



ADMINISTRATION REPORT
OF THE
PUBLIC WORKS DEPARTMENT
(GENERAL, AND BUILDINGS AND ROADS),
MADRAS PRESIDENCY,
FOR THE YEAR
1898-99.

MADRAS:
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1899.

ADMINISTRATION REPORT OF THE PUBLIC WORKS DEPARTMENT,

Casualties. M.R.Ry. S. A. Jagadisa Aiyar Avergal, Assistant Engineer, 3rd grade, died on the 24th March 1899 at Mayavaram, while absent on privilege leave.

The undermentioned officers retired from the service :

Colonel D. McNeil Campbell, R.E., Chief Engineer, 1st class, on the 16th April 1898.

Mr. G. P. Carless, Executive Engineer, 1st grade, on the 21st October 1898.

The following statement shows the grants and expenditure under the several funds administered directly by the Chief Engineer and Secretary to Government, Public Works Department :

Funds and Financial head.	Original grant.	Revised estimate.	Actual expenditure.
1	2	3	4
	RS.	RS.	RS.
Imperial Military Works	70,800	78,000	69,926
Civil Works	92,000	78,000	75,262
Provincial	25,00,000	24,00,000	25,34,628
Local Incorporated Funds	42,000	46,000	37,750
Excluded Funds	4,87,928	2,61,600	2,49,108
Estate Works	3,629	8,721	11,450
Total	31,96,357	28,72,221	29,78,124

It will be seen that while the original grant under all heads amounted to Rupees 31,96,357 and the revised estimate to Rs 28,72,221, the expenditure of the year was Rs. 29,78,124, of which a sum of Rs. 25,34,628—by far the largest share of the outlay—was from Provincial Funds.

The distribution of expenditure under "departmental heads" is given in the following statement :—

STATEMENT showing Grant and Outlay during 1898-99 under all heads of Buildings and Roads Branch, Madras Presidency.

Service heads.	Original works.		Repairs.		Total.	
	Grant.	Outlay.	Grant.	Outlay.	Grant.	Outlay.
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
IMPERIAL.						
44. Military Works.						
Works	8,710	4,932	51,497	50,208	60,207	55,140
Establishment	..	..	..	..	13,884	11,196
Tools and plant	..	..	..	..	951	693
Barrack Department	..	..	..	..	..	..
New supplies	..	..	..	..	1,000	945
Repairs	..	..	..	..	800	445
Establishment	..	..	..	..	1,680	1,507
Total, Military Works	..	..	..	..	78,522	69,926
45. Civil Works.						
Works.. { Civil buildings	16,455	44,613	16,483	15,982	62,938	60,575
Communications	..	..	..	..	..	..
Miscellaneous Public improvements	..	..	..	..	..	..
Establishment	..	..	..	..	..	..
Tools and plant	..	..	..	..	14,457	13,788
Suspense accounts	..	..	..	..	888	899
Expenditure in England	..	..	..	..	..	..
Exchange	..	..	..	..	..	..
Total, Civil Works	..	..	..	..	78,233	75,262
Total, Imperial	..	..	..	..	1,66,755	1,45,188

GENERAL, BUILDINGS AND ROADS BRANCH.

Statement showing Grant and Outlay during 1898-99 under all heads, etc.—*cont.*

Service heads.	Original works.		Repairs.		Total.	
	Grant.	Outlay.	Grant.	Outlay.	Grant.	Outlay.
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
PROVINCIAL.						
45. Civil Works.						
Civil buildings	9,18,890	8,86,384	2,62,067	2,63,054	11,80,947	11,49,438
Communications	2,04,050	2,03,004	1,14,850	1,12,154	3,18,900	3,15,158
Miscellaneous Public improvements	59,778	59,681	18,675	18,104	78,453	77,785
Establishment	..	..	..	..	7,19,729	8,12,715
Tools and plant	..	..	..	..	1,69,899	1,44,100
Suspense accounts	..	..	..	..	57,601	35,432
Total, Provincial Civil Works	..	..	..	..	24,00,327	25,34,628
LOCAL FUNDS.						
Incorporated Local Funds	..	..	..	..	43,692	37,750
Excluded Local Funds	..	..	..	..	2,61,500	2,49,108
Estate works	..	..	..	..	8,721	11,460
CONTRIBUTIONS.						
44. Military Works—Imperial	..	..	..	..	..	4,811
45. Civil Works { Imperial	..	..	..	..	..	318
Incorporated Local	..	..	..	..	..	2,80,780
Provincial	..	..	..	..	..	2,85,909
Total, Contributions	..	..	..	..	28,70,995	32,64,033
Grand Total	..	..	..	..	..	..

NOTE.—The figures entered in column 6 represent final grants.
The figures in this statement are subject to modification on the final closing of accounts.

The revenue collected by the agency of the Public Works Department was as follows :—

STATEMENT showing Revenue Receipts realized during 1898-99 under all heads of accounts in the Buildings and Roads Branch of the Madras Presidency.

Sub-heads.	XXXI. Military Works.	XXXII. Civil Works, Provincial.	XXXIII. Civil Works, Incorporated Local.	Total.
	RS.	RS.	RS.	RS.
Rents of buildings	3,597	73,243	..	76,840
Sales of buildings	..	4,631	..	4,631
of barrack furniture	..	45,718	..	45,718
of tools and plant	44	1,819	6,515	8,378
of produce	12	3,236	..	3,248
of old materials	..	108	..	108
Value of materials received from old buildings	..	5,041	..	5,041
Receipts from self-supporting workshops and net profits	..	1,494	..	1,494
Unclaimed deposits	1	34,086	139	34,226
Fines refunded and miscellaneous	..	..	..	..
Realized in Public Works Department	3,654	1,69,376	6,654	1,79,684
in Civil Department	..	..	..	..
Total	3,654	1,69,376	6,654	1,79,684

The following were the most important of the works in progress.

MILITARY WORKS IMPERIAL.

IV Circle. Remodelling the present Married quarters with out-houses at West Hill, Calicut.—This work was sanctioned and started in January 1899. Half of the block of quarters was vacated early in February, the roof of this portion (five quarters) was dismantled and the walls raised. The expenditure during the year was Rs. 2,986.

Armoury, magazine, office-room and quarters for the Sergeant-Instructor of the South Indian Railway Volunteer Corps at Pākala.—This work estimated at Rs. 8,250 was commenced and the lower storey nearly finished with an outlay of Rs. 3,800, the amount of contribution.

V Circle.—Rupees 250 and Rs. 583 were spent on petty improvements and repairs, respectively, on the Sergeant-Instructor's quarters at Cuddalore and Negapatam.

VI Circle.—Three minor original works were completed at a cost of Rs. 117.

IMPERIAL CIVIL WORKS.

III Circle. A sum of Rs. 900 was spent in repairing Post offices against a grant of Rs. 975.

VI Circle.—Constructing a combined Post and Telegraph office at Kodaikānal, estimate Rs. 5,450.—Work was commenced on 16th January 1899. The runners' huts were nearly completed. The site was levelled, and the superstructure of the main building was in progress. Nearly all the wood work was got ready on the plains and was being despatched to site. All doors, windows and wood for fixed almirahs were ready at site. The outlay during the year was Rs. 1,646.

A fourth-class Post office with Postmaster's quarters at Perambalur, Trichinopoly division, estimate Rs. 2,490, was in progress. The following minor works were completed during the year:—

- (1) Sinking a well in the Post office compound at Ammayanāyakkannūr.
- (2) Constructing a Post office at Periyakulam.
- (3) Improvements to the Post office at Pāmban.

Observatory building at Kodaikānal.—This work was entrusted to the Consulting Architect for execution by departmental agency and was started in March 1898. Work in the main building was stopped in June 1898, pending approval of the plan by the Astronomer Royal. Orders were issued in November to complete the work in accordance with the original design, and the work was practically completed by March 1899. The domes which arrived from England about the end of March have still to be fitted up.

The residence for the Astronomer and quarters for the establishment were also completed during the year.

PROVINCIAL.

CIVIL BUILDINGS.

Forest.

IV Circle.—Converting the old Jail Hospital at Chittoor into a District Forest office.—The revised estimate for the work, amounting to Rs. 2,800, has been worked out, except some pointing.

Customs.

I Circle.—Constructing a new Sea Customs office at Vizagapatam.—An estimate of Rs. 20,499 was sanctioned for this work in March 1897, but funds were allotted only in the year under review. Rupees 8,076 were spent during the year and the masonry was brought up nearly to basement level. It was found necessary to considerably alter the arrangements of foundations and to afford additional protection to the sea face. A revised estimate is under preparation.

IV Circle.—Corrugated iron warehouse at Mangalore.—A total sum of Rs. 9,877 has been spent up to the end of the year. The warehouse made by Messrs. Burn & Co., Calcutta, for Porto Novo, but which is not required there, has been purchased for this work.

Reconstructing burnt portion of the Sea Customs godown at Calicut.—A sum of Rs. 5,784 has been spent on this work during the year. Iron trusses and purlins were ordered from Messrs. Richardson & Cruddas, Bombay, in January, but were not received during the year.

Sea Customs office at Baindur.—A total outlay of Rs. 1,047 has been incurred on this work. Its abandonment has been recommended.

V Circle.—Customs godown at Negapatam.—The work was resumed and completed, and the building handed over during the year.

Consulting Architect's Division.—Public Warehouse at Madras.—This work was started in June 1894, and after some considerable progress, was ordered to be stopped. It was resumed in February 1898 and completed during the year under review.

A shed with corrugated iron roof was erected at the Custom house, Madras, for the use of the Appraiser's department at an outlay of Rs. 3,318.

Land Revenue Buildings.

I Circle.—First-class Taluk office at Palkonda.—This work has been nearly completed, the total outlay being Rs. 31,581 against the estimate of Rs. 32,470.

A First-class Taluk office at Narasapatam was completed and handed over to the Revenue Department. The total outlay on the work was Rs. 42,593 against the estimate of Rs. 42,600.

A Deputy Tahsildar's office at Gunupur was commenced during the year, all the masonry of the main building and of the out-houses has been finished; the outlay during the year being Rs. 4,719.

A Deputy Tahsildar's office at Jeypore.—The estimate for this work was sanctioned late in the year. Work was started and the required iron and wood work collected. The outlay during the year was Rs. 730.

Reroofing Taluk office at Pottinghi.—This work was commenced during the year and nearly completed; the outlay being Rs. 3,775.

Constructing a Deputy Collector's office at Ellore.—The site was not decided on until the end of November 1898, when work was put in hand. The foundations were put in, the superstructure started and materials fully collected. The total expenditure on the work has been Rs. 15,279.

Improvements to the Taluk office at Narasapur.—Work was started in December after the rains. Foundations were laid and the walls raised to roof level. Materials were fully collected.

Stationary Sub-Magistrate's office at Tanuku.—Estimate Rs. 10,730.—Work was started in December. Foundations were laid and more than half the masonry work completed. Materials were fully collected.

Deputy Tahsildar's office at Kottapeta.—This work was completed during the year and handed over to the Revenue Department. The outlay incurred was Rs. 19,981 against the estimated amount Rs. 21,700.

Stationary Sub-Magistrate's office at Rajahmundry.—This work was commenced in January 1899. The concrete foundations were laid and building stone for masonry collected.

Constructing a Treasury room attached to the Collector's office at Chatrapur.—This work was taken in hand in April 1898, but was stopped for want of funds. It was subsequently resumed, the outlay incurred being Rs. 1,534.

The following works yet remain to be carried out :---

Ganjam Division.

- | | |
|---|--|
| (1) Constructing a new office for the General Deputy Collector at Russellkonda—Estimate Rs. 13,450. | The estimate is under revision. |
| (2) Combined office for a Deputy Collector and a Deputy Tahsildar at Chatrapur—Estimate Rs. 9,615. | Estimate sanctioned in August 1898; under revision, as accommodation for the Head-Quarters Deputy Collector also has to be provided. |
| (3) New Deputy Tahsildar's office at Sarada. | Estimates to be prepared for these works. |
| (4) Record-room to the Deputy Tahsildar's office at Goomsur. | |

Vizagapatam Division.

- (5) Deputy Tahsildar's office at Vizagapatam... Estimate under preparation.

Godavari Eastern Division.

- | | |
|--|--|
| (6) New Taluk office at Ramachandrapur ... | Estimate called for. |
| (7) New Collector's office at Cocanada ... | Estimate expected in June 1899. |
| (8) Improvements to the Deputy Tahsildar's office at Pittapur; Estimate Rs. 5,570. | Estimate sanctioned in February 1899. Work to be carried out in 1899-1900. |

Godavari Central Division.

- (9) First-class Taluk office at Amalapur ... Estimate sanctioned for execution when funds are available.

Godavari Western.

- | | |
|---|------------------------------------|
| (10) Deputy Tahsildar's office at Polavaram, Estimate Rs. 24,600. | Estimate sanctioned in March 1899. |
| (11) Deputy Tahsildar's office at Chintalapudi. | Estimate under consideration. |
| (12) Special Assistant Agent's office at Polavaram. | Estimate under preparation. |

II Circle—Kistna Northern Division—First-class Taluk office at Guntur.—This work was completed at a total outlay of Rs. 43,745 against an estimate of Rs. 43,500. It is occupied by the offices moved out of the Jail buildings and will be available for the Taluk establishment when other suitable accommodation has been provided for these offices. The matter is under correspondence with the departments concerned.

First-class Taluk office at Vinukonda.—This work was completed during the year at a total outlay of Rs. 40,278 against an estimate of Rs. 39,440. It was handed over to the Revenue Department in May 1898.

Deputy Tahsildar's office at Machera.—Estimate Rs. 26,000.—This work was commenced during the year. The walls of the main building were raised to level of springing of arches for doors and windows, with the exception of front of cells. Work on ryots' shed and on latrine was also in progress. All the required wood work was ready at site.

Kistna Eastern Division—First-class Taluk office at Gudivada.—A sum of Rupees 9,356 was spent during the year, the outlay to date being Rs. 52,227 against the estimate and to the non-completion of the ryots' shed, which is however nearly finished.

Stationary Sub-Magistrate's office without Jail wards at Arundelpet, Bezvada.—This total outlay being Rs. 10,385 against the sanctioned estimate of Rs. 11,780.

Deputy Tahsildar's office without out-houses at Aranigedda.—An incomplete work of last year. It was completed and handed over, the total outlay being Rs. 23,724 against the sanctioned estimate of Rs. 26,840.

Expenditure was also incurred on the construction of ryots' sheds in the compounds of the Deputy Tahsildar's office at Avanigedda and of the taluk offices at Masulipatam and Gannavaram.

Kistna Western Division—First-class Taluk office at Bapatla.—Estimate Rs. 46,100.—Main building finished; culvert and road work in progress; well work almost completed; flooring to latrine remains yet to be done. The expenditure on the work to date has been Rs. 44,418.

A special feature in the construction of this building has been the success which has attended the manufacture of table moulded bricks for the work, no natural soil being available for 15 miles round and the stone quarries being 30 miles away. The composition of brick earth under these circumstances was made by mixing pure clay, fine sand and a local soil called "pati mannu." A considerable degree of success has attended brick-making with this mixture.

Nellore Division—First-class Taluk office at Ongole.—Estimate Rs. 31,250.—The total outlay on this work up to end of the year was Rs. 21,306. Progress on it was at a standstill for some months owing to the lack of suitable material for the superstructure within easy distance. The use of laterite stone from Kavali was subsequently decided on, but its supply was delayed by the rains. The walls were raised 3 feet above basement all round and the door and window frames fitted. The other materials required have been collected and are at site. The estimate for the work is under revision.

Expenditure, as shown below, has also been incurred on the following minor original works :---

	RS.
(1) Wire-fencing the compound of the Head Assistant Collector's office at Gudur	117
(2) Iron record racks for the English record-room of the Collector's office	629

The repair grants for the year in this Circle were for the most part fully worked out.

III Circle—Bellary Division—The Taluk office at Madakasira was under progress during the year. The contractor for the work died and the portion of the work left undone by him had to be taken up departmentally. The building was nearly completed, only such work as pointing, painting, fitting glass to windows, and fencing the compound having yet to be done. A revised estimate for the work, amounting to Rs. 42,633, was sanctioned in March 1899.

Taluk office at Kalyandrug.—An estimate of Rs. 44,590 was sanctioned for this work early in 1899. No actual work was done, but payment was made for the materials collected during 1897-98. The work will be carried out departmentally.

Improvements to the Taluk office at Alur.—This work was completed during the year, but the accounts were not closed as, at the time of final inspection, some additional work was found necessary and had to be carried out departmentally.

Cuddapah Division.—The wire-fencing of the two new taluk offices at Proddatur and Rayachoti was put up during the year, the total expenditure to date on these offices being, respectively, Rs. 40,733 and Rs. 40,213.

Deputy Tahsildar's office at Chitvel.—This work was commenced in July 1898 and an outlay of Rs. 8,382 incurred mostly in the collection of materials. The work is being done departmentally, the contractor having been removed for not supplying good materials and the foundation having had to be taken out and relaid, as it would not set. A revised estimate for the work is under preparation.

Kurnool Division—Taluk office at Pattikonda.—This was put in hand during the year and the main building completed up to plinth level.

Stationary Sub-Magistrate's office at Nandyal.—Almost completed. The compound wall remains to be built.

The construction of out-houses for the Deputy Tahsildar's office at Markapur was completed during the year.

Taluk office at Nandikotkur.—Work begun during the year. The main building up to plinth level and three-fourths of the compound wall have been finished.

EDUCATIONAL.

Government Colleges.

Consulting Architect's Division—New Law College, Madras.—The work has already been completed; the outlay in 1898–99 represents liabilities paid off.

Providing fittings and furnishing the Chemical Laboratory at the Presidency College.—The furniture was made by the Public Works Workshops and the apparatus obtained through the India Office. The latter was fitted up by Messrs. P. Orr & Sons, Madras.

Providing an installation of gas for illuminating the Library, Reading-room and Theatre at the Connemara Library.—The estimate for this work was sanctioned in May 1898, and the work completed by the following October.

Government Schools.

I Circle—Normal and Union Schools for the Training College at Rajahmundry.—The upper storey was completed and handed over for occupation on 1st April 1899. Some items yet remain to be done, such as white-washing, painting doors, windows and ceiling planks to lower storey and levelling and gravelling the compound. Wire-fencing for the compound has not yet arrived from England. A revised estimate amounting to Rs. 61,000 has been submitted for sanction. The outlay on the work to the end of March 1899 was Rs. 54,621.

V Circle—Additions and alterations to the Reformatory School at Chingleput.—The actual construction of this work was started in October 1898 departmentally. Rubble stone which works out much cheaper than brickwork was ordered to be used for foundations; these have been completed for the school-room, kitchens, stable and coach-house and blacksmith shop. The year's outlay was Rs. 7,082.

ECCLESIASTICAL.

I Circle—Removing and re-roofing St. Paul's Church at Wallair.—An estimate of Rs. 3,200 was sanctioned for this work in January 1899. The work was not however commenced during the year.

II Circle—Church at Bezwada.—Estimate Rs. 17,080.—There were unavoidable delays in fixing a site. The work was also redesigned by the Consulting Architect, and an estimate was sanctioned only in February 1899. Principally on account of these causes, the work was not commenced during the year.

LAW AND JUSTICE.

I Circle.—A new court-house for the District Munsif at Chódavuramu.—An estimate of Rs. 12,600 for this work was sanctioned in September 1898 for execution in 1899–1900.

II Circle.—A waiting shed was constructed in the compound of the District Munsif's Court at Bezwada at a cost of Rs. 439.

District Munsif's Court-house at Kanigiri.—Estimate Rs. 15,600.—There was some difficulty in acquiring land for the site. Materials were collected during the year and arrangements were made for lime and brick manufacture. The outlay was Rs. 3,903.

IV Circle—West Coast Division.—A combined office for the Deputy Tahsildar and the District Munsif at Ottappalam was completed during the year, the total outlay on the work being Rs. 38,334.

Upper storey to the Sub-Judge's Court at Palghat.—This work was sanctioned late in the year and funds were allotted in January 1899. Walls of rooms were built 2 feet high and door frames were fitted.

Salem Division.—A court-house for the District Munsif of Krishnagiri was purchased and improved at an outlay of Rs. 3,712.

V Circle—Tanjore Division—District Munsif's Court-house at Shiyali.—The original grant for this work was reduced during the year to Rs. 2,000 with reference to a digging foundations, a sum of Rs. 2,012 was spent.

South Arcot Division—District Munsif's Court-house at Villupuram.—Foundation completed throughout and raised to top of basement level; door frames are being fitted. The work is being carried out departmentally. The total outlay on the work has been Rs. 9,274.

West Coast wood (*aince*) was obtained for rafters on this building, but it has warped to such an extent that it could not be used. The same wood has been used in other places—Tanjore for instance—successfully and at a very considerable saving in cost.

Chingleput Division—District Munsif's Court-house at Conjeevaram.—Estimate Rs. 17,910.—Rs. 2,013 were spent in the collection of materials. A new site for the building has to be selected.

Negapatam Division—Improvements to the District Munsif's Court-house at Pattukóttai.—These were completed and walls to the pleaders' shed were raised 8 feet high all round.

VI Circle—Madura Division—District Munsif's Court-house at Dindigul.—Estimate Rs. 18,050.—The estimate was sanctioned in October 1898. Materials are being collected. The site was not finally acquired.

The following works remain for execution in the circle:—

- | | |
|--|---|
| (1) New court-house for the District Munsif, Mánámadurai. | } Estimates for (1), (2) and (3) are under preparation. |
| (2) Improvements to the District Munsif's court-house at Sivaganga. | |
| (3) District Munsif's court-house at Sattúr. | } Estimate ready for submission to Government. |
| (4) Re-modelling and terracing the roof of the Sub-court at Kokkarkulam. | |

JAILS.

Central Jails.

IV Circle—Improvements to the Central Jail at Cannanore.—Well sunk and plank-ing under trusses completed with an outlay of Rs. 11,062.

Improvements to the Central Jail buildings at Salem.—Work completed except the provision of zinc shutters to 50 cells in the close prison for which the required materials have been collected.

Deepening the Main gate well in the Central Jail, Coimbatore.—The well has been widened to the full depth; the ramp cutting has made good progress and the steining will be commenced in June 1899. The work could not be resumed till February 1899 as sanction to the revised estimate was received only in the January preceding. The work is in rapid progress and should be completed during 1899–1900.

Providing impervious flooring of cutstone slabs in the hospital building of the Central Jail, Coimbatore.—This work which was half finished some four months before the close of the official year came to a standstill owing to the sudden efflux in February and March of masons from Coimbatore for work on the Perur temple. The rapidity with which the work will be finished off depends on the labour obtainable. Skilled labour is scarce in Coimbatore and endeavours are being made to import stone cutters from the Erode sub-division.

The work is now about three-quarters finished, but a want of stone cutters is experienced. Nevertheless it is fully expected that the end of June will see everything complete.

VI Circle—Trichinopoly Division, Trichinopoly Central Jail—Water-supply.—This work was completed at a total expenditure of Rs. 4,442.

Cubicles are to be provided for one ward of a block and the roofs of several of the buildings require extensive repairs.

Consulting Architect's Division—Increasing the cellular accommodation at the Penitentiary.—Work was not put in hand till December 1898; by March 1899, however, about half of the work had been completed. The work is in progress.

The following works still remain to be carried out :

- (1) Stationary Sub-Magistrate's office at Penukonda.
- (2) Re-roofing the record-rooms of the Collector's office, Bellary.
- (3) Deputy Tahsildar's office, Kamalapur—Estimate under revision.
- (4) Deputy Collector's office, Sidhout—Estimate under consideration.
- (5) Sub-Magistrate's office at Rajampet—Estimate sanctioned in December 1898.
- (6) Upper storey to the Collector's office, Kurnool—Estimate sanctioned, work to be started soon.
- (7) Taluk office at Ramalakot—Estimate under revision.
- (8) Do. Koilkuntla } Estimates under preparation.
- (9) Do. Giddalore }
- (10) Sub-Magistrate's office at Atmakūru—Estimate under revision.
- (11) Do. Kalva.

IV Circle—West Coast Division. The Stationary Sub-Magistrates' offices at Puttur and Coondapoor were completed during the year at an outlay of Rs. 9,590 and Rs. 9,839 against estimates of Rs. 9,400 and Rs. 10,080, respectively.

First-class Taluk office at Kasaragod. This work was taken up during the year and an expenditure of Rs. 14,100 incurred. The superstructure was almost completed and wood work for the roof commenced.

Coimbatore Division—Improving the Collector's office and detached buildings at Coimbatore.—There was some delay in the execution of these improvements as, a crack having appeared in one of the main arches, it was not considered safe to build further without testing them with Madras Railway rails which could not be obtained for a very long time. The work has been nearly completed, only plastering over the terrace and cutstone flooring to the verandah of the Sheristadar's office remaining yet to be done.

Salem Division—Deputy Tahsildar's office at Rásipuram.—There was an outlay of Rs. 6,533 on this work during the year. The walls were raised 10½ feet; more progress could not be made owing to the non-receipt of wood and iron work, which had been indented for from the Public Works Workshops.

Stationary Sub-Magistrate's office at Námakkal.—The compound of this building was fenced during the year at an outlay of Rs. 441.

V Circle—Chingleput Division—Deputy Tahsildar's office at Sathiavedu.—Foundations mostly completed and materials collected during the year.

South Arcot Division—Taluk office at Tiruvannámalai.—This work was completed and handed over at an outlay of Rs. 40,008 against an estimate of Rs. 39,210.

Tanjore Division—Public offices at Tanjore.—The lower storey of the main building, the treasury, the record-room and press office have been completed. Plastering walls and fixing doors and windows are in progress. The outlay to date has been Rs. 1,45,410. The work is expected to be handed over by the end of 1899-1900. A revised estimate is under preparation.

The following works still remain to be carried out :

- (1) Ryots' shed, latrine and compound wall for the taluk office at Chidambaram.
- (2) Improvements and additions to the taluk office at Kallakurehi.
- (3) Providing record racks and a latrine for the new Collector's office at Cuddalore.

VI Circle—Trichinopoly Division.—Stationary Sub-Magistrate's office, Kulitalai.—The building was completed and handed over at a total outlay of Rs. 8,854 against the sanctioned estimate of Rs. 8,500.

Stationary Sub-Magistrate's office at Perambalur.—This work was completed in the previous year; but final payments were made and the accounts closed only during the year under review. The total outlay was Rs. 8,177 against the sanctioned estimate of Rs. 7,600.

GENERAL, BUILDINGS AND ROADS BRANCH.

Extending the strong room of the District Treasury and converting the plinth into a store-room in the Collector's office at Trichinopoly.—An estimate amounting to Rs. 11,660 was sanctioned in September 1898. Materials for the work at collection and the outlay during the year was Rs. 1,000.

Madura Division—Head Assistant Collector's office at Ramnad.—The outlay during the year on this work was Rs. 756, the total expenditure amounts to Rs. 19,927 against the sanctioned estimate of Rs. 19,100. Work completed.

Stationary Sub-Magistrate's office at Periyakulam.—Estimate Rs. 9,000.—Work to the value of about Rs. 300 only remains to be done. The total expenditure on the work has been Rs. 8,002.

Stationary Sub-Magistrate's office at Dindigul.—Walls have been built up to the full height and verandah arches complete. Terracing work and cutstone flooring in progress. A revised estimate amounting to Rs. 9,600 was sanctioned in October 1898. The outlay during the year was Rs. 7,004.

Vernacular record-room for the Collector's office in Tirumal Naik's Palace at Madura.—Estimate Rs. 60,700.—The outlay during the year was Rs. 60, the total outlay being Rs. 42,899. The work is in abeyance.

Additions and improvements to the Sub-Collector's office at Dindigul.—Estimate Rs. 3,060.—The work was commenced in May 1898 and the building completed and handed over in March 1899 at an outlay of Rs. 3,058.

Tinnevely Division.—The Stationary Sub-Magistrate's offices at Sankaranayinár-kóyil and Sáttúr were completed during the year.

The following works yet remain to be completed :—

- (1) Court room for the Deputy Tahsildar of Manappárai. } Estimate called for.
- (2) Additional accommodation for the clerks of the Deputy Tahsildars' offices at Tiruchuli and Mudukulattúr. } Estimates for these two works under preparation.
- (3) Combined office for the Tahsildar and the Stationary Sub-Magistrate at Melúr. }
- (4) Deputy Tahsildar's and Sub-Magistrate's office at Paramagudi. } Estimate sanctioned in October 1898.
- (5) Taluk office at Ottappidáram. } Estimate under preparation.
- (6) Deputy Collector's office at Srivilliputtúr. }
- (7) Re-modelling and terracing the roof of the English correspondence clerk's room of the Collector's office at Kokkarkulam. } Estimate in course of submission.

Residences for Local Governments and Secretariat Offices.

Certain minor additions to the Government Houses at Madras and Guindy were under execution.

Additions and improvements to the Government Secretariat buildings at Ootacamund.—Estimate Rs. 17,660.—Work was started in February 1899 by departmental agency and was completed by April.

Stamp and Stationery Office.

Additional store-room at the Central Stamp office, Madras.—Estimate Rs. 9,520.—The estimate was sanctioned in May and work was started in June 1898. It was completed and handed over early in January 1899.

MINOR DEPARTMENTS.

Monuments and Antiquities.

Consulting Architect's Division—Constructing a new work room and a stuffing room and erecting teak racks, &c., in the Central Museum, Madras.—Estimate Rs. 10,770.—The estimate was sanctioned in October 1896; but work was started only in June 1898 and completed by the following December.

District Jails.

III Circle.—Portions of the District Jail at Bellary were re-roofed with Mangalore tiles at a cost of Rs. 3,783.

VI Circle.—Improvements to the District Jail at Madura—Estimate Rs. 7,840.—The work has been undertaken by the Jail department and is approaching completion.

Lock-ups.

IV Circle.—Adding two cells to the Sub-Jail at Mangéri.—The work is nearly completed, the outlay during the year being Rs. 2,820.

Adding two cells to the Sub-Jail at Angádipuram.—The work was started during the year and is nearly completed. Outlay Rs. 2,121.

V Circle.—Improvements to the Sub-Jail attached to the Sub-Magistrate's office at Tiruvádi—Estimate Rs. 4,130.—Main and cross walls have been raised to the required height and the joists of main roof have been put up.

POLICE.

I Circle.—Constructing a police office, school, store-room and place-of-arms at Vizagapatam.—The lower storey was completed except some plastering and fitting up of woodwork. The work is in good progress.

Constructing a magazine and improving the station-house at Chintapalli.—The estimate of Rs. 12,300 originally sanctioned for this work embraced the following items:—

	RS.
(1) Improving the station-house at Chintapalli	4,700
(2) Constructing police hospital at do.	6,000
(3) Constructing a magazine ...	1,600
Total	12,300

When, however, the work was put in hand during the year under review, it was found that the roof of the station-house (item 1) was very dilapidated, an estimate was accordingly sanctioned supplemental to item (1), and item (2) was considered unnecessary and cancelled. The whole estimate was thus reduced to Rs. 7,320.

Progress on the work in the early part of the year was slow and unsatisfactory, but before the end of the year all the masonry of the station-house was completed and the re-roofing work put in hand. The magazine was completed except asphalt flooring.

Constructing a police school-building at Chatrapur—Estimate Rs. 3,480.—Work was started in June 1898 and practically completed by the end of the year under review with an outlay of Rs. 3,343.

II Circle.—A third-class police station-house at Karempudi—Estimate Rs. 1,210, was commenced during the year and was approaching completion. The outlay was Rs. 1,036.

Revised estimates for converting the old sub-jail into 24 police huts at Masulipatam and for converting the old hospital at the same place into inspector's quarters and out-houses are under preparation.

A second-class police station-house at Venkatagiri estimated at Rs. 2,100 was in progress. The outlay during the year was Rs. 234.

III Circle.—The accounts of the police office at Anantapur and of the police station at Adóni were finally settled and completion reports have been submitted.

The police office at Kurnool, an incomplete work of last year, has been almost done. Plastering the main building, pointing and parapet work have yet to be

The following Police works still remain for execution in the Circle:—

- (1) Extending the Police hospital, Anantapur.—Estimate in course of submission to Government.
- (2) Quarters for Police Hospital Assistants at Bellary.—Estimate under revision.
- (3) Reserve Inspector's quarters, Kurnool.
- (4) Police hospital at Nandyal.
- (5) Police hospital at Cumbum.—Estimate under preparation.

IV Circle.—West Coast Division—One hundred and forty-five Police huts at Mangalore—Estimate Rs. 30,770.—Work was completed at an outlay of Rs. 30,772.

Improvements to the Police Head-quarter office, Calicut—Estimate Rs. 7,550.—This work was commenced during the year. Walls have been built up to roof level. Materials for the roof have been collected.

Office for the Assistant Superintendent of Police, Palghat.—The building has been constructed to roof level. Stone and other materials collected. Progress very much retarded owing to wood-work not being ready.

Permanent quarters for the Police force at Malapuram.—A sum of Rs. 9,999 has been spent on the work during the year. The Thiya and Moplah lines and the blocks of buildings with out-houses for European head constables have been completed.

Coimbatore Division—Improving the old Jail guard lines at Coimbatore to adapt them for the accommodation of the Reserve Police.—The repairs to huts have been completed. Materials for the Inspector's and the European head constable's quarters have been collected.

Third-class Police Station-house at Kandal—Estimate Rs. 2,565.—This building was completed at an outlay of Rs. 2,578 during the year and handed over to the Police department.

Police Hospital Ward in the compound of the Civil Dispensary at Kollegal.—This work was completed and handed over in September 1898. The contractor's accounts have not yet been settled. The construction of a compound wall is under consideration.

North Arcot Division—Converting the old Jail at Chittoor into Police lines.—With the exception of a few details, the work has been completed.

V Circle.—Chingleput Division—Re-roofing the Police Superintendent's office at St. Thomas' Mount.—Masonry work for walls completed; joists fixed and terracing in progress.

VI Circle.—Madura Division—Town Police Station at Madura.—Work completed and handed over to the Police department.

Tinnevely Division—Constructing a second-class Police station-house at Pettai.—Work completed. The provision for land compensation has been exceeded by Rs. 210 and a revised estimate for 3,660 has been submitted for sanction.

Constructing an office and residence for the Assistant Superintendent of Police at Tuticorin—Estimate Rs. 12,450.—The work was completed during the year. The total expenditure has been Rs. 12,550.

The following Police works in the Madura and Tinnevely divisions still remain for execution:—

- (1) First-class Police Station-house at Trichinopoly.
- (2) Two huts for head constables and three for constables at Kodaikámal.
- (3) Second-class Police Station-house at Vedaundur.
- (4) First-class Police Station-house at Srivilliputtur

} Estimate under preparation.

} Estimate in course of submission

} to Government.

... Estimate under preparation.

Consulting Architect's Division—Police Station-house at Washermanpettah—Estimate Rs. 12,675.—The work was started about July 1898 and completed in March 1899.

MEDICAL.

Consulting Architect's Division.—The following works were commenced and completed during the year under review:—

Upper storey to the European female ward at the Leper Hospital buildings to accommodate Native females, Estimate Rs. 7,190.

Constructing a Laundry at the Leper Hospital, Estimate Rs. 2,700.

Constructing a linen-room and general waiting-room for the students of the Medical College, Madras.

Additions to the Lunatic Asylum buildings, Estimate Rs. 50,862.—The work is nearing completion.

MISCELLANEOUS.

Registration.

I Circle—Registrar's office at Chattrapur, Estimate Rs. 4,100.—This work was taken in hand in November 1898 and foundations and basement were completed by the end of December. The superstructure is in progress.

A Sub-Registrar's office at Aska is to be constructed in 1899–1900. The estimate is under preparation.

II Circle.—The work of repairing and improving the Old Taluk office at Nandigama, Kistna Northern division, for the office of the Sub-Registrar, was commenced late in the year and was almost completed. Estimate Rs. 640; outlay Rs. 331. The extension of the Deputy Tahsildar's office at Kota to accommodate the Sub-Registrar's office, an incomplete work of the previous year, was completed.

The extension of the Venkatagiri Taluk office to accommodate the Sub-Registrar's office, estimate Rs. 2,200, an incomplete work of the previous year, was also completed.

III Circle—Bellary Division.—A Sub-Registrar's office at Madakasira was commenced and completed during the year at a cost of Rs. 2,836.

IV Circle—Salem Division—Sub-Registrar's office at Tiruppattur.—Roofing in progress. There was delay in the execution of the work owing to non-receipt of wood-work from the Public Works Workshops. The work will be completed and the work handed over in 1899.

Sub-Registrar's office, Pennagaram.—Roofing almost finished; fixing doors and windows complete.

North Arcot Division—Sub-Registrar's office at Pallikonda.—The work was finished except pointing compound wall. Outlay Rs. 2,124.

V Circle—Sub-Registrar's office at Muttupet.—A sum of Rs. 330 was spent in acquiring the site. The estimate for the work is under revision.

The Sub-Registrar's office at Valavanur in the South Arcot division has to be constructed in 1899–1900.

VI Circle—Trichinopoly Division—Sub-Registrar's office at Pullambadi, Estimate Rs. 2,850.—Walls have been raised to a height of $6\frac{3}{4}$ feet above basement level. The outlay during the year was Rs. 1,470 against the total expenditure of Rs. 1,849.

Sub-Registrar's office at Uppiliyapuram, Estimate Rs. 2,650.—The building is nearing completion; the compound wall is finished and gates have been fitted. The outlay during the year was Rs. 1,782 and the total expenditure Rs. 2,161.

Sub-Registrar's office at Lalgudi, Estimate Rs. 3,470.—The work is nearly completed. Flooring and painting the exterior walls are in progress. The outlay during the year was Rs. 2,540 and the total expenditure Rs. 2,970.

Madura Division—Sub-Registrar's office at Aruppukottai, Estimate Rs. 4,480.—Work completed. The outlay during the year was Rs. 218 against the total expenditure of Rs. 4,989.

Sub-Registrar's office at Tiruppuvanam, Estimate Rs. 4,520.—Work completed. The outlay during the year was Rs. 267 against a total expenditure of Rs. 4,311.

Tinnevely Division—Sub-Registrar's office at Kadayanallur.—The work was completed during the year with the exception of a portion of the compound wall. The outlay on the work during and up to end of the year was Rs. 2,758.

The following registration works still remain for execution in the Madura and Tinnevely divisions:—

(1)	Sub-Registrar's office at Kamudi.	} Estimates for these works will be prepared on the issue of a revised standard design.
(2)	Do. at Rajapalayam.	
(3)	Do. at Vadakkaviravanallur.	
(4)	Do. at Morappanad.	

Consulting Architect's Division—Sub-Registrar's office, Mount Road.—The building in the occupation of this office was purchased during the year for Rs. 4,350.

Public Works Buildings.

I Circle—Residence for the Executive Engineer, Waltair.—The design for this work, as originally estimated for, was considered unsuitable and another plan was prepared by the Consulting Architect, the estimate in this case amounting to Rupees 13,596. The work was commenced in January 1899, and is now complete to 3 feet above basement. All the doors and windows were obtained from Madras and have been fixed. The outlay during the year was Rs. 2,893.

Rest-house with out-houses at Cocanada, Estimate Rs. 8,250.—Materials were collected and the walls of the main building were raised to their proper height at a cost of Rs. 2,570.

The following works still remain for execution:—

(1) Quarters for the Hospital Assistant attached to the Police Hospital, Ramagiri, Udayagiri.

(2) Quarters for the Hospital Assistant attached to the Government Civil Hospital, Goomsur, Udayagiri.

(3) Quarters for the Hospital Assistant attached to the Ganjam Collectorate.

II Circle—Kistna Northern division.—The rest-house at Karempadi was improved at an outlay of Rs. 911.

Kistna Eastern Division—Office for the Executive Engineer, Kistna Northern division.—The work was in abeyance. It is now proposed to build a combined office for the Kistna Northern and Western division offices, the head-quarters of the latter having lately been transferred to Bezvada.

Quarters and out-houses for the Executive Engineer, Kistna Northern division.—This was an incomplete work of the previous year. It was completed.

Nellore Division.—The following minor works were in progress:—

(1) Combined rest-house and storshed at Allur. Estimate Rs. 1,570; outlay Rs. 799.

(2) Wire-fencing the compound of the Sub-Collector's bungalow at Ongole. Estimate Rs. 550; outlay Rs. 123.

The rest-house at Kavali, estimated for at Rs. 1,650, was abandoned and the materials were sold.

III Circle—Bellary Division—District Surgeon's quarters at Anantapur.—A sum of Rs. 71 was spent during the year. The accounts have been finally closed. The total outlay on the building has been Rs. 4,593 against the estimate Rs. 4,570.

Famine Tools Godown at Bellary.—This work was commenced during 1897–98 and completed during the year under review at a cost of Rs. 8,527 against an estimate of Rs. 8,940.

Cuddapah Division—Improving and extending the Executive Engineer's office at Madanapalle.—The work was begun in July 1898 and completed in March 1899 at a cost of Rs. 3,704 against an estimate of Rs. 3,650. The work was done departmentally.

Kurnool Division.—A storshed for famine tools at Cumbum was completed during the year.

quarter of the work remained to be done. Earthwork from 2,200 feet to 5,200 feet was finished and from 5,200 feet to 5,700 feet it was in progress. The total length of this section is 12,260 feet and the work is expected to be finished in 1899-1900.

The work having been sanctioned late in the year, it could not be started before November; it has been carried on with vigour, since. More progress could not have been made as there was strong opposition by a section of the public to the sanctioned line of road by Manupatti and the decision to adhere to that line was arrived at in the last month of the year under review. Considerable difficulties have also to be encountered in the matter of work on the ghât, as most of the labour has to come daily from Manupatti, the nearest village, which is 11 miles distant.

The estimate for the work will need entire alteration with, however, it is hoped, no excess to provide for.

An estimate for constructing a girder bridge across the Chinnar river in continuation of the road is being prepared. Another estimate will also be prepared for improving that portion of the road between the ghât and Manupatti village—not included in the sanctioned estimate. This track is reported to be scarcely fit for lightly laden carts even in fair weather.

The following lines of communication were maintained and improved during the year:—

Name of road.	Length of road.	Expenditure under maintenance.	Expenditure under improvements.	Monsoon damages.
Chundale-Mysore frontier	12	Rs. 5,989	Rs. 12,618	...
Ootacamund to Kullar	27	44,962	...	...

Ootacamund Kullar road.—A sum of Rs. 44,962 was spent in maintaining this road against an estimate of Rs. 44,400; a further sum of Rs. 1,341 was spent in maintaining the suspension bridge at Kullar.

The eight miles of the old ghât between Coonoor and Kullar were also maintained at a cost of Rs. 150 per mile. The other works in progress were—

	Outlay.
(a) Renewing platforms of wooden bridges in the 17th and 18th miles	Rs. 1,041
(b) Repairs to laterite roads and foot-paths leading to Government buildings, Ootacamund	2,623
(c) Repairing the road from Charing Cross to Government Garden gate	1,821

V Circle—Chingleput Division—Restoring the cross road connecting the Chunampet-Madurantakam road with the Merkanam-Tindivanam road.—This work was sanctioned for execution from contributions from Government, the District Boards of South Arcot and Chingleput, and the Zamindar of Chunampet. During the north-east monsoon, the road was so seriously damaged that further expenditure on it seemed of doubtful utility. A recommendation has accordingly been made for its abandonment, pending decision on which, the work is in abeyance.

VI Circle—Madura Division—Road from Bodinayakanur to Kotagudi, Estimate Rs. 1,00,000.—Funds were allotted for this work late in the year, but they had to be surrendered as the required land could not be acquired.

The following works in the Madura and Trichinopoly divisions still remain for execution:—

- (1) Opening out the Lower Palnis ... Estimate under preparation.
- (2) Extension of the Kodamurty road bridge. Estimate to be shortly submitted.

MISCELLANEOUS PUBLIC IMPROVEMENTS.

IV Circle—Filling in the Ootacamund lake.—The work has been completed except draining the new tennis courts and raising low portions of the Pologround. It was in charge of a special Executive Engineer until the close of the year, when it was transferred to the charge of the Sub-divisional officer, Nilgiris. The outlay during the year was Rs. 55,781.

V Circle.—An outlay of Rs. 9,003 was incurred in improving the conservancy of the river Cooum.

Estimates have been submitted for.—

- (1) A southern canal connecting the Madras Harbour with the Cooum river and for
- (2) dealing with the Junction canal.

INCORPORATED LOCAL FUNDS.

II Circle.—The road over the Kistna anicut was re-constructed and opened for traffic on the 24th March 1899, at an outlay of Rs. 990.

A road culvert at 2 miles, 3,650 feet of the central channel in Nellore division was constructed at a cost of Rs. 586.

The following roads were maintained during the year:—

	Outlay.
	RS.
(1) Kykalur road	254
(2) Roadway over the Penner anicut	586

Expenditure as shown below, was incurred on the following famine relief works:—

	Outlay.
	RS.
(1) Duthalore Pamur road	4,763
(2) Kanigiri Pamur road	2,611

V Circle—Negapatam Division—Forming a village road from Latchmangudi village to Kottagam, Estimate Rs. 9,650.—All masonry works and formation of the road for a length of 7 miles and 1 furlong were completed. The remaining portion of 2 miles and 3 furlongs cannot be carried out until the required lands have been made over to the Public Works Department. The necessary steps are being taken.

Trichinopoly Division.—The following roads were maintained during the year at a cost of Rs. 1,142:—

- (1) Road No. 20, from Sirudiyur to the lower anicut *via* Sangaraiyur, 20 miles.
- (2) Road on right bank of lower Pangunyah channel from Pavalur to Thirumangalam, 1½ miles.
- (3) Road along the Iyar Konakarai flood bank, 4,600 feet.

EXCLUDED LOCAL FUNDS.

PORT FUNDS.

I Circle—Quarters with out-houses for the Port officer at Vizagapatam, Estimate Rs. 10,500.—Masonry completed throughout. Plastering inner walls and flooring completed and doors and windows being fixed. A revised estimate for the work is under preparation.

Improvements to the foreshore at Vizagapatam.—This work was executed by the East Coast Railway; the amount of the sanctioned estimate for the work was adjusted by transfer to the East Coast Railway.

Residence for the Port officer at Gopalpur.—A building was purchased for this purpose through the medium of the Revenue Department.

Investigation of Harbour improvements at Vizagapatam.—It was decided in September 1898 that observations of the currents, sand drift, prevailing winds with soundings and surveys should be made so that accurate data might be obtained on

Quarters for the Assistant Superintendent of Police at Nandyal have yet to be built. The estimate for the work is under revision.

IV Circle—Coimbatore Division—Quarters for two Secretariat clerks on Stonehouse Hill at Ootacamund.—These have been completed and are in occupation. The total outlay was Rs. 2,889 against an estimate of Rs. 2,970.

V Circle.—The following works were put in hand and practically completed during the year:—

(1) Constructing a storeshed in the Public Works Stores. Estimate Rs. 6,600; outlay Rs. 7,921.

(2) Constructing a storeshed for famine tools in the Public Works Stores. Estimate Rs. 6,000; outlay Rs. 4,822.

(3) Laying on Red Hills water-supply to the Public Works Workshops. Estimate Rs. 3,389; outlay Rs. 3,390.

VI Circle—Madura Division—Residence with out-houses for the Inspector of Police at Kodaikānal. Estimate Rs. 4,020.—Foundation and basement completed. Superstructure and roofing the out-houses were in progress. The outlay on the work during and up to end of the year was Rs. 1,116.

Residence with out-houses at Kodaikānal for the Deputy Tahsildar. Estimate Rupees 4,000.—This work was in charge of the Consulting Architect. It was started in August 1898, and completed in January 1899 by departmental agency with a saving of nearly Rs. 623.

Compensation for land for residences for European officers at Madura.—A sum of Rs. 665 was refunded by the Civil department and represents a portion of the amount of compensation paid for the suppression of bazaars in the vicinity of these residences.

Residence for the Judge with out-houses at Madura. Estimate Rs. 29,130.—This and the other residences for the head-quarter staff at Madura are in charge of the Consulting Architect to Government. Work was commenced in November 1898. The masonry work is being carried out by contract. Woodwork, doors and windows were made at Madras. By March 1899, the superstructure had been raised 8 feet and all woodwork received at site.

Residence for the District Superintendent of Police, Madura. Estimate Rs. 12,784.—This work has been constructed under the same conditions as the District Judge's residence. Work was begun in December 1898 and by March 1899, the walls had been raised 6 feet, and doors, windows and roof timbers were brought to site from Madras.

Quarters for the Executive Engineer at Madura.—The work was begun in February 1899. Concrete for foundations was completed; work was, however, stopped in March 1899, pending sanction to the estimate for the work.

The following works in the Tinnevely division still remain for execution:—

(1) Residence for the District Forest-officer at Palamecottah.

(2) Residence for the Executive Engineer at Palamecottah. Estimates for both (1) and (2) have already been submitted.

Consulting Architect's Division—Amir Mahal.—Certain additions to the Zenana building were started and completed in the year at an outlay of Rs. 2,432.

COMMUNICATIONS.

I Circle—Road with masonry works from Kallikota to Boirani.—This road was completed during the year with a total expenditure of Rs. 87,116 against the estimate of Rs. 87,800.

Iron girder bridge at Maha Singhi. Estimate Rs. 70,910.—During the year, the abutments were fully completed, including pointing, plastering, brick cornice, parapets, &c. Piers 1, 2, 3, 4 and 5 were fully completed; so also concrete between bays and front apron. Girders over 6 spans were erected and buckle plates fixed. Concrete over buckle plates and roadway gravelled. Approaches one side completed and those

on the other side in progress. The bridge is thus now complete except for metalling the approaches, which will be carried out during the monsoon. The total outlay on the work was Rs. 58,071.

New Kalingia ghât road.—The estimates for this work were returned for revision. The jungle along the proposed line of road has been cleared to admit of a proper revision of the road estimate. The trace has again been inspected by the Executive Engineer.

Road from Surada to Shergaia via Bodagodu.—Surveys and levels were being taken for preparing an estimate.

Road from Koraput to Jeypore.—This portion of the ghât road was transferred to the Public Works Department during the year and estimates for replacing the wooden and temporary bridges by permanent structures are under preparation.

Road from Itikavalasa to Koraput.—This road was maintained during the year at a cost of Rs. 28,246.

IV Circle—West Coast Division—Improvements to the Sultan's Battery, Mysore frontier roads.—The expenditure to the end of the year was Rs. 79,764 against the estimate of Rs. 84,340. The improvements have been completed with the exception of putting up an iron girder bridge across the Kallur river, materials for which have been collected.

A sum of Rs. 4,380 was spent during the year on metal collection for improving the Chundale Sultan's Battery road.

Roads from Pandikad to Thuvur and from Thuvur to Karivarakundu.—These two works, though accounted for as two distinct works, are practically one. The roads have been completed and tested by one monsoon. They are in very fair condition throughout. The total outlay to date has been Rs. 19,566.

Road from Melathur to Karivarakundu.—This road has been completed and opened for traffic and is very much in use. The total outlay on it was Rs. 16,655.

Road from Kalikavu to Karivarakundu.—The road was completed, the total expenditure on the work to date being Rs. 15,403.

Road from Nilambûr to Kalikavu.—This work is nearly completed, and the road is opened for traffic. The total outlay on the work has been Rs. 26,126.

Pandalur road.—Earthwork nearly completed; all the masonry works except three bridges have been completed. The total expenditure to date has been Rs. 23,860.

Coimbatore Division—Havelock road at Ootacamund.—This work was in charge of a special Executive Engineer Mr. J. F. Somers-Eve, and has been opened for traffic. There is, however, a good deal still to be done in completing fences, guard walls, revetments, &c., and as much of the road work had to be done when water was scarce, the metal is loose in many places. The total length of the road is 4 miles $5\frac{1}{2}$ furlongs, and it will be handed over to the Municipality at the close of 1899-1900.

Anamalai road project.—Mr. Loam, Executive Engineer, had charge of the project up to November 1898, when he was relieved by Mr. Wood, who remained in charge till the end of the year. The total expenditure on the project for the year amounted to Rs. 51,815. The bridle-path up the villoney valley was completed and the first $3\frac{1}{2}$ miles of the cart road made good progress.

Pallapalayam Chinnar road.—This road is in the immediate charge of the Executive Engineer, Coimbatore division, with an overseer working under him. An expenditure of Rs. 16,802 was incurred on the work during the year.

Work done on the plains.—1,000 running feet of earthwork from Pullapalayam end finished and enough metal and gravel for that portion collected. Beyond this, work was in progress. The full length on the plains is expected to be finished in 1899-1900.

Work done on the ghât.—The dry stone portion of the abutments to the bridges and culverts was nearly finished for a length of 1,600 feet from the foot and the top portion (dry stone in mortar) for the same works was in progress. The guard wall from the foot to 3,300 feet was completed and from 3,300 feet to 5,200 feet about a

which to frame proposals for the construction of a harbour at Vizagapatam. Messrs. A. T. Mackenzie, Executive Engineer, and Adami, Assistant Engineer, were deputed to this duty. These officers have together collected a large amount of valuable information, which is being tabulated and reduced to shape. The observations made comprise information of a varied character. To complete the data, however, the observations should be extended through the south-west monsoon; and this will be duly carried out. Mr. Mackenzie has had under consideration a design of scouring sluices and other works in connection therewith; his proposals have been submitted to the Chief Engineer.

Mr. Brown, Assistant Engineer, conducted a series of velocity observations above and below Turner bridge during the monsoon of 1898, and the results have been placed at Mr. Mackenzie's disposal.

The estimate sanctioned for these observations amounted to Rs. 6,150. The expenditure during the year amounted to Rs. 3,782.

Extending the Southern and Northern Jetties at Cocanada.—The work has been completed; the original estimate had to be revised to provide for the increased cost of conveyance of materials by rail. The groynes are in good condition except that a settlement has taken place owing to tidal scour round the ends at flow and ebb tides.

A dredger has been indented for for the port.

II Circle.—The following works were in progress:—

	Estimate.	Outlay.
	RS.	RS.
(1) Demarcating the port of Masulipatam	103	88
(2) Investigation of tidal creek at Masulipatam	55	50

IV Circle—Calicut Pier repairs.—Extensive repairs were carried out to the iron screw-pile pier at a cost of Rs. 7,388. The wood-work was almost entirely renewed and new tie rods fixed where required.

V Circle—Negapatam Division—Improvements and extensions to the Jetty wall at Negapatam, Estimate Rs. 3,740.—This was completed during the year at an outlay of Rs. 3,840.

An outlay of Rs. 3,767 was incurred on *Hurdle groynes at Negapatam*. A preliminary estimate and report on the proposed Negapatam pier have been submitted.

An outlay of Rs. 14,855 was incurred on building a barge for the port of Tuticorin and mounting on it the Priestman's dredger lying at the Public Works Workshops, Madras.

The following minor works were in progress in the Circle:—

(1) *Lightkeepers' quarters at Point Calimere, Estimate Rs. 2,260.*—Walls raised to basement level.

(2) *Improving the Port office at Negapatam, Estimate Rs. 1,015.*

VI Circle—Quarters with out-houses for the Port officer at Tuticorin.—Materials were collected for the work, but its execution was stopped as it was considered that the present Port and Sea Customs Office could be improved and extended to provide the necessary accommodation for the Port Officer. Estimates for such extension have been ordered to be prepared.

New pier at Tuticorin and reclamation of foreshore.—This was completed in the previous year. The outlay during this year of Rs. 587 was incurred to meet the debit raised by the South Indian Railway on account of cost of a temporary siding laid in 1894–95.

Fencing the foreshore at Tuticorin.—This work was not finished as the Public Works Workshops, Madras, did not complete the preparation of material as originally expected.

Lighthouse Division—Lighthouse, &c., at Havelock Point, False Point, Divi, Estimate Rs. 1,18,620, Outlay during the year Rs. 39,317.—At the close of 1897–98, well-sinking for the Lighthouse foundations had just been commenced and a number of blocks moulded

Tirupati water-supply.—The collecting wells, collecting chamber and break pressure chamber were raised to summer water level and the infiltration gallery formed by end of May.

Sluice valves were received in March 1899 and were being fitted up.

Cement pipes were laid for the delivery main for a total length of 6 miles and 26 manholes were under construction.

The service reservoir for the town was raised to full height and arched over. Plastering was half done and the inlet, outlet and scour valves were nearly fixed. Pipe valves, &c., for town distribution works were half laid.

FAMINE RELIEF.

I. CIRCLE.

No works under this head were started or in progress during the year. The outlay under this head in the Ganjam division comprises either refunds to paymasters or their pay and allowances debited by the Civil department to the Public Works Department. A sum of Rs. 2,714 was spent in the Vizagapatam division in discharging liabilities to the piece-workers on training Sarada river below Murkada village.

II. CIRCLE.

The following three works were under execution by the Public Works Department in the Nellore division during the year:—

Nandanavanam tank.
Duthalore-Pamur road.
Kanigiri-Pamur road.

There were early rains in May and the number on relief fell off; the Nandanavanam tank work was then closed, and all labour was concentrated on the other two. The heavy rains in September caused the closure of these two in October. The works were carried out on the intermediate piece work system at a cost slightly in excess of ordinary schedule rates.

LIGHTHOUSES.

The following lighthouses were inspected during the year by the ordinary staff of the Public Works Department and their condition reported on:—

Calingapatam.	Cochin.	Mangalore.
Hope Island.	Calicut.	Negapatam.
Lighthouse at Point	Cannanore.	Point Calimere.
Divi.	Tellicherry.	Hare Island.

PUBLIC WORKS STORES AND WORKSHOPS.

Public Works Stores.—A fire occurred in a portion of these stores on the 3rd February 1899. The value of the stock destroyed has not yet been reported.

The closing balance of the year was Rs. 3,06,705–12–5 against Rs. 1,93,510–10–3 at the end of the previous year.

The receipts during the year were as follows:—

	RS.	A.	P.
From London	2,37,620	10	2
„ Public Works Workshops	8,591	4	8
„ Public Works Divisions	410	11	1
„ Local Purchases	20,582	4	9
„ Guaranteed Railways	250	0	0
„ Provincial Revenue	282	15	3
Total	2,67,737	13	11

and the issues were—

	RS.	A.	P.
To Public Works Workshops	83,909	11	10
„ other Public Works Divisions	64,760	12	8
„ Guaranteed Railways	84	4	6
„ other departments	551	13	3
„ Private Sales	367	13	5
„ Articles valuing Rs. 10 and below transferred to other Divisions without value and loss on stock debited to Provincial Minor Original Works	4,868	4	1
Total	1,54,542	11	9

The closing balance of Rs. 3,06,705-12-5 includes value of surplus stock and also such stock as was destroyed by the fire.

Special stores to the value of Rs. 79,246-10-8 were obtained from England on account of other divisions and departments and were duly despatched to their destinations.

Instruments, tools and plant were issued numerically to Public Works Provincial services, but at a valuation to other Provincial services and departments to the extent of Rs. 39,546-3-1.

During the year under review, 35 consignments were received from England and 29 shipments made to other Public Works divisions as against 61 and 20, respectively, in the previous year.

Stock-taking was commenced by Mr. Hutton, Executive Engineer (temporary rank) in October 1898, but was stopped on that officer's temporary deputation to other duty.

Public Works Workshops.—The value of work executed in the shops during the year was Rs. 2,61,336-11-9 against Rs. 2,82,499-5-0 in the previous year, showing a decrease of Rs. 21,162-9-3. Over Rs. 50,000 worth of last year's outturn being directly due to famine, there has, it is reported, been practically an increase in the regular work of the shops.

The following statement shows the work done for each department as compared with that of the previous year:—

Department.	1897-98.			1898-99.			Difference.	
	RS.	A.	P.	RS.	A.	P.	More.	Less.
Public Works Department	2,50,740	0	8	2,15,324	7	11	35,415	8 9
Military Works and State Railways	712	3	0	394	12	1	317	6 11
Other Departments	27,166	13	10	41,557	8	8	14,390	10 10
Quasi-Public bodies	1,127	15	11	3,630	4	5	2,502	4 6
Private parties	2,752	3	7	429	10	8	2,322	8 11
Total	2,82,499	5	0	2,61,336	11	9	16,892	15 4
Decrease of work in 1898-99							21,162	9 3

The value of the machinery and plant in the shops at the beginning of the year was Rs. 27,132-6-7. Deducting the usual 4 per cent. for depreciation, viz., Rupees 3,485-4-9, and adding the receipts during the year, viz., Rs. 9,256-7-2, the balance at the close of the year amounted to Rs. 92,903-9-0. The expenditure on tools and plant and machinery was Rs. 12,057-8-9 and that on new plant Rs. 9,256-7-2. The balance of materials on hand at the end of the year was Rs. 8,278-9-6, as against the sanctioned reserve limit of Rs. 200. Nearly the whole of this balance consists of timber on hand, which had to be bought late in the year on account of the complete failure of the timber contractors to cope with the exceptionally heavy indents of the year under review—a contingency which was never anticipated.

for the superstructure. During 1898-99, the tower was practically completed, so far as was possible in the absence of apparatus which has to be sent out by the Secretary of State; two sets of quarters were almost finished, and the walls of the third were raised 9 feet above basement.

Lighthouse, &c., at Manapud, Estimate Rs. 51,230, Outlay during the year Rs. 18,998.—The excavation of the tower foundations had just been commenced and a large quantity of materials had been collected, at the beginning of the year. During 1898-99, the tower, three sets of quarters, an inspection bungalow and kitchen were completed, except a little finishing. Here, too, the apparatus from England is awaited.

Lighthouse, &c., at Mulki (Kaph Rock), Estimate Rs. 68,600.—During the year materials were collected and the tower raised to a height of 31 feet above rock. Two sets of quarters were completed to basement level and the third set to 5 feet above basement. Work was started only in January. The apparatus from England is also awaited here.

Lighthouse at Masulipatam—Estimate Rs. 8,650.—The tower was commenced in December and completed, except a little finishing, at the end of the year. The oil-store and watch-room were completed to basement level. The apparatus to be fitted here can be moved from Point Divi only on the exhibition of the new Havelock Point light.

Lighthouse, &c., at Mangalore—Estimate Rs. 6,910.—The masonry of tower and oil-store almost completed.

Lighthouse at Seven Pagodas—Estimate Rs. 49,920.—Work was started in March and materials were collected outlay during the year Rs. 2,813.

Additions and alterations to lighthouse at Muttum and constructing quarters for Establishment—Estimate Rs. 10,450.—One set of quarters completed to basement level. The other buildings in progress. Collection of materials commenced only in December.

The expenditure incurred at Pulicat, Malpi, Kundapur and Hangarkotta, was for materials.

Locally-manufactured cement and lime were tested in this division during the year at a cost of Rs. 50. The tests are reported to be still going on.

WORKS IN ESTATES UNDER THE COURT OF WARDS.

I Circle.—The works in the following estates were in charge of the Public Works Department:—

Ganjam Division.

- (1) Bodogodo. (2) Shergada.

No works were carried out in the latter; but in Bodogodo, a sum of Rs. 258 was spent under "Buildings," "Original Works"; under "Repairs" Rs. 573 were spent in repairing three works, of which one was an incomplete work of the previous year.

IV Circle—Repairs to Sivasamudram bridge.—An estimate of Rs. 20,680 has been sanctioned for the work. Expenditure as shown below was incurred during the year:—

South Bridge.		RS.	RS.
38,490 square feet grouting and pointing	...	1,540	
11,931 cubic feet removing and repacking apron stones	...	477	
13,000 cubic feet gravelling roadway	...	260	
			2,277
North Bridge.			
47,820 square feet grouting and pointing	...	1,913	
32,400 cubic feet removing and repacking apron stones	...	891	
19,500 square feet gravelling roadway	...	390	
			3,194
Total	...	5,471	

Service books.—The orders with respect to the due and correct maintenance of service books are reported to have received careful attention from all the officers of the department.

Inventory of valuable stock.—The returns of stock are reported to have been correctly rendered to the Examiner, Public Works Accounts, by all officers of the department.

Lightning Conductors, I Circle.—Arrangements are, it is reported, being made to give effect to the departmental instructions issued in November 1898 for periodically testing the lightning conductors of buildings. The lightning conductors at Hope Island lighthouse and Calingapatam lighthouse were tested during the year.

VI Circle.—Twenty lightning conductors were tested during the year in this circle.

Barrack Department.—The control over the supplies and repairs of furniture required by the Barrack Department in the IV Circle was transferred to the Public Works Department during the year. An expenditure of Rs. 2,808 was incurred under this head.

Execution of masonry works by departmental agency.—This experiment was, it is reported, tried in the III Circle. In the case of Irrigation works which are scattered and supervision over which is difficult on account of the distances comprised in a charge, the experiment has been found to be unsatisfactory. The result of the few works executed in the Buildings and Roads branch by departmental agency has been, it is reported, satisfactory. The works are naturally in the large centres, where labour is more easily obtainable. These are therefore more suited for departmental agency and the extension of the system should, it is reported, also increase the efficiency of Upper Subordinates.

Periodical Examination of Roof timbers.—In pursuance of departmental orders, the Consulting Architect arranged for a systematic examination of the roof timbers of Government buildings in his charge during the year. The roof timbers of all the Government buildings in the I Circle except in three sub-divisions were also examined. Returns from other circles have not been received.

STATEMENT showing the expenditure on Major Works in detail and Minor Works and Repairs in lump sums during the year 1898-99.

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
—44. MILITARY WORKS—IMPERIAL.				
ORIGINAL WORKS.				
MAJOR.				
<i>1. Accommodation for Troops.</i>				
modelling the present married quarters with out-houses at West Hill, Calicut.	8,000	..	2,986	Work abandoned, the material collected being used for improving the old building. Work completed in 1897-98. During 1898-99 the sale-proceeds of materials, &c., amounting to Rs. 169 have been credited to the work.
instructing a new block of married quarters with out-houses at West Hill, Calicut.	..	2,420	— 2,420	
armoury, store-room, magazine and quarters for the Sergeant-Instructor, South Indian Railway Volunteer Rifle Corps, Trichinopoly.	6,300	4,941	— 169	
armoury, store-room, magazine and quarters for the Sergeant-Instructor, South Indian Railway Volunteer Rifle Corps, Pakala.	4,460	..	103	
Total ..	..	..	500	
MINOR.				
I Circle	..	..	1,739	
IV "	..	..	2,326	
V "	..	..	250	
VI "	..	..	117	
Total ..	..	..	4,432	
REPAIRS.				
I Circle	..	..	4,348	
II "	..	..	440	
IV "	..	..	38,271	
V "	..	..	583	
VI "	..	..	6,566	
Total ..	..	..	50,208	
BARRACK DEPARTMENT.				
<i>New Supplies.</i>				
IV Circle	..	..	945	
<i>Repairs and Carriage.</i>				
IV Circle	..	..	434	
VI "	..	..	11	
Total ..	..	..	445	
Grand Total ..	..	..	56,530	
II.—45. CIVIL WORKS—IMPERIAL.				
I. ORIGINAL WORKS.				
MAJOR.				
3. Salt.				
Communications.	..	..	..	
Constructing dam across Valavanar ..	8,900	883	— 82	Work in abeyance. <i>Minus</i> outlay represents value of materials at site transferred to other works.
Total ..	..	..	— 82	
6. Post Office.				
Constructing a combined Post and Telegraph office at Kodaikānal.	5,450	..	1,646	Runners' sheds nearly finished. Superstructure in progress. Windows, doors, and other wood work nearly ready.
Additions and improvements to the General Post Office, Madras.	3,474	..	2,269	
7. Telegraph.				
Telegraph office with out-houses at Vizagapatam.	11,350	10,307	5	Completed and accounts closed.

Statement showing the expenditure on Major Works in detail, &c.—*cont.*

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
II.—45. CIVIL WORKS—IMPERIAL—<i>cont.</i>				
<i>Meteorological.</i>				
Observatory building at Kodaikānal ..	35,850	5,545	18,635	Building practically completed. The domes have to be fitted up. Completed. Do.
Residence for the Astronomer ..	19,863	8,189	7,684	
Quarters for establishment ..	11,570	5,716	2,695	
Total ..	..	..	32,934	
<i>MINOR.</i>				
I Circle ..	..	..	2,509	
II " ..	..	..	1,659	
III " ..	..	..	125	
IV " ..	..	..	2,208	
V " ..	..	..	288	
VI " ..	..	..	2,915	
Consulting Architect division ..	..	..	2,057	
Total ..	..	..	11,761	
<i>REPAIRS.</i>				
I Circle ..	..	..	3,116	
II " ..	..	..	866	
III " ..	..	..	975	
IV " ..	..	..	3,543	
V " ..	..	..	1,543	
VI " ..	..	..	3,862	
Consulting Architect division ..	..	..	2,057	
Total ..	..	..	15,962	
Grand Total ..	..	..	60,575	
III.—PROVINCIAL.				
<i>I. CIVIL BUILDINGS.</i>				
<i>MAJOR WORKS.</i>				
<i>1. Forests.</i>				
Office of the Conservator of Forests at Waltair.	8,800	7,550	729	Completed and accounts closed.
Converting the old Jail Hospital at Chittoor into a District Forest office.	2,800	..	2,798	
<i>2. Customs.</i>				
Constructing a new Sea Customs office at Vizagapatam.	20,499	..	8,076	Masonry nearly brought up to basement level.
Constructing a corrugated iron warehouse at Mangalore.	11,569	5,382	4,495	
Re-constructing burnt portion of the Sea Customs Godown at Calicut.	14,000	..	5,784	Work completed and handed over. The minus outlay represents value of materials at site transferred to other works.
Customs Godown at Negapatam ..	5,700	9,592	5,482	
Iron shed in the Sea Customs office, Madras.	3,590	..	1,371	Completed. Do.
Public warehouse at Madras ..	48,657	36,081	4,960	
Erection of a shed for the use of the Appraisers' Department at the Custom House, Madras.	4,024	..	3,318	
<i>3. Administrations.</i>				
<i>(4) Land Revenue Buildings.</i>				
Constructing a Treasury room attached to the Collector's office, Chattrapur.	8,400	..	1,531	In progress.
First-class Taluk office at Narsapatam ..	42,600	27,559	15,034	Completed.
Do. do. at Palkonda ..	32,470	22,556	9,025	Nearly completed.
Deputy Tahsildar's office at Jeypore ..	18,530	..	730	Work just started. The required iron and wood work has been purchased.
Do. do. at Gunupur ..	11,550	..	4,719	Masonry completed in the main building and out-houses.
Re-roofing the Taluk office at Pottinghi ..	3,940	..	3,775	Completed.
Constructing a Stationary Sub-Magistrate's office at Rajahmundry.	8,060	..	867	In progress.

Statement showing the expenditure on Major Works in detail, &c.—*cont.*

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
III.—PROVINCIAL—<i>cont.</i>				
<i>I. CIVIL BUILDINGS—<i>cont.</i></i>				
<i>MAJOR WORKS—<i>cont.</i></i>				
<i>3. Administrations—<i>cont.</i></i>				
<i>(4) Land Revenue Buildings—<i>cont.</i></i>				
Improvements to the Deputy Tahsildar's office at Prattipad ..	2,740	..	2,221	Masonry completed. Roofing in progress.
Converting the Bengal terraced roof of the additional buildings attached to the Collector's office, Cocanada, into a flat terraced one ..	2,640	..	721	Materials collected.
Deputy Collector's office at Ellore ..	19,900	5,784	9,495	In progress.
Improvements to the Taluk office at Narsapur ..	8,800	..	7,824	Do.
Stationary Sub-Magistrate's office at Tanuku ..	10,730	..	8,475	Do.
First-class Taluk office with out-houses at Kovur ..	35,270	37,751	107	Completed and accounts closed.
Deputy Tahsildar's office at Kottapeta ..	21,700	16,609	3,372	Completed.
Do. do. at Macherla ..	26,000	..	11,347	In good progress.
First-class Taluk office at Guntur ..	43,500	42,687	1,058	Completed, but accounts not finally closed.
Do. do. at Vinukonda ..	39,440	39,333	945	Completed and handed over; but accounts not finally closed.
Do. do. at Narasaraopet ..	36,620	36,765	5	Completed and handed over.
Do. do. at Gudivada ..	56,200	42,871	9,356	Main building completed and ryots' shed in progress.
Stationary Sub-Magistrate's office without Jail wards at Arundelpet, Bezvada ..	11,780	10,231	154	Completed.
Deputy Tahsildar's office at Avanigadda ..	26,840	23,937	213	Do.
First-class Taluk office at Bapatla ..	46,100	30,290	14,128	Main building finished.
Do. do. at Ongole ..	31,250	17,125	4,181	
Head Assistant Collector's office at Gudur ..	23,458	21,400	2,378	
Improvements to the Taluk office at Alur ..	14,481	6,914	6,665	Completed, but accounts not closed.
Taluk office at Madakasira ..	42,633	33,095	2,759	Nearly completed.
Do. at Kalyandrug ..	44,590	2,500	1,400	
Do. at Tadipatri ..	36,270	40,555	320	
Do. at Gooty ..	35,754	42,794	119	Accounts closed during the year.
Improvements to the Taluk office at Hospet ..	8,837	8,110	62	
Taluk office at Dharmavaram ..	35,682	41,743	369	
Do. at Rayachoti ..	39,900	40,110	103	The compounds of both these offices were enclosed with wire-fencing during the year.
Do. at Proddatur ..	41,090	40,526	207	
Deputy Tahsildar's office at Chitvel ..	20,300	..	8,382	Outlay incurred in the collection of materials.
Taluk office at Pattikonda ..	36,610	16,873	6,025	Work in the main building completed up to plinth level.
Constructing Sub-Magistrate's office at Nandyal ..	9,550	9,145	2,500	Compound wall to be completed.
Constructing out-houses, &c., to the Deputy Collector's office at Markapur ..	4,545	860	3,001	Completed. The lightning conductor has to be fixed.
Taluk office at Nandikotkur ..	36,606	..	10,440	Work on main building completed up to plinth level and compound wall three-fourths finished.
Do. at Allagadda ..	36,523	34,799	10	Completed.
Improving the Collector's office and detached buildings at Coimbatore ..	10,300	..	8,534	
Taluk office at Gobichettipollicem ..	29,550	36,352	58	Completed works of 1897-98.
Do. at Kollegal ..	40,090	45,332	22	
Do. at Karur ..	32,100	32,105	1,611	
Improving Deputy Tahsildar's office at Mettupalaiyam ..	2,680	2,385	238	
Stationary Sub-Magistrate's office at Puttur ..	9,400	7,855	1,735	Completed.
Do. do. at Coondapoor ..	10,080	7,884	1,955	
First-class Taluk office at Kasaragod ..	35,921	..	14,100	Do.
Deputy Tahsildar's office at Rasipuram ..	16,100	..	6,533	
Stationary Sub-Magistrate's office at Namakkal ..	8,250	7,703	441	
Taluk office at Tirupattur ..	46,100	42,237	78	Building completed. Wire-fencing approaching completion.
First-class Taluk office at Chendragiri ..	34,920	34,924	1,245	Accounts closed during the year.
Deputy Tahsildar's office at Tirupati ..	11,990	12,969	14	
Combined office for the Deputy Collector and the Stationary Sub-Magistrate at Tiruvallur ..	31,000	30,903	61	Completed.

Statement showing the expenditure on Major Works in detail, &c.—cont.

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
III.—PROVINCIAL—cont.				
I.—CIVIL BUILDINGS—cont.				
MAJOR WORKS—cont.				
16. Miscellaneous—cont.				
(4) Public Works Buildings—cont.				
Constructing quarters for the Executive Engineer at Madura.	..	..	2,681	Work stopped in March 1898, pending sanction to estimate.
Constructing Deputy Tahsildar's residence with out-houses at Kodaikanal.	4,000	..	3,377	Completed.
Additions to the Zenana building, Amir Mahal.	2,700	..	2,432	Do.
Total ..	..	..	7,50,297	
MINOR WORKS.				
I Circle	..	..	19,759	
II "	..	..	6,817	
III "	..	..	11,557	
IV "	..	..	35,475	
V "	..	..	19,074	
VI "	..	..	18,104	
Consulting Architect's Division ..	..	..	25,251	
Lighthouse Division	..	..	50	
Total ..	..	..	1,36,087	
REPAIRS.				
I Circle	..	..	26,742	
II "	..	..	18,825	
III "	..	..	51,826	
IV "	..	..	32,595	
V "	..	..	30,086	
VI "	..	..	23,039	
Consulting Architect's Division ..	..	..	79,941	
Total ..	..	..	2,63,054	
Grand Total ..	..	..	11,49,438	
II.—COMMUNICATIONS.				
ORIGINAL WORKS.				
MAJOR WORKS.				
1. Metalled Roads.				
A. Bridged and drained throughout.				
Road with masonry works from Kallikota to Boirani.	87,800	67,329	19,787	Completed.
Clearing jungle for the proposed new Kalingia Ghat road.	2,500	..	1,000	
Havelock road at Ootacamund	61,300	..	45,898	
Surveying Yercaud Ghat road for making a pathway along the trace in Salem district.	5,940	1,350	3,491	Almost completed.
Improvements to Chundale-Mysore road ..	84,340	67,146	12,618	The only work yet to be done is to put up the iron girder bridge across Kuthur river.
Road from Pandikad to Thuvur	..	8,001	470	} Completed in November 1897.
Do. Thuvur to Karivarakundu	9,140	10,313	782	
Do. Melathur to do.	5,150	15,459	1,197	
Do. Kalikavu to do.	..	5,157	10,246	
Do. Nilambur to Kalikavu	..	10,087	19,039	Completed.
Pandalur road	..	9,138	14,722	Nearly completed.
Restoring the cross road connecting the Madurantakam-Chunampet road with the Merkanam-Tindivanam road.	13,240	6,576	1,284	Very nearly completed.
2. Unmetalled Roads.				
Constructing a bridle-path from Pallapoliem, Coimbatore district, to the Chinnar river, the boundary of Travancore territory.	38,802	..	16,802	

Statement showing the expenditure on Major Works in detail, &c.—cont.

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
III.—PROVINCIAL—cont.				
II.—COMMUNICATIONS—cont.				
ORIGINAL WORKS—cont.				
MAJOR WORKS—cont.				
2. Unmetalled Roads—cont.				
B. Partially bridged and drained.				
Constructing an iron girder bridge at Mahasinghi.	70,910	52,080	5,991	Practically completed.
(a) Constructing a bridle-path from Aliar river to Sirukundru. 8,719	..	17,063	22,141	
(b) Villoney bridle-path .. 7,241				
(c) Temporary establishment for the project. 1,296				
(d) Rest-house, Anamalai .. 4,885	..	..	11,089	
Aliar road works	..	..	18,585	
Do. bridge works	..	..	..	
Total ..	..	..	2,02,142	
MINOR WORKS.				
I Circle	..	..	324	
II "	..	..	12	
III "	..	..	1,000	
IV "	..	..	814	
VI "	..	..	340	
Total ..	..	..	862	
REPAIRS.				
I Circle	..	..	32,960	
IV "	..	..	65,693	
Consulting Architect Division	..	..	13,501	
Total ..	..	..	1,12,154	
Grand Total ..	..	..	3,15,158	
III.—MISCELLANEOUS PUBLIC IMPROVEMENTS.				
ORIGINAL WORKS.				
MAJOR WORKS.				
Filling in Ootacamund lake	1,99,140	1,05,600	55,781	
Fencing the foreshore at Tuticorin ..	2,945	..	1,271	
Total ..	..	..	57,052	
MINOR WORKS.				
IV Circle	..	..	2,629	
Total ..	..	..	59,681	
REPAIRS.				
I Circle	..	..	151	
II "	..	..	124	
IV "	..	..	365	
V "	..	..	9,557	
Consulting Architect Division	..	..	8,637	
Total ..	..	..	77,785	
IV.—INCORPORATED LOCAL FUNDS.				
45. CIVIL WORKS.				
II.—COMMUNICATIONS.				
MAJOR WORKS.				
1. Metalled Roads.				
A. Bridged and drained throughout.				
Forming a village road from Latchmangudi village to Kottagam.	9,650	5,492	1,057	
Total ..	..	..	1,057	

Statement showing the expenditure on Major Works in detail, &c.—*cont.*

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
III.—PROVINCIAL—<i>cont.</i>				
I. CIVIL BUILDINGS—<i>cont.</i>				
MAJOR WORKS—<i>cont.</i>				
8. Administrations—<i>cont.</i>				
(4) Land Revenue Buildings—<i>cont.</i>				
Deputy Tahsildar's office at Sathiavedu ..	14,600	..	2,502	Materials collected; foundations mostly completed.
Taluk office at Tiruvannamalai ..	39,210	36,755	3,253	Completed.
Additions and improvements to the Collector's office at Cuddalore.	1,16,390	1,15,284	68	Do.
Public offices at Tanjore ..	1,25,800	1,02,009	43,401	In progress. Revised estimate in course of submission.
Stationary Sub-Magistrate's office at Kumbakonam.	11,140	11,187	25	Completed.
First-class Taluk office at Musiri ..	34,405	35,590	— 72	Rs. 72, the sale-proceeds of materials, was credited to the work in 1898-99.
Do. do. at Jayankondasolapuram.	40,000	40,018	— 4	Rs. 4, the sale-proceeds of materials, was credited to the work in 1898-99.
Stationary Sub-Magistrate's office at Kudit-talai.	8,500	8,400	454	Completed.
Stationary Sub-Magistrate's office at Perambalur.	7,600	6,929	1,248	Do.
Extending the strong room of the district treasury and converting the plunge bath into a store room in the Collector's office at Trichinopoly.	11,660	..	1,000	Materials under collection.
Head Assistant Collector's office at Ramnad.	19,100	19,171	756	Completed.
Stationary Sub-Magistrate's office at Periyakulam.	9,000	2,750	5,252	Almost completed.
Additions and alterations to the Deputy Tahsildar's office at Kodaikanal.	3,570	1,675	1,205	Completed and handed over. Sundry small works, however, remain.
Stationary Sub-Magistrate's office at Dindigul.	9,600	..	7,004	
Constructing a vernacular record room for the Collector's office in Tirumalai Naick's palace at Madura.	60,700	42,839	60	Work in abeyance.
Additions and improvements to the Sub-Collector's office at Dindigul.	3,060	..	3,058	Completed.
Stationary Sub-Magistrate's office at Sankaranayinarkóvil.	7,350	6,797	170	Do.
Stationary Sub-Magistrate's office at Sattúr.	7,090	7,073	267	Do.
(6) Residences for Local Governments and Secretariat offices.				
Minor additions to the Government House, Madras, and connected buildings.	6,191	..	4,973	
Minor additions to the Government House, Guindy, and connected buildings.	7,608	..	6,249	
Additions and improvements to the Secretariat buildings at Ootacamund.	17,660	..	13,878	
(9) Stamp and Stationery office.				
Additional Store room in Central Stamp office, Madras.	9,520	..	9,576	Completed and handed over.
9. Minor Departments.				
(3) Monuments and Antiquities.				
Constructing a new work room and a stuffing room and erecting teak racks, &c., in the Central Museum, Madras.	10,770	..	9,182	Completed.
10. Educational.				
(1) Government Colleges.				
New Law College, Madras ..	3,86,594	3,70,789	5,701	The minus amount represents value of materials from dismantled tower transferred to other works and stock.
Connemara Library and connected buildings.	5,77,712	5,74,528	— 1,814	
Providing fittings and furniture for the Chemical Laboratory at the Presidency College.	28,237	12,311	13,756	

Statement showing the expenditure on Major Works in detail, &c.—*cont.*

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
III.—PROVINCIAL—<i>cont.</i>				
I. CIVIL BUILDINGS—<i>cont.</i>				
MAJOR WORKS—<i>cont.</i>				
10. Educational—<i>cont.</i>				
(1) Government Colleges—<i>cont.</i>				
Installation of Gas for illuminating the library, reading-room and theatre at the Connemara Library.	10,490	..	10,586	Completed.
Providing punkahs, &c., to the College of Engineering, Madras.	2,377	..	2,058	
(2) Government Schools.				
Normal and Union Schools for the Training College at Rajahmundry.	46,506	38,514	16,107	Nearly completed.
School-house at Anantapur ..	19,920	21,065	— 2	Accounts settled and completion report submitted.
Government Training School at Mangalore.	9,210	8,452	46	Completed.
Alterations and additions to the Reformatory School at Chingleput.	79,040	..	7,082	
11. Ecclesiastical.				
Church at Bezwada ..	17,080	..	11	Work not commenced.
Iron gate to Protestant Cemetery at Pallavaram.	3,270	3,115	121	Completed; accounts not closed.
12. Law and Justice.				
(1) High Courts.				
Property rooms for High, Small Causes and City Civil Courts, Madras.	44,764	37,772	240	Completed in 1897-98. The outlay represents certain liabilities adjusted.
(3) District Courts.				
District Munsif's Courthouse at Narasaraopet.	18,890	17,921	79	Completed, but accounts not closed.
District Munsif's Courthouse at Kanigiri ..	15,600	..	3,903	
Combined office for the Deputy Tahsildar and the District Munsif at Ootapalam.	38,390	26,787	11,547	Completed.
Upper storey to the Sub-Judge's Court at Palghat.	2,980	..	54	
Purchase of and improvements to the District Munsif's Courthouse at Krishnagiri.	3,770	2,737	975	Completed.
District Munsif's Courthouse at Conjeevaram.	17,910	..	2,013	Materials collected; site not yet acquired.
District Munsif's Courthouse at Villupuram.	17,250	718	8,556	In good progress.
District Munsif's Courthouse at Shiyali ..	22,270	2,329	2,012	In abeyance, pending selection of a new site.
Do. at Shiyali ..	7,860	..	4,286	
Improvements to the District Munsif's Courthouse at Patukota.	18,050	..	2,692	Materials under collection.
District Munsif's Courthouse at Dindigul ..				
13. Jails.				
(1) Central Jails.				
Iron palisading to the inner and outer circles in the Central Jail at Rajahmundry.	2,800	1,236	1,063	Completed.
Improvements to the Central Jail at Cannanore.	19,790	7,076	3,986	
Improvements to the Central Jail at Salem.	4,795	2,841	1,195	Almost completed.
Deepening the main gate well in the Central Jail at Coimbatore.	18,580	4,250	4,166	
Providing an impervious flooring of cutstone slabs in the hospital building of the Central Jail at Coimbatore.	3,880	..	2,454	
Water-supply at the Trichinopoly Central Jail.	4,350	1,319	3,123	Completed.
Providing cubicles in Central Jail, Trichinopoly.	2,500	..	2,272	
Increasing the cellular accommodation at the Penitentiary, Madras.	50,674	..	21,558	In progress.
(2) District Jails.				
New hospital and throwing back south-east main wall, Parvatipuram Hill Jail.	22,156	22,920	— 212	
Re-roofing certain portion of the District Jail, Bellary, with Mangalore tiles.	3,760	2,022	1,762	Completed.
Improvements to the District Jail at Madura.	7,840	..	4,849	
(3) Look-ups.				
Adding two cells to Sub-Jail, Manjeri ..	2,820	..	2,820	Completed.
Do. do. Angadipuram.	3,000	..	2,121	Very nearly completed.

Statement showing the expenditure on Major Works in detail, &c.—cont.

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
IV.—INCORPORATED LOCAL FUNDS—cont.				
45. CIVIL WORKS—cont.				
II.—COMMUNICATIONS—cont.				
MINOR WORKS.				
II Circle	..	..	587	
V "	..	..	684	
Total ..	..	..	1,471	
REPAIRS.				
I Circle	..	..	2,277	
II "	..	..	2,806	
IV "	..	..	364	
V "	..	..	18,650	
VI "	..	..	1,142	
Total ..	..	..	25,239	
Grand Total ..	..	..	27,767	
V.—EXCLUDED LOCAL FUNDS.				
1.—CIVIL BUILDINGS.				
MAJOR WORKS.				
Lighthouse.				
Constructing lightkeepers' quarters, Malpe..	3,620	..	1,252	The expenditure represents outlay on materials.
Constructing lightkeepers' quarters, Kundapur.	3,470	..	865	
Constructing lightkeepers' quarters, Hangarkotta.	3,460	..	481	
Constructing lightkeepers' quarters at Muttum.	10,450	..	4,017	
Miscellaneous.				
Quarters with out-houses for the Port officer at Vizagapatam.	10,500	1,138	5,328	In progress.
Residence for the Port officer at Gopalpur ..	6,500	..	6,500	The building was purchased.
Quarters with out-houses for Port officer at Calicut.	18,160	17,709	117	
Residence for the Port officer at Mangalore.	15,000	..	15,000	In abeyance.
Quarters with out-houses for the Port officer at Tuticorin.	13,930	895	1,708	
Total ..	..	..	35,268	
MINOR WORKS.				
I Circle	..	..	33	
IV "	..	..	37	
V "	..	..	2,143	
VI "	..	..	99	
Consulting Architect Division ..	..	..	1,040	
Total ..	..	..	3,352	
REPAIRS.				
I Circle	..	..	263	
Consulting Architect Division ..	..	..	892	
Total ..	..	..	1,145	
Grand Total ..	..	..	39,765	

Statement showing the expenditure on Major Works in detail, &c.—cont.

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
V.—EXCLUDED LOCAL FUNDS—cont.				
III.—MISCELLANEOUS PUBLIC IMPROVEMENTS.				
MAJOR WORKS.				
7. Harbour.				
Extending the Southern and Northern jetties at Cocanada.	54,750	43,198	9,401	Completed.
Investigation of Vizagapatam Harbour improvements.	6,150	..	3,782	In progress.
Improvements to the foreshore at the Vizagapatam port.	13,312	..	13,312	
Improvements and extensions to the jetty wall at Negapatam.	3,740	971	2,869	
Hurdle groynes at Negapatam ..	3,000	..	3,767	
Building a barge for the Tuticorin port and mounting on it the Priestman's Dredger at the Public Works Workshops.	24,000	..	14,855	
Constructing a new pier at Tuticorin ..	1,74,170	1,52,628	587	
8. Lighthouse.				
Lighthouse, &c., at Havelock Point (False Point Divi).	1,18,620	32,332	39,317	
Lighthouse, &c., at Manapaul ..	51,230	8,011	18,998	
Do. at Mulki (Kaph Rock) ..	68,600	..	24,179	
Do. at Masulipatam ..	8,650	..	6,430	
Do. at Mangalore ..	6,910	..	2,899	
Do. at Mangalore ..	49,920	..	2,818	
Constructing lighthouse, &c., at Seven Pagodas.	27,950	..	903	
Improvements to the lighthouse and construction of lightkeepers' quarters at Pulicat.	..	..	1,44,112	
Total ..	..	..	1,44,112	
MINOR WORKS.				
II Circle	..	..	106	
IV "	..	..	277	
V "	..	..	499	
VI "	..	..	20	
Consulting Architect division ..	..	..	1,618	
Lighthouse division ..	..	..	59	
Total ..	..	..	1,581	
REPAIRS.				
I Circle	..	..	220	
IV "	..	..	8,591	
V "	..	..	1,121	
VI "	..	..	1,954	
Consulting Architect division ..	..	..	137	
Lighthouse division ..	..	..	369	
Total ..	..	..	12,392	
Grand Total ..	..	..	1,58,085	
VI.—WORKS IN ESTATES UNDER THE COURT OF WARDS.				
MINOR WORKS.				
I Circle	..	..	1,409	
Total ..	..	..	1,409	
REPAIRS.				
I Circle	..	..	4,314	
IV "	..	..	3,586	
Total ..	..	..	7,900	
Grand Total ..	..	..	9,309	

Statement showing the expenditure on Major Works in detail, &c.—*cont.*

Name of work.	Amount of estimate.	Expenditure to end of previous year.	Expenditure during the year under review.	Remarks.
1	2	3	4	5
CONTRIBUTION WORKS.				
MILITARY WORKS.				
<i>Imperial.</i>				
Armoury, magazine and office room and quarters for the Sergeant-Instructor, South Indian Railway Volunteers at Pakalā.	8,250	..	3,800	
<i>Minor Works.</i>				
IV Circle	..	..	73	
<i>Repairs.</i>				
Consulting Architect division	..	..	920	
Grand Total	..	..	4,793	
CIVIL WORKS—PROVINCIAL.				
<i>Major Works.</i>				
Vizagapatam water-works	4,21,000	25,563	40,063	In progress. Do.
Water-supply to the town of Cocanada ..	3,74,396	33,173	24,867	
Improvements to Ootacamund drainage scheme.	31,680	..	..	
Improvements to iron pipe sewer in Ootacamund lake.	10,000	30,948	25,221	
Extension of main sewer from old Manhole No. 7 to Manhole No. 37.	14,650	..	..	
Improvements to Ootacamund water-supply.	35,700	7,526	17,838	
Improvements to Hobart's Girls' School at Ootacamund.	2,500	1,819	224	
Water-supply to the town of Tirupati ..	2,31,000	28,173	1,37,196	
Victoria Students' Hostel at Chepak ..	1,80,943	..	34,580	
Total	..	..	2,79,989	
<i>Minor Works.</i>				
IV Circle	..	..	21	
V "	..	..	410	
Total	..	..	431	
<i>Repairs.</i>				
II Circle	..	..	162	
Total	..	..	162	
Grand Total	..	..	2,80,582	
INCORPORATED LOCAL.				
<i>Minor Works.</i>				
II Circle	..	..	255	
Grand Total	..	..	255	
Grand Total, Contributions, Works ..	..	..	2,85,630	

APPENDIX B.

STATEMENT showing the expenditure incurred on establishment in divisions during the year 1898-99 and the percentage it bears to the outlay on works and repairs.

No.	Divisions.	Cost of establishment.								
		Total expenditure works and repairs.	Engineer.	Upper Subordinate.	Lower Subordinate.	Total.	Percentage (column 7 bears to column 3).	Petty establishment.	Office and accounts establishment.	Total of columns 7, 9 and 10.
1	2	3	4	5	6	7	8	9	10	11
		RS.	RS.	RS.	RS.	RS.		RS.	RS.	RS.
1	Ganjam division ..	2,22,827	7,374	23,488	348	31,210	14.06	4,677	13,491	49,378
2	Vizagapatam division ..	1,84,753	22,865	25,353	752	48,970	26.5	2,930	9,479	61,379
3	Godavari Eastern division ..	2,77,734	19,592	16,835	..	36,427	13.1	15,404	13,385	67,276
4	" Western ..	1,69,264	9,218	11,020	1,181	21,369	12.6	14,684	9,229	45,282
5	" Central ..	1,45,181	12,832	5,542	170	18,844	12.9	7,275	5,830	31,949
6	Kistna Northern ..	1,03,687	21,831	9,964	..	31,795	30.6	2,273	7,133	41,201
7	" Eastern ..	3,01,166	25,301	16,882	1,176	43,359	14.3	21,565	15,154	80,078
8	" Western ..	2,76,382	21,883	17,665	..	39,548	14.3	11,420	10,803	61,771
9	Nellore division ..	1,18,614	22,423	30,940	2,591	55,954	47.1	9,438	11,555	76,947
10	Bellary ..	1,32,988	18,521	20,414	3,349	42,284	50.9	3,533	12,513	58,330
11	Cuddapah ..	95,740	14,100	17,955	5,397	37,452	39.1	3,599	10,662	51,713
12	Kurnool ..	1,45,031	23,063	26,758	1,601	51,422	35.4	9,506	11,643	72,671
13	West Coast ..	2,44,298	17,254	13,744	1,740	32,738	13.4	2,489	9,295	44,622
14	Coimbatore ..	3,84,837	43,628	25,159	2,405	71,192	18.4	4,740	10,438	86,370
15	Salem ..	79,725	12,978	14,841	647	28,466	35.7	2,280	7,309	38,055
16	North Arcot division ..	1,50,721	21,651	20,729	3,028	45,408	30.1	7,249	10,498	63,155
17	Chingleput ..	2,66,611	14,972	42,064	1,772	58,808	22.06	3,988	19,348	82,144
18	South Arcot ..	2,95,522	21,783	23,139	2,131	47,053	15.9	6,441	9,337	62,831
19	Tanjore ..	3,71,213	16,296	20,262	729	37,278	10.4	7,719	9,138	54,135
20	Nagapattinam ..	84,339	9,298	14,766	..	24,064	28.5	2,919	7,009	33,992
21	Public Works Workshops division ..	21,998	5,344	2,471	..	7,815	35.5	1,068	7,265	16,148
22	Public Works Stores division ..	19,031	9,856	..	..	9,856	51.7	842	5,510	16,208
23	Trichinopoly division ..	1,55,298	10,866	7,905	998	19,769	12.7	1,717	6,416	27,902
24	Madura ..	3,16,458	35,596	22,515	949	59,060	18.6	6,752	11,935	77,747
25	Tinnevely ..	1,76,702	10,200	17,354	2,537	30,091	17.02	5,362	10,981	46,434
26	Consulting Architect's division ..	3,72,989	25,425	14,350	1,945	41,720	11.1	2,020	14,389	68,129
27	Lighthouse division ..	13,806	10,494	435	..	24,735	24.1	24	6,768	31,527
28	Tank Restoration works ..	..	10,632	..	..	10,632	..	12	10,021	20,666
Total, Construction ..		52,15,742	4,98,688	4,72,609	30,122	10,07,319	19.3	1,61,986	2,88,534	14,57,839
<i>Direction.</i>										
(a) Chief Engineers, &c. ..		..	94,896	5,890	..	1,00,786	..	204	69,438	1,70,428
(b) Superintending Engineers ..		..	1,37,254	19,990	4,755	1,61,999	..	12,437	62,696	2,37,132
<i>Accounts.</i>										
(c) Examiners, Deputy and Assistant Examiners. ..		..	86,914	..	..	86,914	..	73	32,638	1,19,625
Total, Establishments Salaries ..		*52,15,742	8,17,652	4,98,489	40,877	13,57,018	26.02	1,74,700	4,53,306	19,85,024
(d) Travelling allowances ..		..	..	..	..	..	..	..	..	2,70,810
(e) Contingencies ..		..	..	..	..	..	..	..	..	61,956
Grand Total, Establishment ..										23,17,790
Add—Charges of other departments and of previous year disbursed during the year ..										— 80,707
Total ..										22,87,083
Deduct—Amount charged to other Provinces and Departments and charges not paid during the year ..										— 28,360
Total Charges for Provincial establishment ..										23,15,443
Add—Cost of special establishment for famine-relief works debitable to " 33. Famine Relief " ..										11,864
Grand Total, Establishment ..										23,27,307

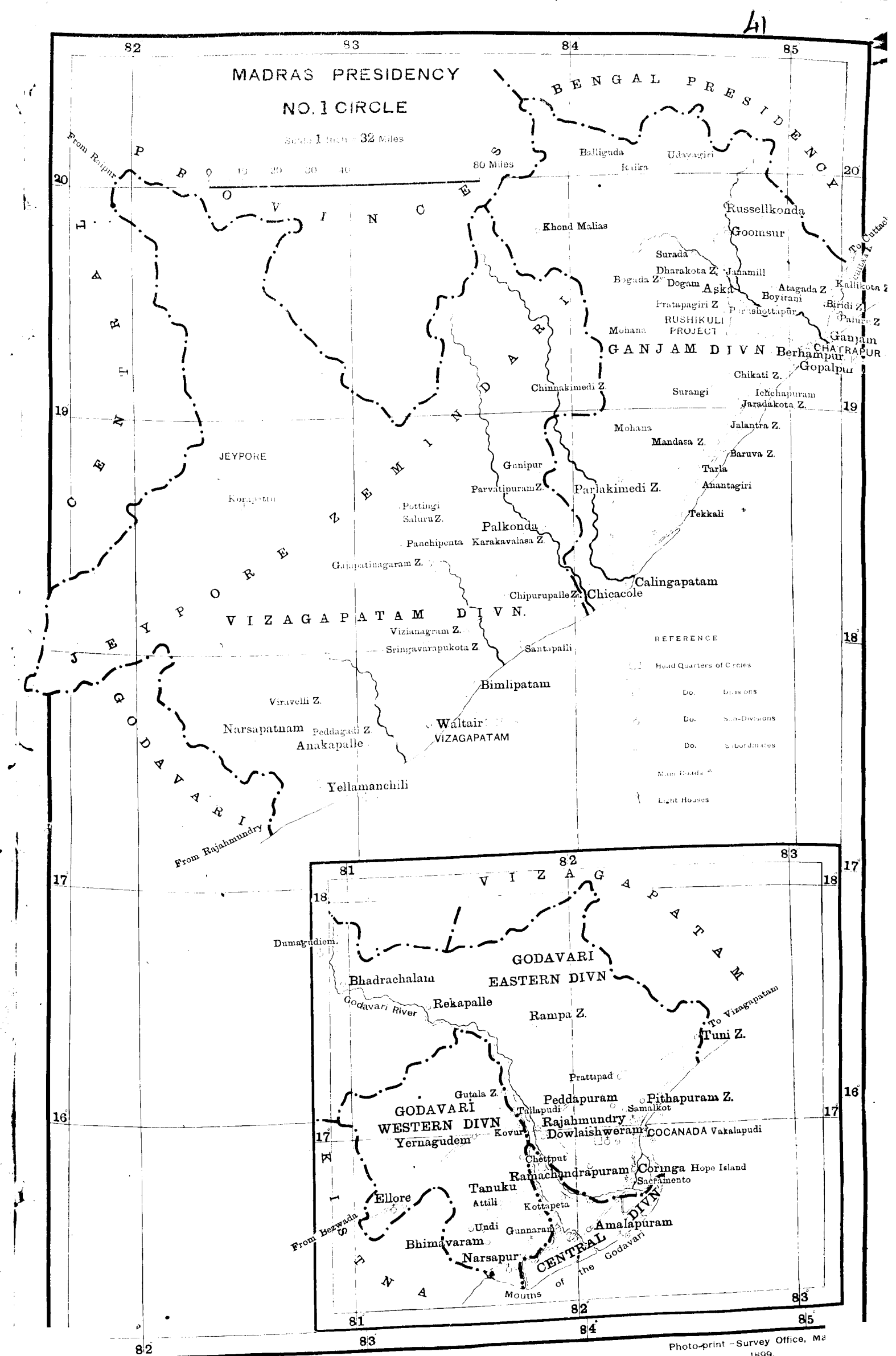
* Excludes outlay under 33. Famine Relief Works.

APPENDIX C.

STATEMENT showing the length of road communication maintained by public authorities in Madras during the year 1898-99.

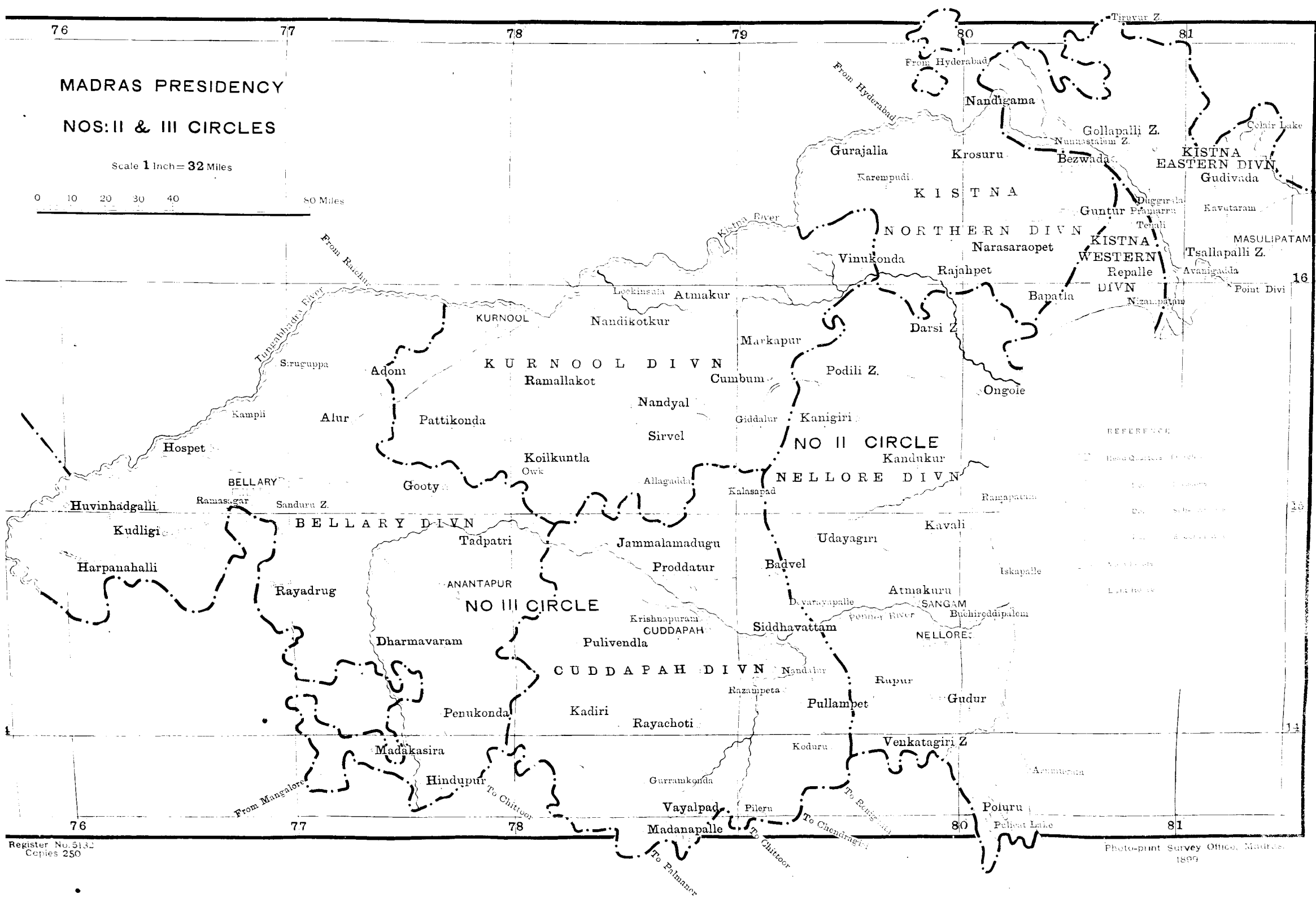
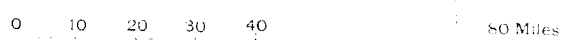
Name of division.	Name of district.	Length of metalled roads maintained by the Public Works department.	Length of unmetalled roads maintained by the Public Works department.	Length of metalled roads maintained by local authorities.	Length of unmetalled roads maintained by local authorities.	Total of metalled roads.	Total of unmetalled roads.
1	2	3	4	5	6	7	8
Ganjam	Ganjam	MLB.	MLB.	MLB.	MLB.	MLB.	MLB.
Vizagapatam	Vizagapatam	50	13.5	694	26	724	39.5
Godavari Eastern	Godavari	63	..	361	598	424	598
Kistna (Northern, Eastern and Western)	Kistna	5	..	804	172	809	172
Nellore	Nellore	77	22	605	179	605.77	201
Bellary	Anantapur	4	..	993	112	993.4	112
Cuddapah	Bellary	..	..	250	506	250	506
Kurnool	Cuddapah	..	..	141	630	141	630
Coimbatore	Kurnool	..	..	640	586	640	586
Salem	Coimbatore	..	..	526	200	526	200
North Arcot	Nilgiris	27	..	1,639	1,649	1,639	1,649
West Coast	Salem	..	..	118	457	145	457
South Arcot	North Arcot	..	..	553	1,435	553	1,435
Chingleput	Malabar	12	30	1,519	..	1,519	..
Tanjore	South Canara	..	..	528	877	540	907
Negapatam	South Arcot	8.75	57.50	148	939	148	939
Trichinopoly	Chingleput	..	..	685	391	693.75	448.50
Madura	Tanjore	..	..	631	63	631	63
Tinnevely	Negapatam	..	..	198	1,363	198	1,363
Consulting Architect's division.	Trichinopoly	22.37	..	575	107	597.37	107
	Madura	..	..	591	632	591	632
	Tinnevely	..	..	827	123	827	123
	Madras	4.30	..	..	..	4.30	..

Note.—This statement does not include roads and streets within municipal limits.

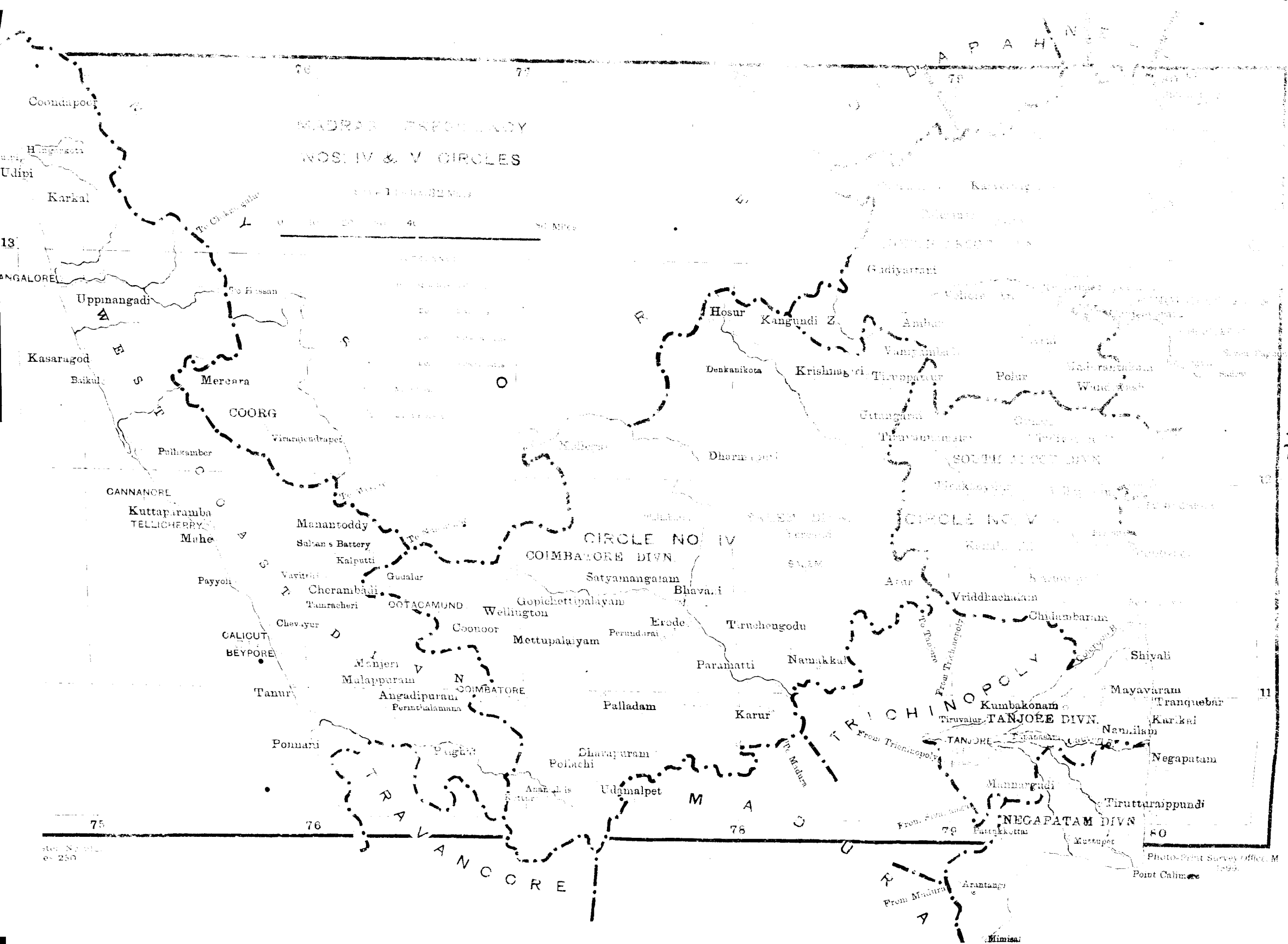


NOS:II & III CIRCLES

Scale **1** inch = **32** Miles



10/5/11



MADRAS PRESIDENCY

NO. VI CIRCLE

Scale 1 Inch = 32 Miles

0 10 20 30 40 50 60 70 80 Miles

REFERENCE

- Head Quarters of Circles
- Do. District
- Do. Sub-District
- Main Roads
- Light Houses



D-2117 M-28
M-95

