

S. NO: 8



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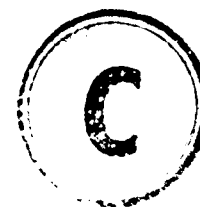
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R.R.NO. 191/65



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Proceedings of the Madras Government, Public Works Department.
20th June 1867.

No. 440. Read the following Proceedings of the Board of Revenue, dated 21st May 1867, No. 3,141 :—

Read the following letter from the Acting Collector of Nellore, to the Secretary to the Board of Revenue, dated 6th May 1867, No. 130.

1. I have the honour to forward, herewith, the plans and estimates for improvements to the irrigation works in the Pennair Delta, prepared by the Superintending Engineer at an outlay of Rupees 4,12,100, and request that they may be forwarded on to Government at as early a date as possible, with the Superintending Engineer's letter to the Secretary to Government, Public Works Department, inclosed. As Government have allotted Rupees 25,000 in the Budget estimate of the current year for the work, it is desirable that as early sanction as possible be obtained in order that work up to that amount may be executed before April next.

2. From the information I have collected, it appears that the irrigable area under the present project is Acres 77,121, of which 31,633 are either already irrigated, or unfit for cultivation. From the remainder, Acres 45,488, it is again necessary to deduct a large amount on account of land that for various causes may not be available. The Superintending Engineer has, accordingly, taken Acres 25,500 only as the area to be benefited by these works. Allowing Rupees 4 per acre for water cess, according to Mr. Dykes' proposal, and excluding the dry or punjah shist which would be levied on waste brought under cultivation, the proposed expenditure on these works, viz., Rupees 4,12,100, is calculated to secure a revenue of Rupees 1,02,000 per annum, *i. e.*, 24.74 per cent. on the outlay. I, therefore, trust that the Board will recommend that the sanction of Government be acceded to this project in its present form, as the work promises to be so remunerative.

From the Superintending Engineer, 2nd Division, to the Secretary to Government, Department of Public Works, dated Masulipatam, 3rd May 1867, No. 17.

1. I have the honour to forward plans and estimates as per margin, relative to a project for extending the irrigation from the anicut across the Pennair at Nellore, amounting to Rupees 4,12,100.

- Enclosures.*
- 24 Surveys and plans as per list attached.
 - 27 Detailed estimates.
 - 30 Abstract do.
 - 15 Specification Reports.
 - 1 General abstract estimate.
 - 1 Synopsis of the general state of Pennair river from 1861 to 1865.
 - 1 Statement of rise of do.
 - 1 Revenue Return.

* By Banghy.

2. The surveys and levels were commenced last year under my direction by R. Smith, Esq., Executive Engineer at Nellore, to whose able assistance I am indebted for much the greater portion of the labour involved in bringing forward the project. The arrangement of the details, the calculations of the dimensions and discharges of the channels, and the designs, most of the masonry works, are his entirely. The surveys and levels were made by Overseer Coopposawmy Raju, who has proved himself a very efficient Surveyor.

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DETAILED ESTIMATE No. 4.
PENNAIR DELTA.

Constructing an auxiliary Head Sluice, enlarging old Channel, and deepening the Main Feeder from the existing Head Sluice to the head of the Sarvapully Channel.

Particulars of Work.	MEASUREMENT.				Cubical contents.	Rates per Cubic yard.		
	Length.	Breadth.	Height or Depth.	No.		RS.	A.	P.
	Feet.	Feet.	Feet.		Feet.			
HEAD SLUICE.								
<i>Enlarging old Channel.</i>								
Laterite cutting	30	42	2	1	2,520	0	8	0
Clearing silt	30	31	3 $\frac{2}{3}$	1	3,410	0	1	6
Laterite cutting	26	42	2	1	2,184	0	8	0
Do. do.	27	23	2	1	1,242	0	8	0
Do. do.	26	11	17 $\frac{3}{4}$	1	5,076 $\frac{1}{2}$	0	8	0
Do. do.	26	11	8	1	2,288	0	1	0
Earth-work	53	23	3 $\frac{2}{3}$	1	4,469 $\frac{2}{3}$	0	1	6
Clearing silt								
Removing and re-packing late-rite revetment	27	1 $\frac{1}{2}$	8	1	324	0	8	0
Laterite cutting	45	24 $\frac{1}{2}$	2	1	2,182 $\frac{1}{2}$	0	8	0
Do. do.	45	1 $\frac{3}{4}$	15 $\frac{1}{2}$	1	1,220 $\frac{3}{8}$	0	8	0
Do. do.	45	1 $\frac{3}{4}$	10 $\frac{1}{4}$	1	807 $\frac{3}{8}$	0	1	0
Earth-work	45	24 $\frac{1}{2}$	3	1	3,273 $\frac{3}{4}$	0	1	6
Clearing silt								
Removing and re-packing late-rite revetment	45	1 $\frac{1}{2}$	10 $\frac{1}{4}$	1	691 $\frac{7}{8}$	0	8	0
Laterite cutting	45	26	2	1	2,340	0	8	0
Do. do.	22	17 $\frac{1}{2}$	$\frac{1}{2}$	1	192 $\frac$			

*Proceedings of the Madras Government, Public Works Department,
20th June 1867.*

ABSTRACT ESTIMATE No. 4.

Quantities.	Description of Work.	Rate.	Amount.	Total.
		RS. A. P.	RS. A. P.	RS. A. P.
1	Head sluice—vide separate estimate.	...	...	6,350 0 0
1,118	Enlarging old channel.	...	...	
2,710	Cubic yards of laterite cutting	...	559 0 0	
114	Do. of clearing silt	...	254 1 0	
	Do. of earth-work	...	7 2 0	
	Demolishing bridge over old sup- plying channel and clearing the latter out underneath it	...	...	820 3 0
	Connecting existing and proposed head sluices by a parapet wall.	...	...	125 0 0
3,312	Cubic feet of laterite in chunam	0 2 9	569 4 0	
	Deduct value of old materials	...	216 0 0	
	Lowering floor of head sluice	...	...	353 4 0
	Altering shutters	...	...	100 0 0
3,852	Deepening Main Feeder.	...	...	216 0 0
12,852	Cubic yards of laterite cutting	...	...	
2,300	Do. of earth-work	0 8 0	1,926 0 0	
1,533½	Do. of rubble pitching	0 1 6	1,204 14 0	
	Do. of gravel backing	1 2 0	2,587 8 0	
	Compensation for one tiled house and a small compound	0 8 0	766 10 8	6,485 0 8
	Sundries	...	...	800 0 0
	Total estimate...	...	...	50 8 4
		...	...	15,300 0 0

DETAILED ESTIMATE No. 4.

PENNAIR DELTA.

Constructing an auxiliary Head Sluice adjacent to the Anicut.

Particulars of Work.	MEASUREMENT.				Cubical contents.
	Length.	Breadth.	Height or Depth.	Number.	
	Feet.	Feet.	Feet.		Feet.
Concrete ...	35½	14	12½	...	6,215½
Abutments	23½	4	10	2	1,880
Piers	27½	2½	10	5	3,416½
Caps	2½	2½	2½	5	67½
Skew backs	23	2½	2½	5	143½
Do.	23	4	2½	2	92
Spandril	41½	23	13½	2	715½
Face walls	41½	3½	13½	2	3,958½
Do.	41½	2	13½	...	1

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20th June 1867.

DETAILED ESTIMATE No. 4.—(Concluded.)

Particulars of Work.	MEASUREMENT.				Cubical contents.
	Length.	Breadth.	Height or Depth.	Number.	
	Feet.	Feet.	Feet.		Feet.
Side walls	23½	3½	12½	2	1,879½
Portion of cut-waters	2½	2½	16	5	375½
Front wings	10	6½	26	2	3,380
Do.	15	5	18	2	2,700
Do.	10	3½	10	2	700
Rear wings	26	3½	10	2	1,820
String course	124	½	¾	...	23½
Parapet	200	1½	3	...	100
Arch work	23	5½	1½	6	1,190½
				Total...	24,373½
Pointing ... Squares.	...	...	...	...	87
Earth-work ... Cubic yards.	...	...	...	...	1,248
Metaling ... "	...	...	...	...	66½
Teak-wood beam ... Cubic feet.	...	...	...	...	35½
Teak-wood shutters with working gear	...	...	...	...	6
Centering	...	...	...	...	...
Sundries	...	...	...	...	...

ABSTRACT ESTIMATE No. 4.

Quantities.	Description of Work.	Rate.	Amount.	Total.
		RS. A. P.	RS. A. P.	RS.
6,216	Cubic feet of concrete	0 2 0	777 0 0	
24,373	Do. of laterite in chunam	0 2 9	4,189 1 9	
87	Squares of pointing... ..	2 0 0	174 0 0	
1,248	Cubic yards of earth-work	0 4 0	312 0 0	
6½	Do. of metaling	0 4 0	16 10 8	
35½	Cubic feet of teak-wood beam	3 8 0	124 4 0	
6	Teak-wood shutters with working gear	78 0 0	468 0 0	
	Centering	...	150 0 0	
	Sundries	...	138 15 7	
				6,350

Specification to accompany the Plan and Estimate for the Regulating Sluice at the head of the Jaffer Saib's Channel.

1. The sluice to consist of five vents of 6 feet span. The front wings to be 13 feet 6 inches in height, the breadth at bottom and top to be 5 feet 4 inches and 1 foot 6 inches respectively, the foundations of pier

DETAILED ESTIMATE, No. 4.

PENNAIR DELTA.

Deepening the Sarvapully New Cut, and improving the old Ramireddy Channel.

No. of Cross Sections.	Particulars of Work.	MEASUREMENTS.					WORK TO BE EXECUTED.					Rate per Cubic yard.		
		Length.	Breadth.	Height or Depth.	Number.	Cubical contents.	Cutting.	Banking.	Rubble Pitching.	Gravel Backing.	Turfing.	RS.	A.	P.
		Feet.	Feet.	Feet.		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.			
1	Cutting	660	68	10	1	4,48,800						0	1	6
	Deduct present work ...	660	73	5	1	2,40,900						0	1	0
							2,07,900					0	1	0
	Cutting	660	25	1	1	...	16,500					0	1	0
	Do.	660	14	2	1	...	18,480					0	1	4
	Turfing	660	25	...	1	...					16,500	0	1	4
	Do.	660	14	...	1	...					9,240	1	2	0
	Rubble pitching ...	660	23	1½	2	...			45,540			0	8	0
	Gravel backing ...	660	23	1	2	...				30,360				
2	Cutting	1,320	68	10	1	8,97,600						0	1	6
	Deduct present work ...	1,320	77	5	1	5,08,200						0	1	0
							3,89,400					0	1	0
	Cutting	1,320	13	3	1	...	51,480					0	1	4

DETAILED ESTIMATE, No. 4.—(Continued.)

PENNAIR DELTA.

Deepening the Sarvapully New Cut, and improving the old Ramireddy Channel.

No. of Cross Sections.	Particulars of Work.	MEASUREMENTS.					WORK TO BE EXECUTED.					Rate per Cubic yard.
		Length.	Breadth.	Height or Depth.	Number.	Cubical contents.	Cutting.	Banking.	Rubble Pitching.	Gravel Backing.	Turfing.	
		Feet.	Feet.	Feet.		Feet.	Feet.	Feet.	Feet.	Feet.		RS. A P.
8	Cutting	1,320	7	2	1	...	18,480	...	...	...	...	0 2 6
	Do.	1,320	4	2	1	...	10,560	...	...	...	...	0 2 6
	Laterite cutting ...	374	54	10	1	201,960						
	<i>Iron Aqueduct to be substituted for Syphon.</i>											
	Cutting	187	54	10	1	100,980						
9	<i>Bridge Floor to be lowered.</i>											
	Cutting	759	54	10	1	409,860						
	Deduct present work ...	1,320	64	4½	1	712,800 380,160	332,640	...	...	...	...	0 4 0
	Laterite cutting ...	1,320	54	10	1	712,800						
	Deduct present work ...	1,320	51	4½	1	319,770	393,030	...	...	...	...	0 4 0
10	Cutting	1,320	7	1	1	...	9,240	...	...	...	...	0 1 6
	Do.	1,320	4	2½	1	...	13,200	...	...	...	...	0 1 6
	Do.	396	54	10	1	213,840						
	<i>Iron Aqueduct to be substituted for Syphon.</i>											
	Cutting	924	54	10	1	498,960						
						712,800						

Proceed

Proceedings of the Madras Government, Public Works Department.
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DETAILED ESTIMATE.—(Continued.)

Particulars of Work.	MEASUREMENT.				Cubical Contents.
	Length.	Breadth.	Height or Depth.	No.	
	Feet.	Feet.	Feet.		Feet.
Cornice Running feet.	...	...	...	...	300
Arch-work	39	21	1½	2	3,071½
	31	27	1	2	1,674
Total ...	...	...	...	...	4,745½
Pointing Squares	...	...	...	...	102½
Excavation Cubic yards	...	...	...	...	1,540
Metaling	...	...	...	...	15
Guard stones	...	...	...	...	4
Centering	...	...	...	...	...
Baling	...	...	...	...	...
Sundries	...	...	...	...	...

ABSTRACT ESTIMATE No. 4.

Quantities.	Description of Work.	Rate.			Amount.			Total.
		RS.	A.	P.	RS.	A.	P.	
4,812	Cubic feet of concrete	0	2	0	601	8	0	
38,454	„ of laterite in chunam	0	2	9	6,609	4	6	
4,745	„ of arch-work with laterite in chunam.	0	3	0	889	11	0	
102½	Squares of pointing	2	0	0	205	0	0	
300	Running feet of cornice	0	4	0	75	0	0	
1,540	Cubic yards of excavation	0	1	0	96	4	0	
15	„ of metaling	0	6	0	5	10	0	
4	Guard stones	4	0	0	16	0	0	
	Centering	...	...	...	370	0	0	
	Baling	...	...	...	200	0	0	
	Sundries	...	...	...	236	10	6	
					9,300	0	0	
	Deduct value of old materials	...	...	...	1,000	0	0	
								8,300

DETAILED ESTIMATE No. 4.

PENNAIR DELTA.

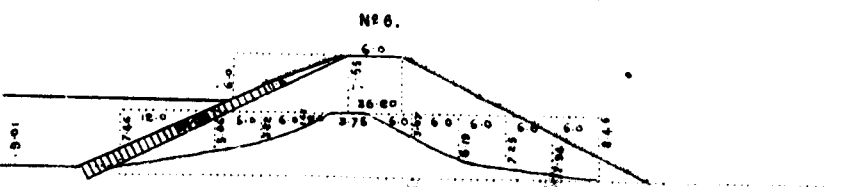
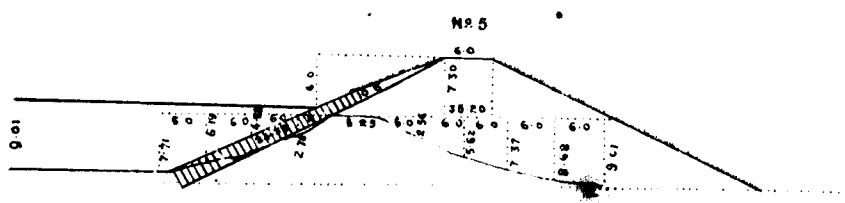
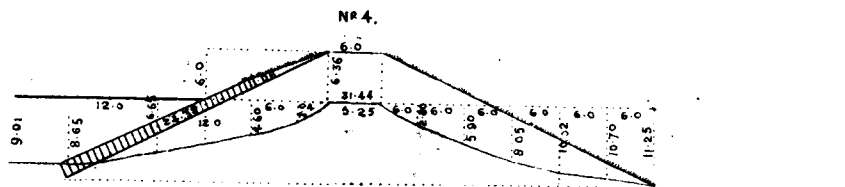
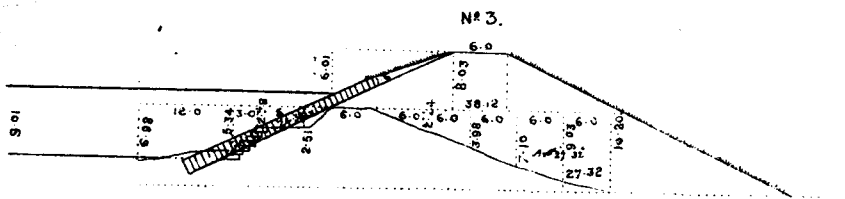
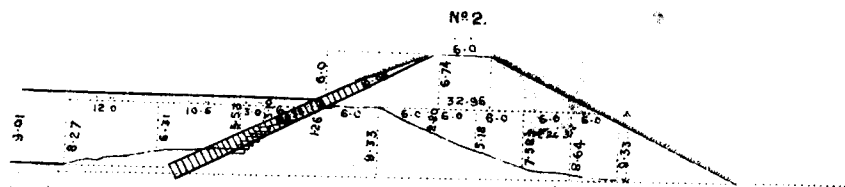
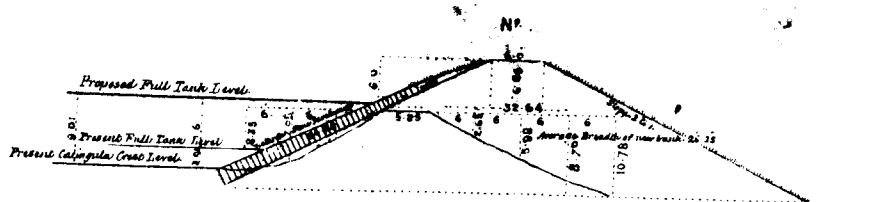
Constructing a Surplus Sluice adjacent to the Survapully Branch Head Sluice across the old
Ramireddy Channel.

Particulars of Work.	MEASUREMENT.				Cubical contents.
	Length.	Breadth.	Height or Depth.	No.	
	Feet.	Feet.	Feet.		Feet.
Concrete.—Abutments	10 $\frac{1}{2}$	7	$\frac{3}{4}$	2	112 $\frac{7}{8}$
Piers	24 $\frac{1}{2}$	20	$\frac{3}{4}$	1	367 $\frac{1}{2}$
Front wings	41	10 $\frac{3}{4}$	$\frac{3}{4}$	2	361 $\frac{1}{2}$
Rear do.	21	9	$\frac{3}{4}$	2	283 $\frac{1}{2}$
Returns	19	7 $\frac{1}{2}$	$\frac{3}{4}$	2	213 $\frac{1}{2}$
Rear retaining wall	12 $\frac{1}{2}$	6	$\frac{3}{4}$	...	56 $\frac{1}{2}$
Front do.	36 $\frac{1}{2}$	5	$\frac{3}{4}$	...	136 $\frac{1}{2}$
Front flooring	26 $\frac{1}{2}$	7 $\frac{1}{2}$	$\frac{3}{4}$	...	142 $\frac{1}{2}$
Rear do.	20 $\frac{1}{2}$	17	$\frac{3}{4}$	...	264 $\frac{1}{2}$
Below flooring between piers...	16	$\frac{3}{4}$	3	5	180
Spandril... ..	29 $\frac{1}{2}$	$\frac{3}{8}$	5 $\frac{3}{8}$	...	1,023 $\frac{1}{8}$
Total...	...	...	...	...	3,143 $\frac{1}{2}$
Foundation.—Abutments	10 $\frac{1}{2}$	5 $\frac{1}{2}$	6	2	741 $\frac{1}{2}$
Piers	24 $\frac{1}{2}$	17 $\frac{1}{2}$	6	...	2,609 $\frac{1}{2}$
Front wings	39 $\frac{7}{8}$	8 $\frac{1}{2}$	5 $\frac{1}{2}$	2	3,728 $\frac{5}{8}$
Rear do.	22 $\frac{1}{2}$	6 $\frac{1}{2}$	6	2	1,792 $\frac{1}{2}$
Returns	16 $\frac{1}{2}$	5 $\frac{1}{2}$	6	2	1,055 $\frac{1}{2}$
Rear retaining wall... ..	14 $\frac{1}{2}$	3 $\frac{1}{2}$	6	...	287 $\frac{1}{2}$
Front do	38 $\frac{1}{2}$	2 $\frac{1}{2}$	5 $\frac{1}{2}$	...	586 $\frac{3}{2}$
Superstructure.—Abutments	10 $\frac{1}{2}$	4 $\frac{1}{2}$	7	2	677 $\frac{1}{2}$
Piers					

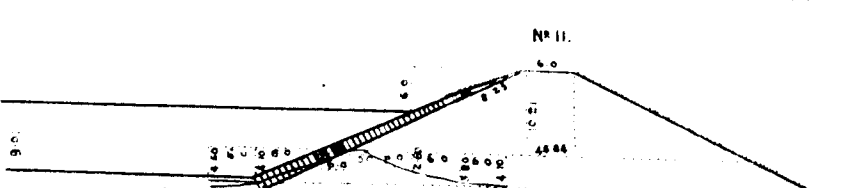
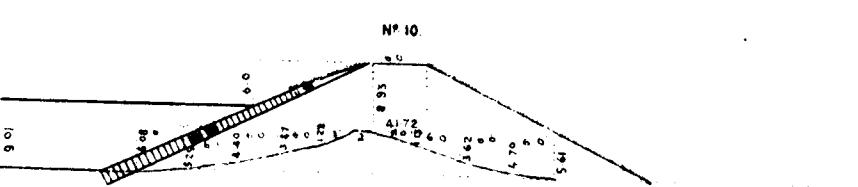
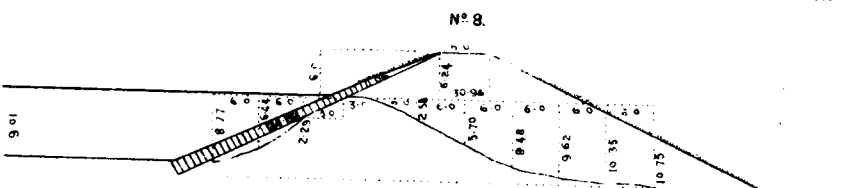
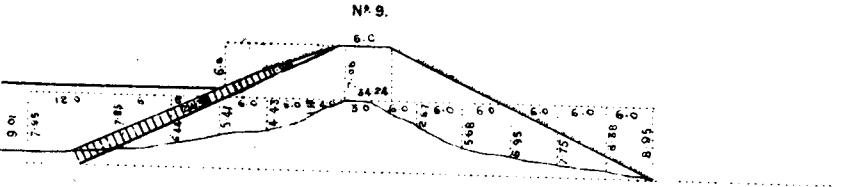
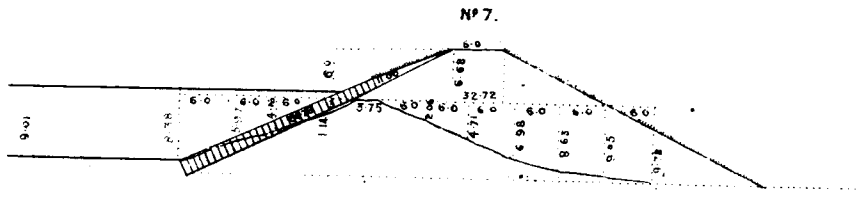
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20th June 1867.*

ABSTRACT ESTIMATE No. 4.

Quantities.	Description of Work.	Rate.			Amount.			Total.		
		RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
1	Head sluice, <i>vide</i> separate estimate.	.....			.....			7,340	0	0
109,781	Cubic yards of cutting	0	4	0	27,445	4	0			
183,317	Do. of do.	0	3	0	34,371	15	0			
36,335	Do. of do.	0	2	0	4,541	14	0			
26,915	Do. of do.	0	1	9	2,943	13	3			
105,006	Do. of do.	0	1	6	9,844	5	0			
10,821	Do. of do.	0	1	0	676	5	0			
								79,823	8	3
22,585	Cubic yards of banking	0	1	3	1,764	7	3			
1,252	Do. of do.	0	1	0	78	4	0			
								1,842	11	3
16,427	Square yards of turfing	0	0	4	342	3	8			
								342	3	8
12	Distributing channels	200	0	0	.....			2,400	0	0
	Compensation ... ..	.....			.....			3,000	0	0
11	Irrigation sluices, <i>vide</i> Plan No. 1..	300	0	0	.....			3,300	0	0
1	Do. do. <i>vide</i> Plan No. 2..	.....			.....			280	0	0
	Bund across Anikapally tank supply- ing channel and valley ... ..	.....			.....			150	0	0
	Drainage channel from aqueduct to old Ramireddy channel ... ..	.....			.....			770	0	0
	Drainage channel from near Anika- pally to Pottempadu swamp.	.....			.....					
61,712	Cubic yards of cutting	0	1	2	4,499	13	4			
								4,		



NELLORE DISTRICT SECTIONS showing the present and proposed bund of the SURVAPULLY TANK. SCALE 25' = 1'



TRANSFER BY H. K. BALDREY & S. SARAVANAYAGAN, LITHO BY R. J. BALDREY AUGUST 1967.

Signed: R. Smith
Ex. Engineer 1st or Nellore Range

