bangalore 20th Decr 1870

From
The Ag. Sup: Engineer
5th Division

To
The Chief Engineer
for Irrigation.

Sir,

Enclosures. 9 I have the honor to submit,
Survey Sketch. for the sanction of Government, a
Plans of sluice dam. revised Estimate amounting to Rs 15,330
Abstract Esti- in the form of a Comparative State-
-ment. -ment, for straightening and impro-
Comparative - vement, for straightening and impro-
Statement. - vement, for straightening and impro-
Specification. - vement, for straightening and impro-
Report. Villapuram Talook of South Arcot.

2. An Estimate of Rs 12,620 was sanctioned in G.O. No 998, of the 9th April 1870 for the improvement of the Allungal Channel, and an allotment of Rs 11,000 for this service was made in the

Budget of the Current Official year. - Item No. 95
A sum of Rs 3,688-6-4 was expended of Budget of
on the work during the last Official 1870/71.
year, and a further sum of Rs 1864-9-7
has been disbursed on the project
during the current year up to the
end of October last.

3. The necessity for the supple-
- mental Estimate has arisen in Con-
- sequence of its having been found
necessary to make certain alterations
in the Original design, for the reasons
explained in the accompanying
report by Mr. R. E. Norfor, Executive
Engineer, at present in charge of
No. 1 Range, and whose report conveys
all detailed information on the
project.

4 The difference between the
Original and revised estimates shows

in No. 97 of
est 1870/71.

an increase in the cost of the whole^{7A}
work of Rs 2,710. To meet this excess
and in order that the work may
be completed during the current
Official year, I have the honor to
request that Government will be
pleased to sanction the above-
mentioned amount to be transferred
for the purpose named, and as it
can be spared, from the grant of
Rs 20,000- for the annicut across the
Poomar river.

5. It appears to me clear that
after the large amount of work
that has been executed on this
most desirable project, it would be
a pity for its beneficial effects to
be marred by the contention that
would arise, were the provisions of
the sanctioned estimate to be carried

out to the letter. And as I consider
that the course now advocated
presents a practical solution of
the difficulty, I trust Government
will be pleased to approve of the
transfer of funds now proposed.

I have the honor to be
Sir,

Your Most Obedt. Servt.

Richd. Roberts Esq. M. A. Col. L.
M. A. Esq. Esq. 5. D.

50

No. 500

4

Range Office No. 1,
Buddalore, 2^d December 1870.

From,

R. E. Norfor Esq.,
Executive Engineer, 1st Range,
South Arcot.

To,

The Asst. Superintending Engineer,
5th Division.

Sir,

Enclosures 13

1 Index map with
sections of channel.

1 Survey & sections of
extension of channel
now proposed.

3 Plans of masonry
works / original design.

4. Plans of masonry
works / revised design.

1. Specification report.

3 Estimates

With reference to the Estimate
of Rupees 12,620, sanctioned in G. O. No. 998
of the 9th April 1870, Item No. 95 in Budget
of 1870-71, for the improvement of the Alluvial
channel, in the Villapooram Talook,

I have the honor, in forwarding the
Plans, Estimates and Specifications noted in
the margin, to bring to your notice that it is
found necessary to make certain alterations
in the original design, which will exceed the
estimated cost by Rs 2,710, and for which
I beg you will be so good as to obtain the
Authority of Government.

2. A sum of Rupees 3,688. 6-4 was
expended on this work in the last official
year.

gear, and Rupees 1864-9-7 in the current year up to the end of October last; a little more than half the earth work provided for in the estimate has been executed for these sums, and the ryots of Anungoor now raise objections to the project being carried out as originally designed, on the ground that the supply to their Tank will be diminished, in as much as they will, under the new arrangements, be deprived of the drainage and surplus from several tanks and Laugles above the Anungoor Tank - and a reference to the Survey Sketch will show that the objections raised are justifiable, and therefore deserving of every consideration. especially as it is quite feasible to supply the Panampett Tank without interfering with long existing rights.

3. From time immemorial the Anungoor Tank has received the surplus water from the Vatapoory Laugle situated immediately above it (See Survey), and this Laugle receives the drainage of the Kolatoor and Salamados Tanks, but

The surplus
and is sent down
the branch channel
as before

As it is
suggested that the
main channel
will be carrying
more water than
before

13A.
according to the new arrangements a branch channel is proposed to be cut from the Allungal main to fall into the Vatapoory Laugle, and from thence conducted into the Panampett Tank, damming up the surplus channel from the Vatapoory Laugle which falls into the Anungoor Tank.

4. The Anungoor Tank is to be supplied by an old Odag from the Allungal main, it has always had this in addition to the surplus from the Vatapoory Laugle, which the new arrangement will cut off from it, and the ryots under the Tank with justice complain very bitterly, and are determined not to allow the work to be proceeded with as originally designed by this Department.

5. To satisfy all parties a more equitable arrangement is now proposed, which is to allow the Anungoor Tank to receive, as formerly, the drainage of the Tanks above it, and for the supply of the Panampett Tank it is proposed to extend the Kolatoor branch channel along the
Tank

Trunk Road No 8 for a distance of 800 yards, and from thence the channel is to be carried on in a North Easterly direction for a distance of 1,850 yards, where it will fall into a large Odag which falls into and supplies the Panampett Sank. In this manner the Panampett Sank will receive its supply from the Allungal main without upsetting the existing mahmool, of which the ryots are very tenacious.

6. These alterations will entail, as I have said, the extension of the Kolatoom branch channel, and at the same time its discharging capacity will require to be increased, to meet the extra demand upon it, for the supply of the Panampett Sank.

7. The bottom width of the Kolatoom channel, as originally designed, is 3 feet, and it is now proposed to increase it to 9 feet as far as the point where a branch is taken off to the Kolatoom Sank, and from thence it will have a bottom width of 6 feet up to where it terminates at the Odag.

8. The

8. The above alteration in the design of the channel to supply the Panampett Sank will cost Rs 1,910 in Earth work in excess of the Original Estimate thus.

Branch channel to Panampett Sank which has been abandoned Rs 430 - - -
- do - to Kolatoom Sank now to be enlarged - - - 240 - - -

Original Estimate - 670 - - -

Cost of altered design as per Estimate A - - - Rs 2,580 - - -

Difference in increase - - - 1,910 - - -

9. As the Kolatoom channel will be enlarged the masonry works across it will have to be altered to suit the increased width of the channel, and a few additional masonry works will be required to pass some small irrigating channels, which cross this branch in its course to the Odag for the purpose of supplying some fields just above the Kolatoom Sank / see Survey/.

10. In the original design the channels crossing the Kolatoom branch

were

were passed over by means of 4 Aqueducts / Original plan No 9 A / the Kolathoor Channel passing underneath, but the designs for these buildings do not appear to be suitable, and it is proposed to adopt 4 Syphon Sluices in their stead / See plan sheet D / costing Rupees 960 against Rs 400 originally sanctioned ^{Estimate B} scheme. In addition to these, 3 more Syphon Sluices as per Plan E will be required in that portion of the channel proposed in extension of the original scheme. Another Syphon Sluice and Head Sluice as per Plans F and C will be needed at the Kolathoor and Panampett branches respectively.

11. The Dam and Division Sluice in the original scheme Plan No 10 will be slightly altered to suit the increased waterway proposed for the Kolathoor branch - the estimate for this work will be Rs 460, instead of Rs 340 or Rs 120 higher. ^{Plan A}

12. The Dam and Division Sluice in the original scheme, Plan No 12, is also altered as the branch to the Panampett ^{Estimate B}
Earth

* Plan B
estimate B

17A
Earth at first proposed to be taken off at this point is abandoned. The estimated cost of the original design is Rs 1150 and the altered plan No 716, a saving of about Rs 434 will be effected in this.

13. Another saving of Rs 647 can be made at the head of the channel, by doing away with the rough stone rivetment proposed for the inner slopes of the Allungal main to a length of 300 yards, and in its stead it is proposed to plant the banks thickly with Kanak grass which grows luxuriantly: the reason I advocate this is because the stonework cannot be done for under 5 Rs a cubic yard, while the estimate provides only 1½ Rs, and the thickness allowed for the rough stone work 18 inches / laid on a sandy slope is insufficient, and will not, I think, stand any kind of current.

14. The alterations enumerated above produce the following results as to the original and revised estimates.

Earth

Original - Revised
8,610 9,870

3,050 4,500

960 - 960

12620 15330

12,620

Difference 2710

and for the authority for this additional outlay I respectfully beg you will be good enough to obtain the early sanction of Government, as it is very important the work should be taken in hand at the end of December or beginning of January.

Have the honor to be

Signed / P. E. Norfor

Executive Engineer,

Mr Hume, S. Acad.

/True copy/

John Rolfe Smith, R.E.

At: Superintendy Eng. 5th Div.

Agricultural — 5th Division, D. I. W. New Work.
 South Act District No. 1 Range. Villaputnam Taluk.
 Abstract of Revised Estimate of 1870-71.

Work. — Straightening and Improving the Allimgal Channel
 from the Ponnai River for the better supply of several
 tanks depending upon it, and cutting and improving
 branch channels from the Main Channel. —

Quantities
 Number Description of Work. Rate Per Amount Total.

Straightening and Improving
 the Allimgal Channel. —

Sloping the North bank of the
 Ponnai River at the new head

538 1/2 6th yards of Earth work — " 1 8 6th 56. 1 6.

2490 3/8 — do — of — do: — " 1 5 do 220. 8.

33 1/2 32 — do — of — do — " 1 do 20. 14. 1

122 1/2 — do — of — do — " 1 2 do 8. 14. 11

499 3/32 — do: — of — do — " 1 5 do 106. 11

106 1/4 — do — of — do: for widening

the embankment of the
 river — " 1 do 66. 8.

cutting New head —

4725 6th yards of Earth work — " 1 1/2 6th 343 12.

6716 3/4 — do — of — do — " 1 9 do 734. 10. 8.

clearing the old channel.

449 1/4 6th yards of Earth work — " 10 do 254 14. 14.

Carried forward 1862. 7. 1.

Brought forward 18271

New Cutting

3946 1/2	6 Yards of Earth work Sect. No. 1	1	By 246.06
21739	do of do	2	1 do 1358 11
1624	do of do	3	1 do 101.8
3045	do of do	4	1 do 190.5
742 9/32	do of do	5	11 do 42.8.5
1063 3/4	do of do	6	11 do 60.15.1
4331 2/3	do of do	7, 8, 9, 10	1 do 240.11.8
988 3/8	do of do	11	11 do 56.10
30	do of do	11	11 do 15
1564	do of do	12	11 do 89.9.8
839 1/2	do of do	13	11 do 48.1.6
1414 1/2	do of do	14	11 do 81.7
1240	do of do	15	12 do 92.9.8
259 1/2	do of do	15	11 do 16.3.6
1648 1/4	do of do	16	9 do 48.10.8
1260	do of do	17	11 do 85.5
185 5/8	do of do	17	11 do 10.11.2
1968 1/4	do of do	18	1.3 do 153.12.2
450	do of do	18	12 do 32.13
871 3/5	do of do	18	1 do 54.4.2
457 25/64	do of do	19	10 do 23.13.2
960	do of do	20	11 do 55
141 3/16	do of do	20	10 do 7.5.8

Straightening and clearing from the Anangor Branch channel

18448 3/4	6 Yards of Earth work	1	do 1153.9
3190	Square yards of planting Kaunal at the head in lieu of rubble stone provided in the original estimate	9	By 149.8.6
	Brought forward		63234.11

Brought forward 63234.11.23A

4	boots for watering & watching Kaunal for 6 months at 4 each	16	do 96
	Sundries & Superintendence	10	Cent 640.11.10
	Improving and cutting the supply channel to Khaton Sink with a bottom width of 9 feet instead of 3 ft as originally proposed & extending the same to Panampint Sink		
13241	6 Yards of Earth work for forming embankment on the East side of the channel from the head & for cutting up to the branching of Khaton Chl	1	By 827.9
18254	do of Earth work of cutting the same channel up to the stream supplying Panampint Sink	1.3	do 1426.1.6
602 7/16	do of do do do	10	do 31.5.8
1115 5/16	do of Earth work of cutting a branch channel to Khaton Sink	1	do 69.11.3
	Sundries and Superintendence	10	Cent 2354.7.2580
	Straightening and Improving the Serovunthead Supply channel		
2666 2/3	6 Yards of Earth work	1.3	By 208.5.1
	Sundries and Superintendence	10	Cent 21.10.8.230
	Total amount of Earth works		9870

Masonry Works

Constructing a Dam & Division
Sluice at the head of Branch
channel to Khatkor & Panampant
Tanks as per Plan A. in lieu of one
originally proposed as per plan
No. 10.

2850 ³/₄ 6¹/₂ ft. of Brick in chumam — " 2.. Cft 356 5 6
11 ¹³/₁₆ Squares of Plastering with 2 Coats
of chumam — 3.. " Sq^{rs} 35. 7.
Excavating foundation forming
embankment — 24. " "

418 12. 6.

Sundries & Superintendence — 10.. " Cent 41. 3 6. 460.

Constructing a Dam and Division
Sluice in the Panampant branch
channel at the head of Khatkor
branch as per Plan C.

1490 ¹/₄ 6¹/₂ ft. of Brick work in chumam — " 2.. Cft 186 4 6.
6 ³/₄ Squares of Plastering with 2 Coats
of chumam — 3.. " Sq^{rs} 20 4. "
Excavating foundation forming
embankments — 13. " "

219 8. 6.

Sundries and Superintendence 10.. " Cent 20. 7. 6. 240.

Constructing 4 Syphon Sluices across
the supply channel to Khatkor
and Panampant Tanks as per
plan D in lieu of Aqueducts
originally proposed as per
Plan No. 9

1518 ⁵/₁₆ 6¹/₂ ft. of brick work in chumam — " 2.. Cft 189. 12 7.
6 ³/₄ Squares of plastering with 2 Coats of
chumam — 3.. " Sq^{rs} 20. 4. "

Excavating foundation — 10. " "

Carried forward — 220.. 7 100.

25 A

Brought forward — 220.. 7. 700.

Sundries and Superintendence 10.. " Cent 19. 15. 5

240 " "

4 Syphon Sluices above across the chls
marked 1, 2, 3 & 4 in the Survey — 240.. " Ch. 960. " " 900. "

Constructing 3 Syphon Sluices across
the Panampant branch channel as
per Plan E.

1560 ¹/₂ 6¹/₂ ft. of Brick work in chumam — " 2.. Cft 195. 1. "

7 ¹/₈ Squares of Plastering with 2 Coats of
chumam — 3.. " Sq^{rs} 21. 6. "

Excavating foundation — 10.. " "

Sundries and Superintendence — 10.. " Cent 20. 9. "

3 Syphon Sluices as above across the
channels marked 5, 6, 7 & 8 in Survey — 240.. " Ch. 960. " " 900. "

Constructing a Syphon Sluice across
the Khatkor branch channel as per
Plan F. and in site marked 8 in
the Survey.

1388 ⁵/₁₆ 6¹/₂ ft. of Brick work in chumam — " 2.. Cft 173 5. 7.

6 ¹/₂ Squares of Plastering with 2 Coats of
chumam — 3.. " Sq^{rs} 19. 8. "

Excavating foundation — 10.. " "

Sundries & Superintendence — 10.. " Cent 20. 9. 5. 223. " "

Constructing a Dam and Division
Sluice at the head of Branch channel
to Amangor and Karampankum
Tanks as per Plan B. in lieu of the
one originally proposed as per plan No. 12.

4488 ¹/₄ 6¹/₂ ft. of Brick work in chumam — " 2.. Cft 561. " 6.

Carried forward — 561. " 6. 2624. " "

N^o 13 9. 10. 29A.
 Note by the Chief Engineer for Irrigation

The revised estimate Rupees 15,330 for improving the Alkungal channel in South Arcot has been prepared in consequence of the objections raised by the Annamangudi ryots to the arrangements for the supply of their tanks. The circumstances are fully explained in the Executive Engineer's letter, and though it is not clear that with an improved main channel the supply to the tanks in question would not have been ample, it is probably advisable not to interfere more than is absolutely necessary with the old sources of supply of the several tanks unless it can be demonstrated that an improved supply will be substituted. Such being the case I would recommend the sanction of the revised arrangements at an additional cost of Rupees 2,710.

2. The dividing dams plans A.B. & C should be placed in positions which will admit of a sufficiently substantial bank between the channels. plan B is better than the others, but this dam also

5th Division S. S. N.
 South Arcot District

M 459/21
 11.11.11

The lack of cleared estimate for strengthening & improving the Alkungal channel from the Annamangudi ryots for the better supply of several tanks depending upon it and cutting & improving branch channels from the main channel.

Amount of Estimate Rs 15,330.

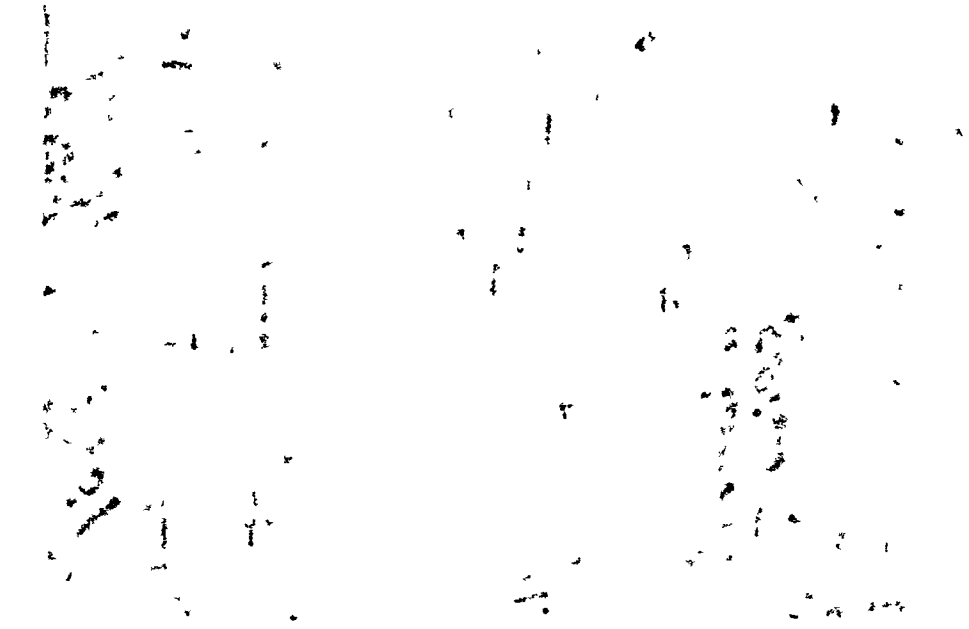
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also might with advantage be placed a few feet lower down the channel. For none of the drains are aprons provided and at least a few feet in width of rough stone or of rubble if less expensive would seem to be required.

21 January 1891 [Signed] John Mullins Major R.E.
Chf. Engr. for Irrigation.

To
The Secretary to Govt P.W.D.
[Faint handwritten text follows]

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every respect the same & Bulungah mound to have a clear opening of 30' Huranypankum Branch in a vent of 1' 6" and Samangood branch 6' vent - for all other dimensions see Plan.

Amount of Estimate Rs 240 ✓

Foundations to be 4' deep throughout 3' top 3 1/2 feet at bottom width, body wall to be flush with the bed of the River and to be 12 feet long from wing to wing inclusive of the thickness of Breast wall between the two vents, one of which is to be 6' and the other 3' clear opening, wing walls to be 4 feet high also breast wall top width 1' 6" & bottom 2' 6" breast wall to have a projecting cutwater as per plan and is to be 20 feet long inclusive of cutwater and thickness of body wall for all other dimensions see Plan.

Division Sluice to be built in the Samang and Kolathoor branch Channel.

Foundations in all cases to be 2 1/2 feet thick which will also form the flooring of under tunnels having an opening 3' x 1' 3" inclusive of riser of arch which is 9" side walls to be 2' thick thickness of arch 1' 3" top leading 9" making an all 2 feet bottom as per plan wall be built in either side of tunnel. and parapet walls 2' thick raised above arch to carry upper channel of various dimensions as given in the Plans accompanying this report.

Syphon Sluices as per plan in sheets D.E. & F.

Alfred
Executive Engineer
P-1 Range South Arch

P-1 Range Office
Buddalore
2nd December 1870

Richd Roberts Esq.
Ag. Superintending Engineer S.B.

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do tail down instead of
 short for the Revised Plans
 for a Madras road to be
 constructed in connection
 with the Andamal Channel
 Project.
 James Fyfe / 1911 Dec 24

Don't fail to }
Don't fail to }
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2d
 3d
 4th
 5th Division

[illegible]

Comparative Statement Showing the difference between the Original and Revised Estimates for Straightening and Improving the Allungat Channel from the Ponnaiar River for the better ^{supply} of several Tanks depending upon it and cutting and improving branch channels from the main channel.

Description of Work	Original Estimate				Revised Estimate			Increase		Decrease		Balance	Remarks.
	Units	Quantity	Rate	Per Amount	Quantity	Rate	Per Amount	Quantity	Amount	Quantity	Amount		
Brought forward				740			700		700		740		
Constructing 4 Siphon Sluices in lieu of above aqueducts across the supply channel to Kolator and Panampul Tanks.	"	"	"	"	"	"	960	"	960	"	"	"	"
Constructing 3 Siphon Sluices.	"	"	"	"	"	"	741	"	741	"	"	"	"
do 1 do.	"	"	"	"	"	"	223	"	224	"	"	"	"
do Dam and Division Sluice at the head of Kavanipatturam, Anangoor and Panampul Channels.	"	"	"	1150	"	"	"	"	"	"	1150	"	"
Constructing Dam & Division Sluice at the head of Kavanipatturam & Anangoor channels.	"	"	"	"	"	"	716	"	716	"	"	"	"
Constructing Dam & Division Sluice at the head of Serovunthad Chal.	"	"	"	260	"	"	260	"	"	"	"	"	"
Improving the present surplus Wier of Valavanoor Tank.	"	"	"	900	"	"	900	"	"	"	"	"	"
Total Amount for Masonry Works.				3050			4500		3340		1890	1450	
Add the amount for Earth Works.				8610			9870		2892		1632	1260	
Compensation for Land.				960			960		"		"	"	
Total				12620			15330		6232		3522	2710	

Sanctioned in G. O. No. 998 dated 9th April 1870.

Superintending Engineer's Office
Madras - 20th Decr 1870.

Balance requiring sanction 2710 ..

Wm. Roberts
Ag. Superintending Engineer S. D. N.

Comparative Statement Showing the difference between the Original and Revised Estimates for Straightening and Improving the Allungab Channel from the Ponnaiar River for the better ^{supply} of several Tanks depending upon it and cutting and improving branch channels from the main channel.

Description of Work	Original Estimate				Revised Estimate				Increase		Decrease		Balance	Remarks.
	Units	Quantity	Rate	Per Amount	Quantity	Rate	Per Amount	Quantity	Amount	Quantity	Amount			
Brought forward														
Improving the present Surplus Weir of the Talavanoor Tank as originally proposed.														
Brick in chunam work	Cyp	143 1/2	3		Cyp	430		143 1/2	3		Cyp	430		
Half old & half new rough stone pointed with chunam	do	155 9/16	1	8	do	233	5	155 9/16	1	8	do	233	5	
Plastering with 2 coats of chunam	Sqrs	34 5/8	3		Sqrs	103	14	34 5/8	3		Sqrs	103	14	
Dismantling old work	Cyp	42		3	Cyp	7	14	42		3	Cyp	7	14	
Sundry repairs to Surplus Weir	"	"	"	"	50	"	"	"	"	50	"	"	"	
Sundries and Superintendence	"	"	"	"	74	14	8	"	"	74	14	8	"	
					900	"	"			900	"	"		
Totals of Masonry Works														
Constructing a Dam and Division Sluice at the head of Holatoor supply channel as per Plan No 10	"	"	"	"	340	"	"	"	"	340	"	"	"	
Constructing a Dam and Division Sluice at the head of Branch Channel to Holatoor and Panampet Tanks	"	"	"	"		"	"	460	"	460	"	"	"	
Constructing a Dam and Division Sluice in the Panampet branch channel at the head of Holatoor branch as per Plan C.	"	"	"	"		"	"	240	"	240	"	"	"	
Constructing 4 Aqueducts as per Plan No 9 to carry the irrigation channels over the Holatoor Ch.	"	"	"	"	400	"	"	"	"	400	"	"	"	
Carried forward					740	"	"	700	"	700	"	"	740	"

Comparative Statement Showing the difference between the Original and Revised Estimates for Straightening and Improving the Alungab Channel from the Ponnaiar River for the better ^{supply} of several Tanks depending upon it and cutting and improving branch channels from the main channel.

Description of Work	Original Estimate				Revised Estimate			Increase		Decrease		Remarks
	Units	Quantity	Rate	Per Amount	Quantity	Rate	Per Amount	Quantity	Amount	Quantity	Amount	
Brought forward												
Constructing a Siphon Sluice across the Holator branch channel as per Plan F.												
Brick work in chunam	Cft	"	"	"	1388 5/16	"	2	Cft	173 87	"	"	
Plastering with 2 coats of chunam	Sqrs	"	"	"	6 1/2	"	"	Sqrs	19 8	"	"	
Excavating foundation	"	"	"	"	"	"	"	"	10	"	"	
Sundries and Superintendence	"	"	"	"	"	"	"	"	203 7	"	"	
									19 156			
									223		223	
Constructing a Dam and Division Sluice at the head of Havanipaukum, Anangoor and Panamput branch channel as per Plan No 12					1150	"	"	"	"	"	1150	
Constructing a Dam and Division Sluice at the head of Branch chad to Anangoor and Havanipaukum Tanks as per Plan B.												
Brick work in chunam	Cft	"	"	"	4488 1/2	"	2	Cft	561 6	"	"	
Plastering with 2 coats of chunam	Sqrs	"	"	"	17 5/16	"	"	Sqrs	51 15	"	"	
Excavating foundation & forming embankment	"	"	"	"	"	"	"	"	40	"	"	
Sundries and Superintendence	"	"	"	"	"	"	"	"	652 156	"	"	
									63	"	6	
									716	"	716	
Constructing a Dam and Division Sluice at the head of Seroorunthad Branch channel as per Plan No 13.												
Brick work in chunam	Cft	56 1/2	3 8	"	Cft 197 8 10	56 1/2	3	"	Cft 197 8 10	"	"	
Arch work	do	1/2	4	"	do 2	1/2	4	"	do 2	"	"	
Rough Stone work	do	16 1/2	1	"	do 16 8	16 1/2	1	"	do 16 8	"	"	
Plastering with 2 Coats of chunam	Sqrs	5 4 1/2	3	"	Sqrs 16 6 4	5 4 1/2	3	"	Sqrs 16 6 4	"	"	
									232 7 2		232 7 2	
Sundries and Superintendence	"	"	"	"	27 8 10	"	"	"	27 8 10	"	"	
					260	"	"	"	260	"	"	
Carried forward					"	"	"	"	"	"	"	

Comparative Statement showing the difference between the Original and Revised Estimates for Straightening and Improving the Alluvial Channel from the Ponnaiar River for the better ^{supply} of General Tanks depending upon it and cutting and improving branch channels from the main channel.

Description of Work	Original Estimate					Revised Estimate					Increase		Decrease		Remarks
	Units	Quantity	Rate	Per	Amount	Quantity	Rate	Per	Amount	Quantity	Amount	Quantity	Amount	Balance	
Brought forward					1,322										
Straightening and Improving the Serovunthad Supply Channel Earth Work	Cy	2666 $\frac{2}{3}$	"	13	Cy 2666 $\frac{2}{3}$	"	13	Cy 2666 $\frac{2}{3}$	"	13	Cy 2666 $\frac{2}{3}$				
Sundries and Superintendence	"	"	10	Cent	21 10 8	"	"	10	Cent	21 10 8					
					230				230						
<u>Totals of Earth Work</u>															
Main Channel	"	"	"	"	7710	"	"	"	7060	"	312	"	6	962	6
Supply Channel to Holatoo Tank	"	"	"	"	240	"	"	"	"	"	"	"	"	240	"
do do and Panamput Tanks	"	"	"	"	"	"	"	"	2580	"	2580	"	"	"	"
Supply Channel to Panamput Tank	"	"	"	"	430	"	"	"	"	"	"	"	"	430	"
do to Serovunthad Tank	"	"	"	"	230	"	"	"	230	"	"	"	"	"	"
<u>Total amount for Earth Works</u>					8610				9870		2892		1632	1260	
<u>Masonry Works.</u>															
Constructing a Dam and Division Sluice at the head of Holatoo Supply Channel as per Plan No 10	"	"	"	"	340	"	"	"	"	"	"	"	"	340	"
Constructing a Dam and Division Sluice at the head of Branch Channel to Holatoo and Panamput Tanks as per Plan A.															
Brick in chunam	Cft	"	"	"	2850 $\frac{3}{4}$	"	2	Cft	356 5 6	"	"	"	"	"	"
Plastering with 2 Coats of Chunam	Sqrs	"	"	"	11 $\frac{3}{4}$	3	"	Sqrs	35 7	"	"	"	"	"	"
Excavating foundation and forming embankment	"	"	"	"	"	"	"	"	27	"	"	"	"	"	"
									418 12 6						
Sundries and Superintendence	"	"	"	"	"	10	"	Cent	41 3 6						
					"				460		460				
Carried forward					"				"		"		"		

Comparative Statement Showing the difference between the Original and Revised Estimates for Straightening and Improving the Allungat Channel from the Ponnaiar River for the better ^{supply} of several Tanks depending upon it and cutting and improving branch channels from the main channel.

Description of Work	Original Estimate				Revised Estimate				Increase		Decrease		Balance	Remarks.
	Units	Quantity	Rate	Per Amount	Quantity	Rate	Per Amount	Quantity	Amount	Quantity	Amount			
Brought forward				4813 9 8				4880 1 8	66 8					
Cutting Earth Work. Tank No 18	Cyo	87 1/8	"	1	Cyo	54 7 2	87 1/8	"	1	Cyo	54 7 2	"	"	"
do do do	19	do	45 7 25/64	"	10	do	23 13 2	45 7 25/64	"	10	do	23 13 2	"	"
do do do	20	do	9 60	"	11	do	55	9 60	"	11	do	55	"	"
do do do	20	do	14 1 3/16	"	10	do	7 5 8	14 1 3/16	"	10	do	7 5 8	"	"
Straightening and clearing from the Anangoor Branch Channel	do	18448 3/4	"	1	do	1153	"	18448 3/4	"	1	do	1153	"	"
Rubble Stone work	do	600	1 8	"	do	900	"	"	"	"	600	900	"	"
Planting Kammal at the head in lieu of rubble stone work	Syo	"	"	"	"	"	"	3190	"	9	Syo	149 8 6	3190	149 8 6
4 Coolies for watering and watching Kammal for 6 months at 4 Rs each Mo.	"	"	"	"	"	"	"	96	"	"	96	"	"	"
				7007 4 5				6419 4 11	312	"	6	900	"	"
Sundries & Superintendence	10	"	"	Cent 702 11 7	"	"	"	Cent 640 11 1	"	"	"	62	"	6
Improving and cutting the supply Channel to Holatoor Tank	"	"	"	77 10	"	"	"	7060	"	"	"	312	"	6
Improving and cutting supply Channel to Holatoor Tank with a bottom width of 9 feet instead of 3 feet as originally proposed and extending the same to Panampud Tanki..	"	"	"	240	"	"	"	"	"	"	"	240	"	"
Forming embankment Earth Work	Cyo	"	"	"	1324	"	"	1	Cyo	827 9	"	"	"	"
Cutting the Channel	do	do	"	"	18264	"	"	13	do	1426 1 6	"	"	"	"
do do do	do	do	"	"	602 1/6	"	"	10	do	31 6 8	"	"	"	"
do do do	do	do	"	"	1115 5/16	"	"	1	do	69 11 3	"	"	"	"
								2354 11 5						
Sundries and Superintendence	"	"	"	"	"	"	"	Cent 225 4 7	"	"	"	"	"	"
								2580	"	2580	"	"	"	"
Cutting a supply channel to Panampud Tank				430	"	"	"	"	"	"	"	430	"	"
Carried forward				"				"	"	"	"	"	"	"

Comparative Statement showing the difference between the Original and Revised Estimates for Straightening and Improving the Allungab Channel from the Ponnaiar River for the better ^{supply} of General Tanks depending upon it and cutting and improving branch channels from the main channel.

Description of Work	Original Estimate				Revised Estimate			Increase		Decrease		Balance	Remarks.
	Units	Quantity	Rate	Per Amount	Quantity	Rate	Per Amount	Quantity	Amount	Quantity	Amount		
Straightening and Improving the Allungab Channel.													
Sloping the North bank of the Ponnaiar River at the new head													
Sloping Earth Work	Cyd	538 1/2	"	18	Cyd	561 6	538 1/2	18	Cyd	561 6	"	"	"
do do	do	2490 3/8	"	15	do	220 8	2490 3/8	15	do	220 8	"	"	"
do do	do	334 5/32	"	10	do	20 14 1	334 5/32	7	do	20 14 1	"	"	"
do do	do	122 1/2	"	12	do	8 14 11	122 1/2	12	do	8 14 11	"	"	"
do do	do	1199 1/32	"	15	do	106 4	1199 1/32	15	do	106 4	"	"	"
Widening the embankment in the bed of the river Earth work													
do do	do	"	"	"	do	"	1064	1	do	66 8	1064	66 8	"
Cutting new head do	do	4725	"	14	do	393 1/2	4725	14	do	393 1/2	"	"	"
do do	do	6716	"	19	do	734 10 3	6716 3/4	19	do	734 10 3	"	"	"
Clearing the old Channel Earth Work													
do do	do	4794	"	10	do	254 14 4	4794	10	do	254 14 4	"	"	"
New cutting Earth work Tank No 1													
do do	do	3946 1/2	"	1	do	246 10 6	3946 1/2	1	do	246 10 6	"	"	"
do do	do	21739	"	1	do	1358 11	21739	1	do	1358 11	"	"	"
do do	do	1624	"	1	do	101 8	1624	1	do	101 8	"	"	"
do do	do	3045	"	1	do	190 5	3045	1	do	190 5	"	"	"
do do	do	742 9/32	"	11	do	42 8 5	742 9/32	11	do	42 8 5	"	"	"
do do	do	1063 3/4	"	11	do	60 15 1	1063 3/4	11	do	60 15 1	"	"	"
do do	do	4331 3/4	"	1	do	270 11 8	4331 3/4	1	do	270 11 8	"	"	"
do do	do	988 3/8	"	11	do	58 10	988 3/8	11	do	58 10	"	"	"
do do	do	30	"	6	do	15	30	6	do	15	"	"	"
do do	do	1564	"	11	do	89 9 8	1564	11	do	89 9 8	"	"	"
do do	do	839 1/2	"	11	do	48 16	839 1/2	11	do	48 16	"	"	"
do do	do	1414 1/2	"	11	do	81 7	1414 1/2	11	do	81 7	"	"	"
do do	do	1270	"	12	do	92 9 8	1270	12	do	92 9 8	"	"	"
do do	do	259 1/2	"	11	do	16 3 6	259 1/2	11	do	16 3 6	"	"	"
do do	do	1678 3/4	"	9	do	78 10 8	1678 3/4	9	do	78 10 8	"	"	"
do do	do	1260	"	11	do	85 5	1260	11	do	85 5	"	"	"
do do	do	185 5/8	"	11	do	10 10 2	185 5/8	11	do	10 10 2	"	"	"
do do	do	1968 3/4	"	13	do	153 12 2	1968 3/4	13	do	153 12 2	"	"	"
do do	do	450	"	12	do	32 13	450	12	do	32 13	"	"	"
Carried forward													
				4813 98			4880 18		66 8				

Fifth Division D. & W.
South Arcot District.

W 459/51
Per 21 July 1871 L. 441

Comparative Statement showing
the difference between the original
and revised estimates for straightening
and improving the Allengar Channel
from the Periyar River for the better
supply of several Tanks depending
upon it and cutting and improving
the branch channels from the main
channel.

515 W. P. D. S.
Proceedings of the Madras Govt.
Read the following
from
The Chief Engineer
for Irrigation } (H. E. & Co. 138) 21 July 1871

In Proceedings 1899
dated 9th April 1870, the
Govt. sanctioned esti-
mates amounting to
Rs 12,620 for the im-
provement of the
Allengar Channel in
the Villapooram talook
of the South Arcot
District. The Super-
intending Engineer
now submits through
the Chief Engineer
for Irrigation a revised
estimate

estimate of Rs. 15,330 for the project and explains that the excess of Rs. 2,710 is due to the necessity which has arisen for modifying the original arrangements so far as to meet the just demands of the Ryots of Annangoor who would be deprived of the drainage and surplus from several tanks above the Annangoor Tank if the improvements were carried out as originally designed.

Major Mullins recommends that the additional outlay be authorized and the Govt. accordingly sanction the

Revised estimate	15,330
Expenditure in 1869/70 - 3688	
allotment - 1870/71 - 11,000	14,688
	6442

* Item No. 97
of Budget

To the Supr Engr. S. D. S.
" Controller P. M. Acot.
" Chief Engr. for Dy. S.

the revised estimate of Rs. 15,330. 414

As it appears that the expenditure in 1869/70 was 3688, and an allotment of Rs. 11,000 has been provided for the project in the current year's Budget, the additional amount required is Rs. 6442, which His Excellency the Governor in Council resolved to divert from the assignment for the Anicut across the Pooniar river.

The attention of the Supr Engineer will be drawn to the suggestions in Para 2 of the Chief Engineer's note.

Recd 24/2/71

W. B.

(2)
 (Lower clout number two)
 (1000 - 2000) (Chickadee count)

Pro 3rd March / 69 488-789
 " 19th April — 480-481
 " 3rd Aug — 52-53
 " 9th April / 70 — 157-158

Further Pro 1879 of 23-3-71

66 Feb / 1902 627-1005

Gobt of 1871 Madras.

PUBLIC WORKS..

1. The Superintendent Engrs.
J. H. Perkins.

Dates

Recd

10/11/19

G. O. 2 / *Seely* 1871 p. 513.

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 when we reached the
 fort, we found the
 service extremely
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