

NINETEENTH ANNUAL REPORT
OF THE
SUPERINTENDING ENGINEER,
PUBLIC HEALTH DEPARTMENT
(ENGINEERING BRANCH)
BIHAR AND ORISSA
FOR THE YEAR ENDED
31st MARCH 1931.



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NINETEENTH ANNUAL REPORT
OF THE
SUPERINTENDING ENGINEER,

Public Health Department (Engineering Branch),
Bihar and Orissa, for the year ended
31st March 1931-

Staff.—The post of the Superintending Engineer, Public Health Department, Bihar and Orissa, was held throughout the year by Mr. S. E. Platt and that of his Personal Assistant by Mr. A. P. Jaruhar till 26th September 1930 when Mr. S. B. Dutt, Assistant Engineer, took over charge and held the post till the close of the year.

In addition to his own duties the Superintending Engineer served as Chairman of the Patna-Bankipur Joint Waterworks Committee and Consulting Engineer to the Jharia Water Board.

Mr. T. S. Soorma held charge of the post of Executive Engineer, 1st Division, Public Health Department, Patna, throughout the year except for the period from 14th October to 1st December 1930 when he was on leave and Mr. A. N. Banerjee, Assistant Engineer, held charge of the division.

Mr. E. R. Smith held charge of the post of Executive Engineer, 2nd Division, Public Health Department, Ranchi, throughout the year.

Mr. E. D. MacDonald held charge of the post of Executive Engineer, Mechanical Division, throughout the year.

The office of the Drainage Engineer was abolished with effect from 1st April 1930 and the staff was attached to the office of the Superintending Engineer, Public Health Department, to complete the Patna Main Drainage Scheme. This scheme was submitted to Government in April 1931, when the services of the special staff were dispensed with.

In addition to the above there were employed in the department eight assistant engineers, two engineer improvers, eight supervisors and 47 subordinates and the requisite number of draftsmen, estimators, tracers and clerical staff.

During the year the following places were visited by the Superintending Engineer :—

- (1) Arrah, (2) Bhagalpur, (3) Cuttack, (4) Dinapur, (5) Deoghur, (6) Dhanbad, (7) Gaya, (8) Giridih, (9) Hazaribagh, (10) Itki, (11) Jbaria, (12) Kodarma, (13) Madhupur, (14) Muzaffarpur, (15) Netarhat, (16) Puri, (17) Ranchi and (18) Sonepur.

The Executive Engineer, Mechanical Division, submitted periodical inspection reports of open waterworks and assisted in the preparation of specifications and advising on tenders for pumping plant.

Expenditure.—Work to the value of Rs. 6,85,735 was carried out during the year under review of which Rs. 3,07,791 was expenditure on deposit works on behalf of local authorities. In addition, the expenditure incurred by local authorities on the maintenance of waterworks and sanitary works amounted to Rs. 4,41,326 and Rs. 1,22,258 respectively.

The total value of the work carried out under the supervision of the Superintending Engineer, Public Health Department, was Rs. 12,49,319. Detailed schemes amounting to Rs. 24,92,264 and preliminary and outline schemes amounting to Rs. 13,38,950 were prepared and submitted either to Government or to local bodies. Work is in hand on the preparation of detailed and outline schemes amounting to Rs. 36,44,340 and projects estimated to cost about Rs. 14,55,110 have to be prepared as soon as staff is available.

The expenditure on the establishment of the department during the year was Rs. 3,08,996.

Fees earned for work done on behalf of local authorities amounted to Rs. 44,247.

CONSTRUCTION—ORIGINAL WORKS.

Patna-Bankipur water-supply.—The borehole pumps for the five tube wells at Digha and the University were tested in July 1930 and subsequently taken over from the contractors. They have continued to give good service but require considerable attention. A new borehole pumping set supplied by Messrs.

Sulzer Brothers has been erected at Amlatola and is very satisfactory. The work on the extension scheme amounting to Rs. 3,44,000 and the Amlatola scheme amounting to Rs. 1,00,000 has now been completed and the accounts will be closed shortly.

Bhagalpur water-supply.—Two electrically driven vertical spindle pumping sets have been installed in the old suction well and have maintained the supply during the past year. There has, however, been some trouble due to vibration and the contractors are arranging to provide additional girders to carry the pumps.

Patna Camp Jail water-supply and drainage.—To meet the emergency due to overcrowding of the ordinary jails, a large temporary jail was constructed by the Public Works Department near the Dairy Farm, Phulwari.

In the first instance water was supplied from the Veterinary College installation; subsequently a 5" diameter tube-well was constructed at the jail and two electrically-driven pumping sets installed. One pump is driven by an alternating current motor taking energy from the mains of the Patna Electric Supply Company and the other by a direct current motor to be supplied from the jail emergency generating plant. A service reservoir of 20,000 gallons capacity with the necessary distribution system has been provided.

To prevent any nuisance occurring from the accumulation of drainage from the flat site of the jail the necessary surface drains with collecting sump and pumping plant have been provided to discharge sullage on to the Agricultural Farm about 200 yards south of the jail enclosure. The water-supply was started on 1st September 1930 and the complete installation worked satisfactorily during the remainder of the year.

Expenditure was Rs. 58,420.

Patna Veterinary College.—The water-supply and drainage system were put into use from 1st June 1930 and worked satisfactorily to the end of the year. The total expenditure on the scheme is Rs. 1,25,914 and expenditure during the year Rs. 5,142.

Patna—Shifting water main in the bazar.—Consequent upon the widening of the main bazar road it was decided to remove the water mains from the side of the road to a position under the footpath of the new road. This has been completed in sections I, III and VI at a cost of Rs. 11,490.

Muzaffarpur water-supply reorganisation.—Duplicate sets of electrically driven pumps have been installed on the new tube

wells at Chandwara and the Prince of Wales Garden. The plant on test was found satisfactory and has been handed over to the municipality.

The scheme for the reorganisation of the supply was sent to the municipality in November 1930 but arrangements to start the work have not yet been made owing to difficulty in providing funds.

Gaya water-supply.—An estimate amounting to Rs. 82,516 has been sanctioned and funds were placed at the disposal of this department towards the close of the year. Arrangements to start the work are in hand.

Cuttack Medical School and Hospital.—Work on the drainage scheme has proceeded slowly during the year. The sewage pumping plant has been erected and was started up in April 1931. The delay which has occurred was due to electric current for the sewage pumps not being available and to delays in the acquisition of additional land for the sewage filters. Experience with the filters of Ravenshaw College has shown that the smell from the filters on the original site causes occasional slight nuisance at the College quarters near the canal and it was considered undesirable to discharge the Medical School sewage on to filters at the same place. Advantage has therefore been taken of the opportunity offered by the construction of the hospital filters to remove the College filters and construct all the filters on a site at a considerable distance from the College.

Cuttack Ravenshaw College water-supply.—A 5 inch diameter tube-well has been constructed and tested with satisfactory results. Arrangements for the installation of the necessary pumping plant are in hand. Meters have been fixed on all service connections at a cost of Rs. 2,810 and have effected a surprising economy in the demand for water.

Drainage.—The service latrines attached to the main hostels have been converted to water-flushed latrines.

Daltonganj water-supply.—A scheme estimated to cost Rs. 1,05,500 for the improvement of the supply has been sanctioned and a grant of Rs. 60,000 made by Government to the municipality.

The work will be started on receipt of funds from the municipality. The intake and pumping plant, etc., have been taken over by the municipality from the East Indian Railway

and an agreement made under which the municipality has undertaken to supply water to the railway station.

Itki Sanatorium water-supply.—The yield from the well was found inadequate and an estimate amounting to Rs. 4,995 for an additional well has been prepared and sanctioned. The work is now in hand.

Netarhal water-supply.—An estimate amounting to Rs. 4,488 for improvement of the supply, including provision of steam-driven pumping plant and an intake on the lower lake, has been sanctioned and work is in hand.

Kanke (Mental Hospitals) water-supply and drainage.—An estimate amounting to Rs. 19,600 for extension of the infiltration gallery having been sanctioned arrangements were made to start work in February; due to heavy rain at that time there was a considerable surface flow in the river and work could not be started until early in April.

The installation of bulk meters and house connection meters sanctioned at a cost of Rs. 26,000 has been completed and also the water-supply fittings and drainage of additional buildings at a cost of about Rs. 15,015.

Two estimates totalling Rs. 23,400 for improvement of the arrangements for disposal of the sewage discharging at outfalls nos. 2 and 3 have been sanctioned but work cannot be started owing to shortage of funds.

When completed the effluent from both outfalls will be conveyed across the Agricultural farm and subsequently discharged into the Jumar river.

Ranchi—Government House water-supply.—A well 15 feet diameter and 40 feet deep on the race course and a well 12 feet diameter and 50 feet deep in the Radium Institute compound were successfully completed before the rains of 1930. When tested the minimum combined yield was found to be about 15,000 gallons per day.

An estimate amounting to Rs. 34,000 for the two wells and for the necessary pumping plant and rising mains, etc., has been sanctioned for the supply of water to Government House and the neighbouring official residences.

Ranchi—Water-supply to residence of Hon'ble Member.—An estimate amounting to Rs. 4,178 has been sanctioned to cover the cost of a 2-inch diameter supply main and a small electrically-driven pump. The work has been completed.

Puri water-supply.—Based on the promising results of the exploratory work carried out during 1928 and 1929 a preliminary scheme amounting to Rs. 12,05,000 has been prepared and after approval by the recently-formed Joint Waterworks Committee, was sanctioned by Government in December 1930.

In compliance with the orders of Government, a detailed scheme amounting to Rs. 11,84,500 was submitted to the Puri Joint Waterworks Committee in January 1931 and work was started on the construction of six 9-inch diameter tube-wells with the object of completing and testing them before the rains of 1931.

To the end of March four tube-wells (nos. 1, 2, 3 and 4) had been completed and two accepted. The results obtained being no. 1 tube-well yield 220 gallons per minute with a depression of 11 feet, no. 3 tube-well yield 175 gallons per minute with a depression of 11 feet. Work on the construction of nos. 5 and 6 and the testing of nos. 2, 4, 5 and 6 is now in hand.

In addition to the main tube-wells, six 3-inch diameter indicator tube wells, four near the sea and two on the inland border of the land to be acquired for the head-works, have been completed, sixty-seven indicator tubes to ascertain the effects of pumping on the level of the subsoil water table and the six lines of piping to discharge the water pumped from the tube-wells near the sea have also been completed.

In order to maintain accurate records of the quantity of water pumped six venturi meters have been provided to measure the discharge from each tube well.

Expenditure during the year was Rs. 49,452.

New Capital Sewage Pumping Plant.—An estimate amounting to Rs. 25,083 has been sanctioned to cover the cost of providing electrically driven pumping plant for the following pumping stations maintained by the Patna Administration Committee:—

- (a) Gardanibagh.—Three sets of a total capacity of about 950 gallons per minute.
- (b) Government House.—Two sets each of a capacity of 30 gallons per minute.
- (c) "R" Block.—Two sets each of a capacity of 50 gallons per minute.

The plant for Gardanibagh has been delivered and erection is now in hand. A decision regarding the sizes of these sets proved to be a matter of considerable difficulty owing to the necessity for providing adequate power to deal with storm flows and the limitation imposed by the length of the 9 inch diameter cast iron rising main (8,335 feet long).

Small tube-wells.—The two sets of boring plant purchased last year have been employed during the year in the construction of the indicator tubes for Puri water-supply and the following 3-inch diameter tube-wells :—

- (a) Residence of Hon'ble Member, Finance Department, Patna ;
- (b) Residence of Inspector-General of Prisons, Bihar and Orissa ;
- (c) Ashram, Muzaffarpur.

Funds are now available for 17 2½" and 3" diameter tube-wells and in order to complete them within a reasonable period arrangements are being made to construct 12 of them by contract.

In compliance with recent orders all tube-well and boring work, and the supply and maintenance of hand pumps done by the Public Works Department in the past, has been handed over to this department and some difficulty is being experienced in dealing with it in a satisfactory manner owing to want of staff.

PREPARATION OF PROJECTS.

Patna Drainage Scheme.—This scheme estimated to cost Rs. 15,53,765 has been completed and submitted to Government.

Arrah Drain Flushing Scheme.—Work on the preparation of a scheme for the improvement of the water-supply and of the drainage of the town is in hand but is making slow progress due to staff being employed on more urgent schemes for which funds are available.

Bhagalpur water-supply—Reorganisation Scheme.—A detailed scheme amounting to Rs. 7,73,059 was submitted to the municipality in September 1930 and subsequently approved but on further examination it was decided by Government that the Municipal Board would be unable to meet the recurring charges and a note was submitted in March 1931 for a modified scheme estimated to cost about Rs. 4.5 lakhs. The matter is still under consideration but in view of the state of the filtered water pumping plant a very early decision is desirable.

Patna water-supply extension.—A grant of Rs. 6,14,000 was given by Government to the Patna City Municipality in March 1930 to meet the major portion of the cost of extending the supply to the remainder of the area of Patna City Municipality. The preparation of the scheme is in hand and it is expected that it will be submitted to the Joint Waterworks Committee very shortly.

In addition to the scheme for the extension of the area of supply, a preliminary estimate amounting to Rs. 32,000 has been approved by the Joint Waterworks Committee for the provision of an additional tube-well and pumping plant within the area of the Patna Administration Committee. Rs. 16,000 has already been deposited to the credit of this department and it is hoped to start work shortly.

Puri—Improvement of Narendra Tank.—An estimate amounting to Rs. 14,524 was prepared to cover the cost of providing a drain to introduce fresh water from the Athara Nala into the tank at the south-east corner where nearly all bathing is done. The scheme has been abandoned as there is some doubt whether the advantage to be gained by the introduction of this water would not be more than counterbalanced by the difficulty produced by increased deposit of silt.

Jharia water-supply.—Due to the steadily increasing demand and to the considerable leakage which still occurs it has proved increasingly difficult to obtain a sufficient output of filtered water. The type of filter to be adopted in extending the filtration plant was under the consideration of the Board and the advice of the writer to provide additional filter area of the same general design as the existing slow sand filters has now been approved and an estimate for the work is being prepared by the Board's Engineer. The reduction of leakage from the supply line and service reservoir at Tilatand has also received attention. Tests on the reservoir have shown that there is a daily loss of between 150,000 and 200,000 gallons and alternative proposals to make the reservoir water-tight are under consideration.

Due to unsatisfactory maintenance, the two venturi meters on the supply mains from Tilatand Reservoir were found to be in a very bad condition and as the cost of repairing them was more than half the cost of purchasing new meters of an improved type, it was decided to obtain new meters and the order was placed with Messrs. Glenfield and Kennedy, Ltd.

Monghyr Jail water-supply.—Due to shortage of water the Inspector-General of Prisons asked for an estimate to cover the

cost of improving the supply. An outline scheme amounting to Rs. 12,600 was prepared and submitted.

Hinoo water-supply.—An estimate amounting to Rs. 5,613 for a submerged weir across the river has been prepared and submitted to Government.

Hinoo and Doranda Drainage.—An estimate amounting to Rs. 30,400 has been prepared for improving and completing the surface drainage of both Hinoo and Doranda.

MAINTENANCE OF OPEN WATERWORKS.

Arrah.—The unfiltered and filtered water pumps were maintained in fair order. The plant being old, needs special care to guard against breakdowns. The quality of the filtered water is unsatisfactory.

Bhagalpur.—The electrically driven pumping sets installed in the suction well developed trouble and are being realigned and assembled by the suppliers. The Diesel engine driven pump for the filtered water-supply has been overhauled and is now in working order. The essential repairs required to keep the steam-driven pumps in working order have been done but the condition of this plant is unsatisfactory and serious trouble may develop at any time. The mechanical filters and slow sand filters require complete overhauling.

Daltonganj.—The old steam-driven pumping sets were taken over from the East Indian Railway Administration and are now being maintained by the municipal authorities. Recent inspection indicated that the boilers have been subjected to undue stresses due to bad stoking. The Board has been advised to insist on this practice being stopped and in addition to purchase coal of good quality.

Gaya.—The plant is being run about twenty-two hours daily and is in need of a thorough overhaul as early as possible. The yield from the galleries and wells is not sufficient to meet the demand in the hot weather and the construction of two additional wells is included in the scheme recently sanctioned. One of the boilers has been partially dismantled in order that necessary repairs can be carried out. This should be done and the boiler bricked up ready for duty as soon as possible. A new boiler feed water pump is being installed to replace an old horizontal duplex Worthington pump. The size of the present work-shop is insufficient to accommodate the tools and staff and early steps should be taken to extend it. The workshop engine is in bad condition and requires a complete overhaul.

Monghyr.—The plant has been kept in fair order, but the additional filter on which work was started several years ago is still incomplete.

Muzoffarpur.—The steam pumping plant at Chandwara has been maintained in a satisfactory condition. For the greater part of the year the water-supply available from the old tube-wells has been augmented by a supply from the new tube-wells pumped by air lift. The compressor was lent by this department.

The electrically driven pumping sets installed on the new tube-wells at Chandwara and Prince of Wales Garden have been started and this has greatly increased the supply of water. The condition of the oil-driven pumping set at Kachisarai tube-well is very unsatisfactory; it requires immediate overhaul to ensure the continuity of the water-supply to the area supplied from this tube-well. To provide standby plant at this station the Board has been advised to install an electrically driven pumping set.

Patna-Bankipur waterworks.—The pumping plant has been maintained in a satisfactory condition and during the latter part of the year the new set at Amlatola pumping station was started up and has proved very satisfactory.

Sonepur water-supply.—The water-supply during the fair was, as usual, augmented by installing temporary portable pumping sets on surface wells. Temporary extensions of the supply to the area occupied by the police and military camps were carried out. The usual limited supply has been maintained throughout the year.

Government pumping installations.—The following pumping installations have worked satisfactorily and been maintained in good order :—

- (1) Patna Medical College.
- (2) Gulzarbagh Government Press.
- (3) Patna High Court.
- (4) „ Phulwari Dairy Farm.
- (5) „ Government House.
- (6) „ Veterinary College.
- (7) „ Camp Jail.
- (8) Darbhanga Medical School and Hospital.

- (9) Cuttack Medical School and General Hospital.
- (10) „ Ravenshaw College.
- (11) Dhanbad School of Mines.
- (12) Ranchi Race course.
- (13) Ranchi—Hinoo.
- (14) Kanke Mental Hospitals.
- (15) Itki Sanatorium.
- (16) Hazaribagh Central Jail and Reformatory School.

The following appendices are attached :—

Statement no. I.—Details of open waterworks.

Statement no. II.—Details of cost of maintenance during 1930-31.

Statement no. III.—Capital expenditure incurred on waterworks.

Statement no. IV.—Results of examination of water.

Statement no. V.—Comparative statement of working expenses of waterworks.

Statement no. VI.—Details of drainage schemes and cost of maintenance and extensions during 1930-31.

Statement no. VII.—List of outline schemes submitted.

Statement no. VIII.—List of detailed schemes submitted.

Statement no. IX.—List of works under construction by the Public Health Department.

Statement no. X.—List of works under construction by local authorities.

Statement no. XI.—List of detailed schemes under preparation.

Statement no. XII.—List of outline schemes under preparation.

Statement no. XIII.—List of schemes to be prepared.

From a comparison of appendix I with the corresponding appendix in the reports for 1928-29 and 1929-30, it will be seen that the improvement in receipts and reduction in expenditure hoped for as a result of the appointment of a Mechanical Engineer have not yet materialised.

From appendix IV it will be seen that the standard of purity of the supplies from tube-wells at Patna, both the public supply and the supply to the hospital, has been very satisfactory and the filter effluent at both Jharia and Kanke is, after chlorination, also of a high standard. The results obtained at Gaya are surprisingly good.

The standard of purity of the water supplied at Arrah, Bhagalpur and Daltonganj is not satisfactory.

The results of the examination of the water supplied at Muzaffarpur are affected by the contamination of the tube-well at Kachisarai. In spite of a thorough search and examination the source of this contamination has not been ascertained and the Board has been advised to install plant to add a small dose of chlorine to the water.

General.—The writer desires to thank the staff of the department for the work done during the year. With one or two exceptions the work done has been satisfactory.

S. E. PLATT,

*Superintending Engineer,
Public Health Department,
Bihar and Orissa.*

The 18th July 1931.

APPENDIX I.

Statement of operations of various water works in Bihar

Serial number.	Particulars.	1	2	3	4	5	6	7
		Arrah.	Bhagalpur.	Buxar (Central Jail).	Cuttack (Havenshaw College).	Cuttack (General Hospital).	Daitong anj.	Darbhanga School, Medicot
	Year of completion.	1894.	1888.	1925.	1925.	1938.	1904.	1925.
POPULATION.								
1	By Census of 1921 ...	40,769	81,576	...	...	...	11,942	...
2	Approximate population served.	98,000	81,576	1,500	600	850	7,700	400
CONSUMPTION OF WATER.								
3	Unmetered supplies in gallons.	55,569,127	309,841,250	...	7,990,819	7,896,000	20,017,500	...
4	Metered supplies in gallons.	5,414,883	...	...	1,368,681	6,000	289,000	...
5	Total quantity supplied.	61,003,510	309,841,250	8,885,116	9,360,000	7,892,000	20,306,500	4,517,000
6	Daily average supply ..	167,138	847,510	24,288	25,644	21,622	55,634	12,375
7	Consumption per head per day.	4'8	10'38	18'1	42'7	25'4	7'2	80'9
8	Hours of daily supply...	10'0	8'0	10'0	13'0	24'0	9'0	24'0
LIFT OF PUMPS.								
9	From river or well to pump sump or L. L. feet.	33'32	74'75	N11	N11	N11	20'0	N11
10	From filtered water pump to tank or H.L. feet.	62'94	118'50	57'76	91'0	54'0	50'0	47'5
11	Total lift in feet ...	96'26	193'25	57'76	91'0	54'0	70'0	47'5

DIX I.

and Orissa for the year ended the 31st March 1931.

8	9	10	11	12	13	14	15	16
Dhambad (School of Airline).	Gaya.	Gulzarbagh (Patna) Press water supply.	Hazaibagh (Central Jail).	Huaco.	Itki.	Jharia Water Board.	Kanke.	Labortasari Hospital.
1927.	1918.	1927.	1914.	1913.	1929.	1927.	1925.	1927.
	67,562	...	...	...	...	1,32,000	...	...
825	67,562	600	1,610	1,300	178	1,08,100	7,000	800
5,250,606	446,569,000	7,654,100	26,723,750	3,130,501	2,201,170	211,164,000	44,732,294	2,359,670
1,673,474	Meters out of order.	...	Nil	Nil	Nil	500,760,000	5,598,253	237,150
6,924,080	446,599,000	7,664,100	26,723,750	3,130,501	2,201,170	711,944,000	50,330,549	2,910,820
18,970	1,223,531	20,997	73,216	8,576	6,031	1,960,531	137,891	7,163
63°3	18°1	84°9	45°47	6°8	53°3	18°04	19°7	23°84
24°0	9°0	24°0	9°0	4°0	24°0	24 winter 16 summer	6°5	24°0
Nil	Nil	Nil	86°10	126°05	153°95	Gravitation supply.	50°10	...
65°58	199°24	54°0	100°52				184°34	60°0
63°55	199°24	54°0	136°63	126°05	153°95	...	234°44	60°0

APPENDIX I—contd.

		17	18	19	20	21	22
Serial number.	Particulars.	Monghyr.	Muzaffarpur.	Faiz-Bankipur.	Patna General Hospital.	Ranchi Government House.	Bonepore.
	Year of completion.	1918.	1920.	1920.	1927.	1913.	1920.
POPULATION.							
1	By Census of 1921 ...	47,000	32,755	...	...	...	..
2	Approximate population served	45,000	32,755	62,000	1,700	500	Mela supply
CONSUMPTION OF WATER.							
3	Unmetered supplies in galls.	110,361,147	101,500,090	...	60,151,000	2,005,434	8,456,625
4	Metered supplies in gallons ...	3,766,872	Not recorded.	399,546,160	Nil	Nil	Nil
5	Total quantity supplied ...	114,128,019	101,500,090	309,546,160	60,151,000	2,005,434	8,456,625
6	Daily average supply ...	312,679	279,083	838,873	164,660	5,494	23,168
7	Consumption per head per day	6.94	6.49	13.5	96.7	90.9	...
8	Hours of daily supply ...	6.5	10.0	9.0	23.0	24.0	24 hours, 0.0 during mela.
LIFT OF PUMP.							
9	From river or well to pump sump or L. L. feet.	35.23	(a) l. L. = 37.10. (b) L. L. = 31.0.	Digha 163 Univ. 144	63.2	250.0	95.36
10	From filtered water pump to tank or H. L. feet.		(c) H. L. = 72.0. (d) H. L. = 60.0.				
11	Total lift in feet. ...	35.23	...	...	63.0	250.0	95.36

(a) Boring head works.
 (b) Boring District Board Godowa.
 (c) H. L. Steam.
 (d) No. 2 Boring Kachl Saral.

APPENDIX I—*contd.*

Serial no.	Particulars.	1	2	3	4	5	6	7
		Atrab.	Bhagalpur.	Buxar Central Jail.	Cuttack Hevenshaw Colofc.	Cuttack Hospital.	Daitouganj.	Darbhanga School.
Year of completion.		1894	1898	1925	1925	1928	1914	1925
SUPPLY CONNECTIONS.								
12	Total number of un-metered connections.	132	668	Nil	17	43	14	64
13	Total number of metered connections.	97	1	Nil	41	1	1	Nil
ANNUAL CHARGES; COST OF WATER.								
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
14	Maintenance charges	16,745	82,593	2,949	1,400	2,488	6,738	1,678
15	Interest and sinking fund.	Nil	1,962	...	Nil	Nil	Nil	Nil
16	Total charges ...	16,745	84,555	2,949	1,400	2,488	6,738	1,678
17	Total charges per 1,000 gallons in annas.	4.29	4.37	5.32	2.39	5.04	5.31	5.84
INCOME FROM WATERWORKS.								
18	From assessment ...	24,203	62,793	Nil	Nil	Nil	5,659	141
19	From metered supplies	2,020	7,128	...	272	...	30	Nil
20	From other receipts ...	64	8,225*	...	Nil	...	6	Nil
21	Total income ...	26,287	75,149	Nil	272	Nil	5,695	141
22	Total receipts per 1,000 gallons in annas.	6.59	5.88	...	1.16	...	4.41	.49
23	Profit or loss on year's working.	+9,542	-9,408	...	-1,128	...	-1,143	-1,537
24	Profit or loss in annas per 1,000 gallons.	+2.59	-0.49	...	-1.81	...	-1.0	-5.55

* Includes house connection fees of Rs. 6,085.

DIX I--contd.

8	9	10	11	12	13	14	15	16
Dhanbad School of Mines.	Gaya.	Gulzarbagh (Udama) Press water-supply.	Hezaribagh (Central Jail).	Hinoo.	Ikky.	Jbaria Water Board.	Kanke.	Lachmeswari Hospital.
1927	1913	1927	1914	1913	1929	1927	1925	1927
Nil	264	Nil	198	23	47	Nil	107	50
32	319	Nil	Nil	...	Nil	292	299	6
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
2,598	48,043	2,921	8,458	4,270	2,747	74,292	27,158	1,058
Nil	Nil	...	...	Nil	Nil	4,41,195	Nil	Nil
2,598	43,042	2,921	8,438	4,270	2,747	6,18,487	27,158	1,058
60	105	609	605	2133	1019	1165	654	05
Nil	} 43,050 {	Nil	Nil	Nil	Nil	} 5,97,791 {	Not available.	149
...				
...	7,142	Nil	Nil	Nil	Nil	...	...	...
Nil	50,192	Nil	Nil	...	...	5,97,791	...	149
...	179	...	...	...	...	1320	...	01
...	-4,150	...	...	...	...	+62,397	...	-909
...	-10	...	...	...	...	+155	...	-559

APPENDIX I—concl'd.

Serial no.	Particulars,	17	18	19	20	21	22
		Monghyr.	Muzaffarpur.	Patna-Bankipore.	Patna General Hospital.	Ranchi Government House.	Sonepore.
Year of completion,		1918	1920	1929	1927	1913	1929
SUPPLY CONNECTIONS.							
12	Total number of unmetered connections.	76	38	Nil	...	11	Nil
13	Total number of metered connections.	51	Nil	1,332	...	Nil	Nil
ANNUAL CHARGES ; COST OF WATER.							
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
14	Maintenance charges ...	38,368	20,140	69,750	9,207*	7,963	2,325*
15	Interest and sinking fund ...	Nil	16,914	19,690	...	Nil	Nil
16	Total charges ...	38,368	46,454	89,449	9,207	7,963	2,326
17	Total charges per 1,000 gallons in annas.	5'37	7'52	6'62	2'41	63'8	4'4
INCOME FROM WATER-WORKS.							
18	From assessment ...	58,596	52,079	300†	...	...	Nil
19	From metered supplies ...	...	Nil	1,26,336‡	...	...	...
20	From other receipts ...	2,205	940	9,334§	...	...	...
21	Total income ...	58,558	53,019	1,36,070	...	...	Nil
22	Total receipts per 1,000 gallons in annas.	5'41	8'35	7'02	...	...	...
23	Profit or loss on year's working.	+232	+6,568	+46,539	...	...	...
24	Profit or loss in annas per 1,000 gallons.	+1'04	+1'09	+2'40	...	...	...

*Cost of maintenance, 1st Division not supplied.

†Contribution from Patna Administration Committee for street watering.

‡Includes a-rears of Rs. 33,045.

§Includes House connection fees Rs. 8,700.

APPENDIX II.

Annual maintenance accounts of various Water works in

Serial no.	Particulars.	Arrah.	Bhagalpur.	Ruxar Central Jsil.	Cuttack Ravenshaw College.	Cuttack General Hospital.	Daltonganj.	Darbhanga Medical School.	Dhanbad School of Mines.	Gaya.
1	2	3	4	5	6	7	8	9	10	11
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Establishment	7,209	12,714	731		975	1,129	761	1,625	13,687
2	Fuel, Power and Lubricating Oils :-									
	(a) Coal	2,915	16,044	2,190			1,553			17,088
	(b) Fuel Oil ... ..	...	5,493	...				135		...
	(c) Electrical charges ... ..	...	16,470	...		918	...	...	21	...
	(d) Lubricating Oils	189	2,159	28			153	109	...	293
3	Stores and materials	697	794	...		60	163	49	...	8,465
4	Cleaning Channels and wells	148	2,933	...			8	...	...	4,737
5	Cleaning Settling Tanks	307	203	...						
6	Cleaning and renewing filter beds.	...	4,673	...			23	...	...	...
7	Purchase of sand for filters ...	...	...	...			17	...	...	...
8	Purchase of Alumina Ferric	626	629	...			531	...	...	...
9	Purchase of bleaching powder	...	...	...			Nil	...	...	...
10	Repairs to distribution system	800	...	...		510	635	450	600	1,191
11	Repairs to—									
	(a) Pumping machinery, boilers and accessories;	2,643	17,628*	...			238	47	352	Includes in item 3 above.
	(b) Rising Supply and distribution Mains.	...	...	...			Nil	51	...	...
	(c) Buildings, grounds, towers, and reservoirs.	1,067	...	...		25	9	31	...	661
	(d) Tools and Plant ... ..	...	...	...			127	42	...	...
12	Cost of water analysis ... ..	...	...	...			...	...	...	...
13	Cost of water ... ..	...	...	...			1,854	...	...	...
	Any other charges ... ..	...	883	...			...	...	...	...
	Total	16,745	62,593	2,049	1,400	2,489	6,738	1,678	2,598	49,042

(a) Details are

* Includes spare parts Rs. 2,587

† Includes cost

‡ Includes percentage

Total cost of maintenance Rs. 2,11,323 of open

DIX II.

Bihar and Orissa for the year ending the 31st March 1931.

Guzerhagh supply.	Press Water.												
12	13	14	15	16	17	18	19	20	21	22(a)	23	24(a)	
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
933	1,105	1,005	825	27,644	4,119	743	6,787	13,753	10,843	...	1063	...	
..	5,770	1,534	...	...	...	...	...	3,365	167	...	1,353	...	
..	...	...	...	...	...	...	1,284	3,005	...	...	565	...	
1,520	...	...	1,650	...	17,042	...	305	679	27,735	...	363	...	
..	324	251	...	...	...	16	...	1,711	...	...	...	...
41	...	864	272	2,008	1,692	...	554	747	6,828	...	1,320	...	
..	...	...	...	307	...	..	..	90	...	...	...	..
..	
..	...	...	...	2,244	...	..	48	...	...	...	...	..
..	...	...	...	...	...	..	781	...	...	...	...	..
..	357	...	...	...	1,976	...	655	...	...	...	...	..
..	53	...	...	21	...	..	..	3,435	...	...	...	..
..	...	352	...	2,521	1,473	2,308	233	9	210	3,062	...	..
..	...	...	...	...	...	..	..	..	..	..	1,371	..	
5664	549	...	...	Nil	...	56	2,227	1,124	542	...	...	..
..	...	..	..	...	...	..	..	...	541	...	...	..
..	...	314	...	3,578	149	...	121	500	1,241	...	...	..
..	...	...	...	200	...	..	..	...	...	...	...	..
..	...	...	...	555	...	..	..	59	...	...	...	..
..	...	...	...	Nil	...	..	..	...	...	...	...	..
2	...	...	...	22,714	...	7	...	...	9,627	...	1,009	...	
2,821	8,435	4,270	2,747	74,592	27,186	1,068	38,708	29,550	60,750	9,207	7,953	2,328	

not yet ready.

and over hauling Rs. 8,041.

of spares, etc.

charges Rs. 8,243.

water-works in Bihar and Orissa.

APPENDIX III.

Statement of capital cost of various Waterworks in Bihar and Orissa for the year ending the 31st March 1931.

Serial number.	Name of waterworks.	Cost up to 31st March 1930.	Cost during 1930-31.	Total cost up to March 1931.
1	2	3	4	5
		Rs.	Rs.	Rs.
1	Arrah Waterworks ...	4,25,802	Nil	4,25,802
2	Bhagalpur ...	11,30,009	30,540	11,60,549
3	Buxar Central Jail ...	32,057	97	32,154
4	Cuttack Ravenshaw College ...	69,089	14,338	73,427
5	Cuttack General Hospital ...	41,279	733	42,012
6	Daltonganj ...	69,143	Nil	69,143
7	Darbhanga Medical School ...	50,774	Nil	50,774
8	Dhanbad School of Mines ...	43,432	160	43,592
9	Gaya ...	8,33,855	Nil	8,33,855
10	Gulzarbagh Press (Patna) ...	16,068	178	16,246
11	Hazaribagh Jail ...	1,01,374	347	1,01,721
12	Hinoo ...	Not known.	Nil	...
13	Itki Sanatorium ...	31,246	1,577	32,823
14	Jharia Water Board ...	86,82,951	34,839	87,17,790
15	Kanke Mental Hospitals, Ranchi ...	5,17,056	7,639	5,24,695
16	Laheriasarai Hospital ...	30,868	565	31,431
17	Monghyr ...	5,73,949	105	5,74,054
18	Muzaffarpur ...	5,88,417	42,122	6,30,569
19	Patna-Bankipur ...	11,89,117	38,147	12,27,344
20	Patna General Hospital ...	68,135	Nil	68,135
21	Patna Veterinary College ...	44,020	6,201	68,251
22	Patna Overflow Jail ...	New work.	43,045	43,045
23	Ranchi Government House (New Scheme).	21,331	36,241	57,572
24	Sonepore ...	95,888	2,625	98,523

APPENDIX IV.

Analysis statement of Major Waterworks in Bihar

Serial number.	Waterworks.	Bacteriological.							
		Total number of samples examined.	Number of samples of water after purification (if any).		Number of samples of water in which colonies exceed 100 per c. c.		Percentage of samples below standard.		
			Head Works.	Distribution.	Head Works.	Distribution.	Head Works.	Distribution.	
1	2	3	4	5	6	7	8	9	
1	Arrah	18	6	9	8	5	50.0	55.5	
2	Bhagalpur	24	10	10	6	8	60.0	60.0	
3	Daltonganj	24	Nil	24	Nil	24	Nil	100.0	
4	Gaya	21	Nil	21	Nil	5	Nil	23.8	
5	Kanke	16	6	9	Nil	Nil	Nil	Nil	
6	Monghyr	24	9	10	Nil	2	Nil	20.0	
7	Muzaffarpur	37	14	17	9	12	64.2	70.5	
8	Patna Bankipur	65	86	29	Nil	Nil	Nil	Nil	
9	Jharua Water Board	306	168	57	43	4	21.7	7.0	
10	Patna Medical College	77	15	62	Nil	2	Nil	8.2	

DIX IV.

and Orissa for the year ended 31st March 1931.

File salt lactose for presence of B. Coli,							Chemical,		
Total number of samples examined.	Number of samples of water after purification (if any).		Number of samples of water in which B. Coli were detected in less than 10 c. c.		Percentage of samples below standard.		Total number of samples examined,	Number of samples considered good.	Number of samples considered bad.
	Head Works.	Distribution.	Head Works.	Distribution.	Head Works.	Distribution.			
10	11	12	13	14	15	16	17	18	19
19	6	9	8	6	50.0	66.6	12	12	Nil
24	10	10	1	6	10.0	60.0	17	17	Nil
24	Nil	24	Nil	24	Nil	100.0	16	16	Nil
21	Nil	21	Nil	Nil	Nil	Nil	18	18	Nil
18	6	9	Nil	Nil	Nil	Nil	12	12	Nil
24	9	10	Nil	Nil	Nil	Nil	16	16	Nil
37	14	17	5	7	35.7	41.2	17	17	Nil
65	30	29	Nil	Nil	Nil	Nil	Nil	Nil	Nil
806	168	57	22	3	11.1	5.2	57	57	Nil
77	15	62	Nil	6	Nil	9.8	3	3	Nil

Comparative Statement of fuel consumption, working expenses and

No.	Waterworks.	Pumping plant.	Fuel consumption.	Fuel consumption per 1,000 feet Gallons.	Total average Lift.
1	2	3	4	5	6
			Tons.		Feet.
1	Arrah	Steam Plant	222.4	705 lbs	96.26
2	Bhagalpur	Do. Oil and Electricity	S-5,146.25	107 ..	193.25
		Oil	0-020.2	00313 ..	...
3	Buxar	Steam Plant	161.0	703 ..	67.76
4	Cuttack Ravenshaw College	Electrical Plant ... ..	...	...	61.60
5	Cuttack General Hospital	Do. do. ... ..	...	...	54.00
6	Daltongunj	Steam Plant ... ..	...	...	79.90
7	Darbhanga Medical School	Oil Plant	*239.95	0.058 Pint.	47.50
8	Dhurbad (Indian School of mines).	Electrical Plant ... ..	...	...	63.58
9	Gaya	Steam Plant	1,781.4	6322 lbs.	100.24
10	Gulzarbagh Press, Patna	Electrical Plant ... ..	...	...	54.0
11	Hazaribagh Central Jail	Steam Plant	330.4	1202 ..	136.62
12	Hinoo (Ranchi)	Do.	101.7	677 ..	129.05
13	Jharia Water Board	Gravitation Supply	Nil	Nil	Nil
14	Kanke	Electrical Plant ... ..	...	...	234.44
15	Laberiasrai (Hospital)	Do. do. ... ..	...	...	60.00
16	Monghyr	Oil Plant	*2,627.4	00692 Pint.	35.22
17	Muzaffapur	Steam Plant Oil and Electrical.	220.0	105 lbs.	L.L.=37.1
			*3,135	0067 Pint.	L.L.=31.6
					H.L.=73.0
					H.L.=60.0
18	Patna-Bankipur	Electrical Plant ... ..	...	...	D=163
					U.=144
					A.=110
					62
19	Patna General Hospital	Do. do. ... ..	...	...	...
			*220	017 Pint.	...
20	Ranchi Government House	Steam and Oil Plant	2-28.8	785 lbs.	200.263
21	Sonepur Waterworks	Oil Plant	*602.4	0076 Pint.	90.33

* Gallons.

L. L.=Low Lift, H. L.=High Lift.

D.=Digha, U.=University, A.=Amlatola, Pumping Stations.

DIX V.

receipts of water in Bihar and Orissa for the year ended 31st March 1931.

Percentage of maintenance charges for :-			Per 1,000 Gallons.		Per head of population (on census figures) for Municipal Plant only.			Remarks.
Establishment.	Fuel or Power.	Other charges.	Total working cost.	Total receipts.	Total working cost.	Total receipts.	Profit or Loss.	
7	8	9	10	11	12	13	14	15
			A.	A.	As.	As.	As.	
43'04	17'59	39'31	4'09	6'39	6'77	10'31	+3'74	
...	
14'58	43'56	41'86	4'81	3'88	17'48	14'74	-2'74	
21'78	74'26	00'96	5'32	Nil	Nil.	Nil	Nil	
Details not available	...	...	2'39	Nil	Nil	Nil	Nil	
39'18	38'19	23'93	5'04	Nil	Nil	Nil	Nil	
16'75	27'48	56'77	5'31	4'41	9'02	7'49	-1'53	
45'35	8'01	46'61	5'94	Nil	Nil	Nil	Nil	
62'54	Not charged	37'40	6'00	"	"	"	"	
29'73	37'13	33'15	1'65	1'79	10'90	12'03	+1'13	
33'68	52'24	14'11	6'09	Nil	Nil	Nil	Nil	
13'09	65'38	18'53	5'05	Nil	Nil	Nil	Nil	
23'77	35'92	40'31	21'82	Nil	Nil	Nil	Nil	
37'34	...	62'60	11'65	13'20	67'84	60'96	+6'88	
15'16	82'68	22'17	8'64	Nil	Nil	Nil	Nil	
70'51	Not charged	29'49	6'6	Nil	Nil	Nil	Nil	
17'68	3'34	78'93	5'37	5'41	13'06	13'13	+0'07	
46'55	24'57	28'88	7'32	2'35	22'60	25'69	+3'20	
28'44	39'90	31'57	4'63	9'02	23'08	35'08	+12'00	
...	...	...	2'44	Nil	Nil	Nil	Nil	
24'55	21'40	51'02	02'6	Nil	Nil	Nil	Nil	
...	...	...	4'4	Nil	Nil	Nil	Nil	

APPENDIX

Statistics with regard to Drainage and Sewerage works in

Serial number.	Name of the place or work.	Approximate population served.	Total length of existing drains.	Total length of pucca drains added during the year.	Cost of pucca drains added during the year.	Total length of sewer if any in feet.
1	2	3	4	5	6	7
1	Arrah	31,000	182,254	330	255	...
2	Bhabua	11,432	21,060	...	...	...
3	Bhagalpur	30,000	63,580	1,735	2,300-3-6	...
4	Buxar	10,498	...	...	...	...
5	Chapra	42,415	41,417	1,822	400	...
6	Chakradharpur	7,244	1,800	...	...	...
7	Cuttack	85,783	287	...	...	...
8	Daltonganj	7,500	66,144	939	950	...
9	Deoghar	9,000	63,380	12,144	1,827	...
10	Dhanbad	11,973	34,456	207	265	...
11	Dumka	4,439	16,651	...	...	...
12	Gaya	67,592	168,600	432	322	28,580
13	Giridih	461	3,248	...	...	...
14	Hazaribagh	9,000	33,270	100	75	...
15	Jamalpur	19,000	84,439	430	900	...
16	Jharia	12,500	55,314	430	500	5,711
17	Kisanganj	4,000	10,580	...	...	...
18	Madhubur	3,500	17,070	...	...	...
19	Monghyr	35,000	264,000	...	...	...
20	Motihari	10,000	68,080	...	...	...
21	Muzaffarpur	32,755	37,745	...	...	...
22	Patna City	1,10,523	219,650	29,401	1,684	...
23	Patna Administration Committee	13,451	...	1,177	831	60,700
24	Puri	10,000	15,309,102	...	...	...
25	Purnea	13,900	11,353	...	...	...
26	Purulia	14,000	28,760	800	574	...
27	Ranchi	44,142	34,210	...	...	...
28	Sahebganj	12,000	91,694	...	...	...
29	Sambalpur	13,548	46,596	...	...	...
30	Sasaram	20,000	4,224	1,000	500	...
31	Sewan	7,000	22,407	...	...	...
	Total	...	...	...	...	...

VI.

Bihar and Orissa during the year ended 31st March 1931.

Total length of sewer added during the year.	Cost of sewer added during the year.	Total capital cost up to 31st March 1930.	Total capital expenditure during the year.	Total capital expenditure up to 31st March 1931.	Total cost of maintenance.	Remarks.
8	9	10	11	12	13	14
	Rs.	Rs.	Rs.	Rs.	Rs.	
...	...	418,847	285	418,492	8,093	
...	...	11,269	...	11,269	460	
...	...	61,877	2,300	64,177	4,383	
...	
...	...	16,011	420	16,471	...	
...	...	2,514	...	2,514	69	
...	...	688/13/0	...	688/13/0	...	
...	...	42,457	959	43,446	1,447	
...	...	1,600	1,827	2,027	3,126	
...	...	6,794	285	7,079	7,079	
...	...	4,088	...	4,088	180	
...	...	5,53,924	592	5,54,216	6,403	
...	...	4,789	...	*4,789	...	*No special staff is maintained for cleaning the drains. It is done by the general conservancy staff.
...	75	...	2,797	
...	...	53,984	900	54,984	10,076	
10	150	1,00,047	650	1,00,697	...	
...	...	10,212	...	10,212	647	
...	...	20,386	...	20,386	1,044	
...	...	1,68,261	...	1,68,261	3,911	
...	...	68,000	...	68,000	1,909	
...	4,393	
...	...	7,120	1,064	8,804	1,493	
...	...	5,01,988	831	5,02,819	57,818	
...	...	1,56,536	...	1,56,536	29	
...	
...	...	23,662	674	23,236	661	
...	...	26,816	...	26,816	2,760	
...	...	35,054	...	35,054	2,272	
...	...	854	...	854	113	
...	500	500	608	
...	...	68	...	63	783	
...	1,22,268	

APPENDIX VII.

List of preliminary and outline schemes submitted during the year 1930-31.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Remarks.
1	2	3	4	5
			Rs.	
1	Chaibassa ...	Water-supply at Jugsalai ...	1,70,000	
2	Cuttack ...	Orissa School of Engineering (Cuttack) Preliminary water-supply scheme.	26,000	
3	Do. ...	Ditto drainage ...	2,000	
4	Deoghar ...	Improvement of drainage system in ward no. 1, Deoghar municipality (outline scheme).	13,700	
5	Jajpur ...	Jajpur drainage (preliminary)	91,650	
6	Monghyr ...	Improvement of water-supply to Juvenile Jail, Monghyr (outline scheme)	12,600	
7	Patna ...	Water-supply, drainage and sewerage for clerks' quarter in the area proposed to be acquired north of Patna High Court.	2,40,000	
8	Do. ...	Water-supply and drainage to the area proposed to be acquired at Anlatols for the residential accommodation of the ministerial staff, High Court.	30,000	
9	Do. ...	Patna-Bankipur water-supply extension scheme to Patna City and Mithapur (outline proposal.)	7,14,000	
10	Do. ...	Patna-Bankipur water-works additional 9" tube well in the Patna Administration Committee area with pumping plant, etc.	39,000	
		Total ...	13,38,950	

APPENDIX VIII.

List of detailed schemes submitted during the year 1930-31.

Serial no.	Name of district	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
1	Balasoie ...	Estimate for sinking two 3" tube wells in the Balasore municipality.	3,988 0 0	Sanctioned	
2	Do. ...	Estimate for sinking a 2" diameter tube well in the compound of Subdivisional Officer's residence, Orissa Coast Canal Subdivision, Balasore.	1,105 0 0	...	
3	Bhagalpur	Estimate for providing taps in the kitchen attached to the two storied barracks for 92 warders in the Central Jail, Bhagalpur.	1,070 0 0	Sanctioned.	
4	Do. ...	Special repairs and maintenance to water-supply to the Central Jail at Bhagalpur—Replacing existing 6" diameter sluice valves.	300 0 0	Do.	
5	Do. ...	Bhagalpur Central Jail providing one semi-rotary force pump and necessary G. I. pipe and fittings for improvement of the supply.	500 0 0	Do.	
6	Do. ...	Bhagalpur Jail water-supply (Survey estimate.)	186 0 0	Do.	
7	Do. ...	Water connection to the compound of the Silk Institute, Bhagalpur.	280 0 0	Do.	
		Carried over ...	7,439 0 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	7,439 0 0		
8	Bhagalpur	Colgong Municipality—construction of an outfall drain (Survey estimate.)	5 4 0	Sanctioned	
9	Do. ...	Sabour Agricultural College water-supply	18,124 0 0		
10	Champaran	Sinking a 3" tube well fitted with hand pump for Motihari jail.	1,470 0 0	Sanctioned.	
11	Cuttack ...	Cuttack General Hospital and Medical School Hot water installation, sanitary fittings and sewerage—second supplementary.	16,700 0 0		
12	Do. ...	Cuttack General Hospital and Medical School sewerage scheme diversion of existing sewer line for the proposed administrative block.	1,270 0 0	Sanctioned.	
13	Do. ...	Cuttack General Hospital and Medical School—Estimate for providing meters for residential quarters.	1,550 0 0		
14	Do. ...	Estimate for water-supply and sanitary installation to two compounders' quarters in the General Hospital and Medical School, Cuttack.	1,200 0 0		
		Carried over	47,758 4 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 47,758 4 0		
15	Cuttack ...	Cuttack Ravenshaw College Waterworks —Proposed internal water connection to the additional bath rooms attached to Warden's quarters.	38 0 0	Sanctioned.	
16	Do. ...	Cuttack Ravenshaw College Waterworks —Proposed water connection to the new dispensary in the College compound.	274 0 0		
17	Do. ...	Estimate for the installation of a 3" tube well with a hand pump for water-supply to the residence of the Hostel Superintendent, Ravenshaw Collegiate school, Cuttack.	1,060 0 0		
18	Do. ...	Cuttack training school—Construction of sullage disposal surface drains.	880 0 0	Sanctioned.	
19	Do. ..	Estimate for sinking 3" tube well and providing with a hand pump and storage tanks in the Mahakalpara thana compound, Cuttack.	1,520 0 0		
20	Darbhangā	Sinking a 3" tube well in the Sub-Registry office compound at Kisaapur, Darbhanga.	1,400 0 0		
		Carried over ...	52,933 4 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 52,930 4 0		
21	Darbhanga	Darbhanga Medical School—Providing meters for the residential buildings attached to the Darbhanga Medical School.	741 0 0		
22	Do. ...	Providing meters for residential buildings attached to the Darbhanga Medical School Hospital at Laheriasarai.	275 0 0		
23	Do. ...	Sinking a 3" tube well in the compound of the Northbrook School, Darbhanga (Modified).	2,461 0 0	Sanctioned.	
24	Do. ...	Sinking a 3" tube well for the Superintendent of Police and another for Reserved Police lines at Laheriasarai Departmental work 2,550 0 0			
		Contract work ...	3,500 0 0		
25	Do. ...	Sinking a 3" tube well in the Registrar's quarters at Bahera, Darbhanga.			
		Contract work ... Departmental work 1,100 0 0	1,400 0 0		
26	Do. ...	Sinking a 3" tube well for the two Munsiffs' residences at Madhubani.	1,796 0 0		
		Carried over ...	63,103 4 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 63,103 4 0		
27	Darbhanga	Sinking a 3" tube well with hand pump in the Sub-Jail at Madhubani.	1,679 0 0		
28	Do. ...	Construction of a 3" tube well with hand pump in Samastipur Municipality.	2,000 0 0	Sanctioned.	
29	Do. ...	Sinking a 3" tube well in the Samastipur Dispensary compound.			
		Departmental work 1,900 0 0			
		Contract work ...	2,370 0 0		
		Alternative	1,465 0 0		
30	Do. ...	Sinking a 3" tube well in the compound of Phulparas Police Station, district Darbhanga.	1,845 0 0		
31	Gaya ...	Gaya Drainage survey	63 0 0	Sanctioned.	
32	Do. ...	Water connection to the new buildings for Zila School, Gaya.	1,027 0 0	Do.	
33	Do. ...	Water connection to the quarters for the Head Master, Zila School, Gaya.	325 0 0	Do.	
34	Do. ...	Water connection to the wireless buildings at Gaya.	1,276 0 0	Do.	
35	Do. ...	Water connection to the Government wool weaving institute at Gaya.	241 0 0	Do.	
		Carried over ...	73,929 4 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	73,929 4 0		
36	Gaya ...	Sinking a 3" tube well in the compound of the residence of the Subdivisional officer, Jahanabad Gaya.			
		Contract work ... Departmental work Rs. 1,110.	1,440 0 0		
37	Hazaribagh	Central Jail, Hazaribagh—Improvements of water connection to the ablution platforms attached to the latrines of wards nos. 8 and 9.	610 0 0		
38	Manbhum	Dhanbad Scho ^o of mines—Water connection to the Cashier's quarters.	160 0 0		Sanctioned.
39	Do. ...	Water-supply for the office of the Chief Inspector of Mines, the menials quarters attached, the Chief Inspector's Bungalow and attached quarters at Dhanbad (Survey est).	5 0 0		Do.
40	Manbhum	Construction of pucca drain around the playground attached to the Zilla School at Purulia (Survey estimate).	5 4 0		Sanctioned.
41	Do. ...	Public Health Department staff quarters at Dhanbad.	6,800 0 0		...
		Carried over ...	82,949 8 0		

APPENDIX VIII—contd.

Serial No.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward	82,949 8 0		
42	Manbhum	Special repair estimate for the pumping plant at the Dhanbad School of Mines.	659 0 0	Sanctioned.	
43	Do. ...	Water-supply for the office of the Chief Inspector of Mines, the menials' quarters attached, the Chief Inspectors' and Inspectors' Bungalows and attached quarters at Dhanbad.	8,000 0 0	...	
44	Monghyr...	Jamalpur water-supply—survey estimate—opening out the existing main at different places for the internal and external examinations.	60 0 0	Sanctioned.	
45	Do. ...	Internal water connection to the Superintendent of Police's residence, Monghyr.	459 0 0	...	
46	Muzaffarpur	Muzaffarpur water-supply—Reorganization scheme.	2,64,720 0 0	...	
47	Do. ...	Muzaffarpur water-supply Reorganization Maintenance estimate.	25,000 0 0		
48	Do. ...	Muzaffarpur municipality. Sinking a 2" Abyssinian tube well near the Kachisarai tube well for testing the subsoil water.	200 0 0	Sanctioned.	
		Carried over ...	3,72,029 8 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of schemes and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward	Rs. a. p. 3,72,029 8 0		
49	Muzaffarpur	Muzaffarpur jail Providing a sump and a hand pump with an overLead tank for improvement of water-supply in Jailer's quarters.	315 0 0	Sanctioned.	
50	Do. ...	Muzaffarpur Jail shifting water connection from old quarters for Assist- and Jailer's, Doctor's Compounder's and refixing the same to four new quarters built for them in Muzaffarpur Jail.	375 0 0	Do.	
51	Do. ...	Muzaffarpur water-supply—Water connection to Professors' and Lecturers' quarters Greer Bhumihar Brahman College, Muzaffarpur.	2,124 0 0	...	
52	Do. ...	Sinking a 2½" tube well in the compound of Shri Ramkrishna Vivekanand Sevasharam at Muzaffarpur.	400 0 0	Sanctioned.	
53	Do. ...	Sinking 3" tube well in the Police lines Muzaffarpur. Contract work 1,520 Departmental work 1,188.	...	Submitted.	
54	Do. ...	Muzaffarpur water-supply—Water connection to the residence for the Professor of Science (Indian Educational Service, Greer Bhumihar Brahman College, Muzaffarpur).	516 0 0	Do.	
		Carried over ...	3,77,289 8 0		

APPENDIX VIII—contd.

Serial no.	Name of District.	Name of scheme and locality,	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward	Rs. a. p. 3,77,289 8 0		
55	Muzaffarpur	Water connection to the Civil Surgeon's office at Muzaffarpur.	178 0 0	Sanctioned.	
56	Do. ...	Tube well for Belsand police-station (Modified Estimate).	1,834 0 0	...	
57	Do. ...	Muzaffarpur water-supply—Water supply to warehouse officer's quarters occupied by the Excise Superintendent, Muzaffarpur.	283 0 0	...	
58	Palamau ...	Daltonganj water-supply scheme—improvement of the existing system.	1,05,500 0 0	Sanctioned.	
59	Patna ...	Diversion of the storm drain in the north of the area acquired for the extension of Amlatola.	935 0 0	Do.	
60	Do. ...	Pump chamber for Amlatola Independent water-supply (detailed estimate).	1,320 0 0	Do.	
61	Do. ...	Drainage scheme for the areas acquired for the extension of Amlatola, Patna (Deposit work).	53,341 0 0	Do.	
62	Do. ...	Drainage scheme for the areas acquired for the extension of Amlatola Survey estimate.	13 0 0	Do.	
		Carried over ...	5,40,693 8 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward	Rs. a. p. 5,40,693 8 0		
63	Patna ...	Drainage scheme for the areas acquired for the extension of Amlatola, Patna. Government work.	14,879 0 0	...	
63A	Do. ...	Revised estimate for Amlatola independant water-supply.	1,00,000 0 0	Sanctioned.	
64	Do. ...	Survey estimate (supplementary) for drainage scheme for extension of Amlatola.	25 0 0	...	
65	Do. ...	Providing an additional tap in the residence of the Professor of Physiology, in the Commissioner's residence compound, Patna.	35 0 0	Sanctioned.	
66	Do. ...	Patna-Bankipur water-works—Water connection to the quarters for the Assistant Caretaker, Secretariat Buildings, Patna.	172 0 0	...	
67	Do. ...	Patna-Bankipur water-works—Providing a double mouthed ferro concrete standpost on Jamal Road.	820 0 0	Sanctioned.	
68	Do. ...	Providing taps in the bath room of the Assistant Superintendent of the Hostel, Bihar National College, Patna.	223 0 0	Do.	
		Carried over ...	6,56,847 8 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p		
		Brought forward	6,56,347 8 0		
69	Patna ...	Patna Medical College —Providing water borne latrine and water connection in the acquired house lately in the occupation of the Deputy Superintendent.	1,260 0 0	...	
70	Do. ...	Water connection to the quarters for the Superintendent, Patna Collegiate School hostel.	116 0 0	...	
71	Do. ...	Providing a tap in the Pantry room attached to the two sets of chambers for the members of the Legislative Council on the Gardiner Road, Patna.	23 0 0	Sanctioned.	
72	Do. ...	Providing a tap in the pantry attached to the dining room of quarters no. 1 of the members of Legislative Council's chamber on the Gardiner Road, Patna.	23 0 0	Do.	
73	Do. ...	Water connection to two sets of 'C' type quarters for the assistants of Revenue Department.	130 0 0	Do.	
		Carried over ...	6,58,399 8 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 6,58,399 8 0		
74	Patna ...	Patna-Bankipur water-works—Providing an additional tap in the residence no. 2 for the Assistant Engineer, Public Health Department, Patna.	78 0 0	Sanctioned.	
75	Do. ...	Patna-Bankipur water-supply extension—Providing a standpost in the lane connecting Machuoli and Langertoli Roads.	196 0 0	...	
76	Do. ...	Temporary two-seated latrine and two-seated urinal for the use of servants of Patna Law College hostel at Ranighat.	350 0 0	Sanctioned.	
77	Do. ...	Shifting the existing standpost from south-east corner of Collectorate record rooms to the south-west corner newly constructed Mukhtarkhana at Patna.	70 0 0	...	
78	Do. ...	Common latrine for the use of menials of Government Cattle Farm, Patna.	635 0 0	Sanctioned.	
79	Do. ...	Constructing a 3" tube well with a hand pump in the garden of the Inspector-General of Prisons, Bihar and Orissa, Patna.	1,134 0 0	Do.	
		Carried over ...	6,60,862 8 0		

APPENDIX VIII--contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 6,60,862 8 0		
80	Patna ...	Patna University surface drainage scheme for the Muhammadan hostel and Superintendent's quarters, Patna College.	2,121 0 0		Sanctioned.
81	Do. ...	Patna—Providing an additional tap over the sink in the pantry and shower in the south-east bath room in first floor of the residences for the Registrar, Co-operative Societies, Bihar and Orissa	30 0 0		Do.
82	Do. ..	Special repairs to approach road to Digha pumping station.	3,204 0 0		Do.
83	Do. ...	Patna City water-supply survey estimate.	420 0 0		Do.
84	Do. ...	Patna-Bankipur water-supply extension—Water level indicator for 120,000 gallons tank at Patna University.	84 0 0		Do.
85	Do. ...	Patna-Bankipur water-works—Extension of 2" C. I. main for water connection to the proposed additional quarters in "R" Block for the staff of the Executive Engineer. Central Division.	620 0 0		Do.
		Carried over ...	6,67,341 8 0		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Est mated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	6,67,341 8 0		
86	Patna ...	Water connection to double storied barrack, Police Lines, Patna.	384 0 0	Sanctioned.	
87	Do. ...	Constructing a 3" tube well with hand pump in the residence of the Hon'ble Member (Finance), Patna.	1,400 0 0	Do.	
88	Do. ..	Patna-Bankipar water-works—Water connection to the "C" type quarters for the store-keeper, Central Division.	90 0 0		
89	Do. ..	Shifting the stand-pipe in the residence of Assistant Electrical Engineer now occupied by the Executive Engineer, University Division.	42 0 0	Sanctioned.	
90	Do. ...	Erecting temporary standpost in the camping ground east of the High Court for the use of the Police forces deputed to Patna in connection with the Police Parade in February 1930.	90 0 0	Do.	
91	Do. ...	Providing standpipes for the mounted military police in the High Court, Gachi.	25 0 0	Do.	
		Carried over ...	6,69,372 8 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 6,69,372 8 0		
92	Patna ...	Patna Veterinary College—Estimate for water-supply, sanitary installation and sewerage, drainage construction to additional buildings.	6,550 0 0	Sanctioned.	
93	Do. ...	Providing an additional tap in the quarters no. A-2, road no. 33 occupied by the Head Assistant, Development Department, Patna.	91 0 0	Do.	
94	Do ...	Patna Veterinary College—Providing outlet for the waste water from the wash-hand basin in the Dispensary Block.	12 0 0	Do.	
95	Do. ...	Patna University—Provision of two sets of latrines for the office staff of the Patna University.	1,032 0 0	...	
96	Do. ...	Patna-Bankipur water-works—Water connection to the proposed quarters for the line men of the Telegraph Engineering Department at Amlatola.	243 0 0	...	
97	Do. ...	Patna-Bankipur water-works—Water connection to the proposed quarters for the Electrical and Engineering Supervisor in the Post and Telegraph office compound, Patna.	446 0 0	...	
		Carried over ...	6,77,746 8 0		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1.	2.	3.	4.	5.	6.
			Rs. a. p.		
		Brought forward	6,77,746 8 0		
98	Patna ...	Water connection to the rooms of the Photo Section of the Criminal Investigation Department, Patna.	102 0 0	Sanctioned.	
99	Do. ...	Temporary water-supply to overflow Jail, Patna.	27,080 0 0	Do.	
100	Do. ...	Patna-Bankipur waterworks—Providing 3" main in the Kazipur lane, Patna.	1,492 0 0	Do.	
101	Do. ...	Internal water connection to the new kitchens of Bankipur Jail.	55 0 0	Do.	
102	Do. ...	Patna Medical College Improvement to the existing drain under work table in the Biological Laboratory	615 0 0	Do.	
103	Do. ...	Modified estimate for water connection to the 4 sets of 'C' type quarters in 'R' block for the staff of the Executive Engineer, Central Division.	280 0 0	Do.	
104	Do. ...	Patna University—Sanitary installation to the Bayley Library.	2,008 0 0	...	
105	Do. ...	Patna University—Water-supply to the Bayley Library.	684 0 0	Sanctioned.	
		Carried over ...	7,10,072 8 0	...	

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	7,10,072 8 0	...	
106	Patna ..	Additions and alterations to water-supply in the residence of Deputy Director of Public Instruction (Mr. Whitlock) Public Works Department no. 8 in Strand Road, New Capital, Patna.	40 0 0	Sanctioned.	
107	Do. ..	Patna University—Sanitary installation to Gymnasium, Science College, Patna.	116 0 0	Do.	
108	Do. ..	Additions and alterations to water-supply in the residence no. D-6 occupied by Director of Industries.	30 0 0	Do	
109	Do. ..	Patna-Bankipur water-works—Providing an additional tap in the bath room of the Anglo-Indian quarters no. B-6 on Mangles Road, Patna.	148 0 0	Do.	
110	Do. ..	Patna-Bankipur water-works—Providing additional taps in the bath rooms of the Anglo Indian quarters no. A 7 on Hardinge Road, Patna.	156 0 0	Do.	
		Carried over ...	7,10,592 8 0	...	

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 7,10,592 8 0	...	
111	Patna ...	Providing additional shower baths in the residence of the Principal, Veterinary College, Patna.	42 0 0	Sanctioned.	
112	Do. ...	Sinking a 3' tube well in the residence of Deputy Commissioner of Excise and Salt— Contract work ...	2,000 0 0	Do.	
113	Do. ...	Departmental work Rs. 1,255 0 0. Patna-Bankipur water-works—Providing additional water fittings in the residence of the Superintending Engineer, Public Health Department, Bihar and Orissa, Patna.	24 0 0	Do.	
114	Do. ...	Digha staff quarters surface drainage.	307 0 0	Do.	
115	Do. ...	Patna University—Water-supply and sanitary installation shifting of pipe lines for water-supply to Wheeler Senate House due to construction of gate keeper's shed.	155 0 0	Do.	
116	Do. ...	Patna-Bankipur water-works—Water connection to the residence for the new Judges of Patna High Court on the Bayley Road.	680 0 0	Do.	
		Carried over ...	7,13,800 8 0	...	

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 7,13,800 8 0		
117	Patna ...	Providing cash chest in the Public Health Department Sub-divisions nos. I and II.	462 0 0	...	
118	Do. ...	Patna University—sewerage construction—Removing stone ware pipes from the Science College compound to University Head works.	75 0 0	Sanctioned.	
119	Do. ...	Patna overflow Jail drainage construction.	14,725 0 0	Do.	
120	Do. ...	Temporary water-supply to overflow jail, Patna (supplementary.)	22,542 0 0	Do.	
121	Do. ...	Revised estimate for providing two additional taps with showers in the two bath rooms of the Anglo-Indian quarters no. A1-1 on Mangles Road occupied by the Head Assistant of the Judicial Department.	230 0 0	Do.	
122	Do. ...	Providing additional tap in the residence of the Subordinate Judge no. 2.	49 0 0	...	
		Carried over ...	7,51,883 8 0	...	

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 7,51,883 8 0	...	
123	Patna ...	Survey expenses on petty schemes.	25 0 0	Sanctioned.	
124	Do. ...	Patna-Bankipur water-supply extension of main in Govind Mitra Road.	2,756 0 0	Do.	
125	Do. ...	Temporary water-supply to overflow jail, Patna III supplementary estimate.	2,208 0 0	Do.	
126	Do. ...	Patna Medical College—Providing four gas taps in the south-west corner of the upper verandah of the Physiology Block.	98 0 0	Do.	
127	Do. ...	Patna-Bankipur water-supply—extension of 2" C I. main at Amlatola for water connection to the proposed quarters for the assistants of the Finance Department.	809 0 0	Do.	
128	Do. ...	Patna-Bankipur water-supply—Water connection to the proposed two sets of 'B' and 'C' type quarters for the assistants of the Finance Department at Amlatola.	130 0 0	Do.	
129	Do. ...	Providing two additional taps in the residence of the Chief Engineer, Public Works Department, Irrigation Branch.	144 0 0	Do.	
		Carried over ...	7,58,053 8 0	...	

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward	Rs. a. p. 7,58,053 9 0		
130	Patna ...	Patna-Bankipur water-supply—Extension of main in Mahalla Afzalpur, Pirbahore ward, Patna.	1,431 0 0	Sanctioned.	
131	Do. ...	Providing X P. M. to the windows of water tower, Veterinary College, Patna.	27 0 0		
132	Do. ...	Constructing a 3" tube well with hand pump in the residence of Inspector-General of Prisons, Bihar and Orissa (Revised Estimate).	1,433 0 0	Sanctioned.	
133	Do. ...	Water-supply to overflow jail-water connection to the quarters for the Superintendent and Deputy Superintendent, Patna.	312 0 0	Do.	
134	Do. ...	Addition and alterations to the sewage disposal works in the reserve police lines at Bankipur.	165 0 0	...	
135	Do. ...	Providing additional taps in the residence (leased house of Mrs. Nag on the new dak bungalow road) of the Hon'ble Sir Ganesh Dutt Singh.	115 0 0	...	
		Carried over ...	7,61,536 8 0	...	

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	7,61,536 8 0		
136	Patna ...	Replacing the existing hand pump on the new tube well by a power pumps in the residence of the Hon'ble Member, Finance, Patna.	800 0 0	Sanctioned.	
137	Do.	Providing a water tap near the latrine of the senior section of the Madrasa Islamia Shamsul Huda at Patna.	185 0 0	...	
138	Do. ...	Constructing two culverts over the diversion of storm drain at the crossing and road nos. 1 and 2 at Amlatola on the north of area acquired for extension (sent to Public Works Department).	670 0 0	...	
139	Do. ...	Outfall drains for the residence of the new High Court Judge's on Bayley Road, Patna.	950 0 0	...	
140	Do. ...	Patna University—Constructing spill water drain from the ice plant of the Science College, Patna.	160 0 0	Sanctioned.	
		Carried over ..	7,64,301 8 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Ra. a. p.		
		Brought forward ...	7,64,301 8 0		
141	Patna ...	Patna University— Raising the side wall of the road side drain east of Science College Hostel no. 2.	823 0 0	Sanctioned.	
142	Do. ...	Patna-Bankipur water- supply. Extension of main in the lane consisting of the Langertoli and Machhuatoli roads.	2,716 0 0	Do.	
143	Do. ...	Shifting to the nearest foot path the road watering Hyd- rants of Patna City unfiltered water- supply.	4,200 0 0	...	
144	Do. ...	Construction of a tube well in the Bihar municipality.	2,000 0 0	Sanctioned.	
145	Do. ...	Gulzarbagh Press water-supply—Pro- viding a clerestory window in the store- room.	13 0 0	Do.	
146	Do. ...	Special repairs to water connection to the quarters for the European Police Sergeants and const- ables attached to Patna High Court.	145 0 0	...	
147	Do. ...	Special repairs to sewage disposal works in the Bankipur Jail.	138 0 0	...	
		Carried over ...	7,74,336 8 0		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	7,74,336 8 0		
148	Patna ...	Estimate for loss on stock ending 31st March 1930.	1,806 6 5	Sanctioned.	
149	Do. ...	Shifting water mains of standpost with platforms and providing rider main due to widening road to Patna City (Revised Estimate).	12,860 0 0	...	
150	Do. ..	Dinapur Cantonment. Sair Bazar drainage scheme.	28,719 0 0	...	
151	Puri ...	Sinking trial boring at Puri for the location of suitable sites for the proposed permanent tube wells and also the location of suitable sites for the proposed permanent tube wells and the location of the zone of diffusion of fresh and salt water both in connection with the proposed water supply for Puri town (Revised estimate).	5,722 0 0	Sanctioned.	
152	Do. ...	Survey estimate for Puri town water-supply scheme.	62 0 0	Do.	
153	Do. ...	Puri Narendra Tank improvement scheme.	14,524 0 0	...	
		Carried over ...	8,38,029 14 5		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 8,33,029 14 5		
154	Puri ..	Puri town water-supply scheme.	11,34,500 0 0	...	
155	Purnea ..	Sinking a 3" tube-well for the quarters of sub-inspector of schools, Earsoi—			
		Departmental work Rs. 1,120-0-0.			
		Contract work ...	1,440 0 0	...	
156	Do. ...	Taking levels for the drainage scheme for the Safiganj Bazar, Katihar municipality.	20 0 0	...	
157	Do. ...	Construction of a 3" tube-well with hand pump for Kasba Union Board, district Purnea.	2,000 0 0	Sanctioned.	
158	Do. ...	Sinking a 3" tube-well for the Deputy Magistrate's quarters at Kissenganj, Purnea—			
		Contract work ...	1,440 0 0	...	
		Departmental work Rs. 1,120 0 0.			
159	Kanchi ...	Notified area Doranda. Providing wells 7'-0" diameter and 40 feet deep in each of the three matalas, Hatikhaca, Kumartoli and Mechitoli.	4,148 0 0	...	
		Carried over ...	20,31,587 14 5		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 20,31,687 14 5	...	
160	Ranchi ...	Hinco water-supply—estimate for constructing a stone submerged weir.	5,613 0 0	...	
161	Do. ...	Drainage scheme of Doranda and Hinco staff quarters.	30,400 0 0	...	
162	Do. ...	Doranda dispensary, Ranchi—provision of a stand pipe.	100 0 0	...	
163	Do. ...	Itki Sanatorium water-supply—construction of a 12-foot diameter well.	4,995 0 0	Sanctioned.	
164	Do. ...	Itki Sanatorium—sewerage and drainage outfalls. Estimate for providing boundary pillars for demarcating the land acquired by Public Health Department.	100 0 0	Do.	
165	Do. ...	Indian Mental Hospital, Kanke—hot and cold water supply in the new tuberculosis ward.	9,150 0 0	...	
166	Do. ...	Surface drainage scheme, Indian Mental Hospital, Kanke.	281 0 0	Sanctioned.	
167	Do. ...	Surface drainage scheme for the additional buildings proposed to be constructed in the Indian Mental Hospital, Kanke (Survey estimate).	19 0 0	Do.	
		Carried over ...	20,82,245 14 5		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	20,82,245 14 5		
163	Ranchi ...	New Tuberculosis Wards, Indian Mental Hospital, Kanke—water-supply and drainage.	2,400 0 0	...	
169	Do. ...	Estimate for one $\frac{1}{2}$ " tap in the cement class of the Occupational Therapy Department of the European Mental Hospital, Kanke.	140 0 0	...	
170	Do. ...	Additional taps in the Agricultural Farm for the use of staff and menials.	240 0 0	Sanctioned.	
171	Do. ...	Kanke Indian Mental Hospital—surface drainage scheme for a family attendant's quarters.	120 0 0	...	
172	Do. ...	Estimate for providing additional tap in the newly-constructed vat in the Dhobikhana of European Mental Hospital, Kanke.	30 0 0	Sanctioned.	
173	Do. ...	Estimate for Air Compressor chamber at Kanke.	730 0 0	...	
174	Do. ...	Estimate for two $\frac{1}{2}$ " taps in the Infirmary kitchen, Indian Mental Hospital, Kanke (male and female sections).	166 0 0	...	
		Carried over ...	29,86,071 14 5		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	20,86,071 14 5		
175	Ranchi ...	Water connection and drain to feeding platforms, male and female sections, Indian Mental Hospital, Kanke.	1,400 0 0	...	
176	Do. ...	Survey estimate for ascertaining the nature of the soil in connection with the proposed construction of a sewer outside the compound of the female hospital at Kanke to carry the effluent sewage from the existing outfall no. III and discharge it into the pucca drain which carries away the effluent sewage from outfall no. 2.	10 0 0	Sanctioned.	
177	Do. ...	Remodelling the existing kutchra outfall drain on the north of European Mental Hospital, Kanke, male section enclosure wall at Kanke and constructing a pucca sullage drain for irrigating the European Mental Hospital garden.	1,107 0 0	Do.	
178	Do. ...	Special repairs to drivers' shed at Kanke waterworks.	200 0 0	Do.	
		Carried over ...	20,88,788 14 5		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 20,38,788 14 5		
179	Ranchi ...	Survey estimate for examining the existing 2" G. I. rising main from the pumps at the existing race course wells to the old Government House tank in connection with the water-supply to the new Government House at Ranchi	230 0 0	Sanctioned.	
180	Do. ...	Estimate for providing hot water installation in the new staff house in the compound of Government House, Ranchi.	800 0 0	Do.	
181	Do. ...	Estimate for lowering 3" G. I. rising main in the new Government House, Ranchi.	100 0 0	Do.	
182	Do. ...	Water-supply to the various Government residences in the vicinity of Government House, Ranchi. Consolidated estimate for the whole cost of the improvements to the existing water-supply scheme including the new Radium well, the new racecourse well, and additions to the rising main.	34,000 0 0	Do.	
		Carried over ...	21,23,918 14 5		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 21,23,918 14 5		
183	Ranchi ...	Special repair and maintenance estimate—water-supply to new Government House, Ranchi, and various other Government residences in the vicinity of the same.	270 0 0	Sanctioned.	
184	Do. ...	Estimate for providing fountain connection in the Government House compound, Ranchi.	140 0 0	Do.	
185	Do. ...	Providing one garden water hydrant in the Government House lawn, Ranchi.	260 0 0	Do.	
186	Do. ...	Estimate for water connection to the residence of the Hon'ble Member, no. 1, South, at Ranchi.	4,478 0 0	Do.	
187	Do. ...	Water-supply to the residence of the Hon'ble Minister, Local Self-Government, Bihar and Orissa, Ranchi.	1,550 0 0	...	
188	Do. ..	Water-supply to the residence of the Hon'ble Minister, Local Self-Government, Ranchi; carrying out a recuperation test of the 8 ft. diameter well in the compound of the newly built Stenographer's quarters at Ranchi.	37 0 0	Sanctioned.	
		Carried over ...	21,30,653 14 5		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 21,30,653 14 5		
189	Ranchi ...	Divisional loss on stock for 1930-31.	78 4 7	...	
190	Sambalpur	Estimate of the approximate cost of improving the main drain in Bargarh Basti, district Sambalpur.	1,563 0 0	...	
191	Santal Parganas.	Giridih surface drainage scheme (survey estimate).	19 0 0	...	
192	Do. ...	Madhupur municipality surface drainage scheme.	9,145 0 0	...	
193	Saran ...	Sonepur water-supply—Providing a double-mouthed F. C. standpost near the Sub-registry office.	110 0 0	...	
194	Do. ...	Improvement to Sonepur water-supply (detailed).	35,173 0 0	...	
195	Do. ...	Sonepur water-supply—Providing a storage tank on the roof of the Sonepur Charitable Dispensary, district Saran.	135 0 0	...	
196	Do. ...	Sonepur water-supply—water connection to the Police sub-inspector's and constables' quarters at Sonepur.	175 0 0	...	
		Carried over ...	21,77,152 3 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	21,77,152 3 0		
197	Shahabad	Provision of sluice valves on the C. I. mains inside sub-jail, Arrah.	268 0 0	Sanctioned.	
198	Do. ...	Special repairs to water-supply for the subsidiary jail at Arrah for 1930-31.	111 0 0	...	
199	Do. ...	Special repairs to water-supply to Arrah sub-jail—replacing the old meter.	103 0 0	Sanctioned.	
200	Do. ...	Provision of two additional taps in the sub-jail, Arrah.	252 0 0	Do.	
201	Do. ...	Arrah waterworks—water connection to the residence of the District Officer, Shahabad.	1,144 0 0	Do.	
202	Do. ...	Construction of a 5' tube-well in Buxar municipality.	2,000 0 0	Do.	
203	Do. ...	Buxar Central Jail water-supply testing tube-well.	982 0 0	Do.	
204	Do. ...	Buxar Central Jail water-supply—Elevated Reservoir—addition and alterations to the existing M. S. ladder.	17 0 0	...	
		Carried over ...	21,82,029 3 0		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	[21,82,029 3 0		
205	Shahabad	Buxar Central Jail— Surface drainage scheme inside and outside jail (supple- mentary).	3,700 0 0	Sanctioned.	
206	Do. ...	Sinking a 3" tube-well in the police-station compound at Dumraon. Departmental work Contract work ...	1,100 0 0	Do. ...	
207	Do. ...	Construction of a 3" tube-well in the hand pump in Dumraon municipality.	2,000 0 0	Do.	
208	Do. ...	Sinking a 3" tube-well in the Kudra police- station, Shahabad.	1,440 0 0	...	
209	Do. ...	Construction of a 3" tube-well and hand pump in Sasaram municipality.	2,000 0 0	Sanctioned.	
210	Do. ...	Sinking a 3" tube-well in the compound of Subdivisional Officer's residence, Sasaram. Departmental work Contract work ...	1,100 0 0 1,440 0 0 ...	... ...
211	Singhbhum	Water-supply at Netarhat (survey estimate).	20 0 0	Sanctioned.	
212	Do. ...	Water-supply at Netarhat.	4,488 0 0	Do.	
		Carried over ...	21,98,217 3 0		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 21,98,217 3 0		
		REPAIR WORKS.			
213	Cuttack ...	Cuttack General Hospital and Medical School—Repair and maintenance of sanitary installation and internal water-fittings for the year 1930-31.	920 0 0	Sanctioned.	
214	Do. ...	Cuttack General Hospital and Medical School—Repair and maintenance of sewerage for the year 1930-31.	2,170 0 0	Do.	
215	Do. ...	Cuttack General Hospital waterworks—Repair and maintenance of the purping plant distribution system, tank, etc., for the year 1930-31.	3,080 0 0	Do.	
216	Do. ...	Cuttack Ravenshaw College—Repair and maintenance of water-supply and internal gas and sanitary fittings for the year 1930-31.	1,970 0 0	Do.	
217	Do. ...	Cuttack Ravenshaw College—Repair and maintenance of surface drains, sewers and sanitary installation for the year 1930-31.	1,550 0 0	Do.	
218	Do. ...	Cuttack Ravenshaw College—Repair and maintenance of sewage pumping plant for the year 1930-31.	2,575 0 0	Do.	
		Carried over ...	22,10,482 3 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 22,10,482 3 0		
219	Darbhanga	Repair and maintenance to water-supply and sanitary installation at Darbhanga Medical School.	5,076 0 0	...	
220	Do. ...	Repair and maintenance to water-supply and sanitary installation to Banwari Lal Hospital.	1,687 0 0	...	
220A	Gaya ...	Repair and maintenance to water-supply. Central Jail, Gaya.	400 0 0	...	
221	Hazaribagh	Repair and maintenance to water-supply at Hazaribagh Central Jail and Reformatory school for the year 1930-31.	7,950 0 0	...	
222	Manbhum	Repair and maintenance to the distribution system and house connection at the Mining school, Dhanbad, for the year 1930-31.	670 0 0	Sanctioned.	
223	Do. ...	Repair and maintenance to sewerage and sanitary installation in the Mining school, Dhanbad, for the year 1930-31.	760 0 0	Do.	
224	Do. ...	Repair and maintenance to pumping plants at the Mining school, Dhanbad, for the year 1930-31.	2,000 0 0	Do.	
		Carried over ...	22,29,025 3 0		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	22,29,025 3 0		
225	Patna ...	Repair and maintenance to water-supply and sanitary installation to Secretariat Buildings.	863 0 0	...	
226	Do. ...	Repair and maintenance to Secretariat and Heads of Departments' clerks' quarters, Amlatola.	800 0 0	...	
227	Do. ...	Repair and maintenance to Council Chamber, Patna.	600 0 0	...	
228	Do. ...	Repair and maintenance to internal water-supply and sanitary installation to Patna High Court.	750 0 0	...	
229	Do. ...	Repair and maintenance to sewage disposal work at Reserve Police Lines, Bankipur.	425 0 0	...	
230	Do. ...	Repair and maintenance to Patna University—water-supply and sanitary installation.	1,200 0 0	...	
231	Do. ...	Repair and maintenance to Patna University—drainage and sewerage.	650 0 0	...	
23	Do. ...	Repair and maintenance to sanitary installation to Patna General Hospital.	3,924 0 0	...	
		Carried over ...	22,37,337 3 0		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 22,37,337 3 0		
233	Patna ..	Repair and maintenance to sewage disposal works at Patna General Hospital.	2,300 0 0	...	
234	Do. ...	Repair and maintenance to sanitary installation and drainage, Patna Veterinary College.	3,708 0 0	...	
235	Do. ...	Repair and maintenance to New Capital storm drainage.	2,500 0 0	...	
236	Do. ...	Repair and maintenance to drainage and sewerage within the compound of Patna Training College and Collegiate school.	345 0 0	...	
237	Do. ...	Special repairs to the Digha Approach Road, Patna.	3,204 0 0	...	
238	Do. ...	Repair and maintenance to Government House and outhouses, Patna.	3,220 0 0	...	
239	Do. ...	Repair and maintenance to water-supply for temporary Jail at Patna.	1,800 0 0	..	
240	Do. ...	Repair and maintenance to pumping plant at Barkipur Jail.	680 0 0	...	
241	Do. ...	Repair and maintenance to water-supply to Government House Garden.	1,948 0 0	...	
		Carried over ...	22,57,042 3 0		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 22,57,042 3 0		
242	Patna ...	Overhauling pumping plant at Chajjubagh, Patna.	2,500 0 0	...	
243	Do. ...	Repair and maintenance to water-supply and drainage and latrine in E. N. College, Patna.	647 0 0	...	
244	Do. ...	Repair and maintenance to water-supply and sanitary installation and gas fittings in the laboratories, Patna Medical College.	530 0 0	...	
245	Do. ...	Repair and maintenance to watering of the lawn of Patna Medical College and Patna General Hospital.	946 0 0	...	
246	Do. ...	Repair and maintenance to hot water installation at Patna General Hospital.	309 0 0	...	
247	Do. ...	Repair and maintenance to water supply to overflow Jail at Patna.	937 0 0	...	
248	Do. ...	Repair and maintenance to water-supply, drainage and sewerage, Patna Veterinary College.	2,508 0 0	...	
		Carried over ...	22,65,488 3 0		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	22,95,488 3 0		
249	Patna ...	Repair and maintenance to water-supply, sanitary and installation and gas fittings of laboratories of Patna General Hospital.	360 0 0	...	
250	Do. ...	Repair and maintenance to Patna sewerage pumping plant.	21,224 0 0	...	
251	Do. ...	Repair and maintenance to Patna-Bankipur water-supply.	65,185 0 0	...	
252	Do. ...	Repair and maintenance to independent water-supply at Patna High Court.	1,495 0 0	...	
253	Do. ...	Repair and maintenance to internal water-supply at Chajjubagh Judges' residences.	2,500 0 0	...	
254	Do. ...	Repair and maintenance to hot water installation at Patna General Hospital.	6,428 0 0	...	
255	Do. ...	Repair and maintenance to Veterinary College sewage pumping plant.	2,500 0 0	...	
256	Do. ...	Repair and maintenance to internal water-supply and lawn watering at Patna General Hospital.	14,328 0 0	...	
		Carried over ...	23,79,518 3 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 23,79,518 3 0		
257	Patna ...	Repair and maintenance to Veterinary College water-supply pumping plant.	2,450 0 0	...	
258	Do. ...	Repair and maintenance to Dairy Farm, Patna.	1,548 0 0	...	
359	Do. ...	Special repairs to internal water-supply at Chajjubagh, Patna.	2,500 0 0	...	
260	Do. ...	Repair and maintenance to spill water-supply at Phulwari Jail.	1,921 0 0	...	
261	Do. ...	Repair and maintenance to sewerage, Phulwari Jail.	2,331 0 0	...	
262	Do. ...	Repair and maintenance to Press water-supply at Gulzarbagh.	2,374 0 0	...	
263	Ranchi ...	Repair and maintenance to Government House and staff quarters at Ranchi for the year 1930-31—			
		Sanitary installation to Government House.	905 0 0	...	
264	Do. ...	Periodical repair and maintenance to water-supply to Government House and staff quarters at Ranchi for the year 1930-31	7,430 0 0	...	
265	Do. ...	Repair and maintenance to sanitary installation in the new Government House, Ranchi, for the year 1930-31.	1,250 0 0	...	
		Carried over ...	24,02,217 3 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 24,02,217 3 0		
266	Ranchi ...	Repair and maintenance to the Hinoo water-supply for the year 1930-31.	4,580 0 0	Sanctioned.	
267	Do. ...	Repair and maintenance to water-supply pumping plant to the Itki Sanatorium for the year 1930-31.	3,100 0 0	Do.	
367A	Do. ...	Repair and maintenance to the sewerage and sanitary installation during 1930-31.	620 0 0	...	
268	Do. ...	Water-supply to Itki Sanatorium.	560 0 0	...	
269	Do. ...	Repair and maintenance—estimate of the motors at Kanke for the year 1930-31.	574 0 0	Sanctioned.	
270	Do. ...	Indian Mental Hospital, Kanke—repair and maintenance to internal water-supply, sanitary installation and buildings for the year 1930-31.	1,800 0 0	Do.	
271	Do. ...	Indian Mental Hospital, Kanke—repair and maintenance to surface drainage for the year 1930-31.	1,470 0 0	Do.	
272	Do. ...	Indian Mental Hospital, Kanke—repair and maintenance to sewerage system for the year 1930-31.	710 0 0	Do.	
273	Do. ...	Indian Mental Hospital, Kanke—internal water-supply and sanitary installation.	1,750 0 0	Do.	
		Carried over ...	24,17,381 3 0		

APPENDIX VIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 24,17,381 3 0		
274	Rauchi ...	Repair and maintenance to water-supply to Indian Mental Hospital, Kanke, from July 1930 to June 1931.	19,000 0 0	Sanctioned.	
276	Do. ...	European Mental Hospital, Kanke—repair and maintenance to internal water-supply, sanitary installation and buildings for the year 1930-31	1,580 0 0	Do.	
276	Do. ...	Nil ...	...	...
277	Do. ...	Nil ...	...	...
278	Do. ...	Repair and maintenance to water-supply to European Mental Hospital, Kanke, from April 1930 to March 1931.	7,584 0 0	Sanctioned.	
279	Saran ...	Repair and maintenance to Sonepur water-supply and distribution system.	347 0 0	...	
280	Do. ...	Repair and maintenance to Sonepur water-supply.	4,000 0 0	...	
281	...	Repairs and carriage to tools and plant for six months.	1,155 0 0	...	
		TOOLS AND PLANT.			
282	...	Purchase of two cycles at Rs. 120 each.	240 0 0	...	
283	...	Repair and maintenance to tools and plant for the 2nd half-year 1930-31.	1,500 0 0	...	
		Carried over ...	24,52,787 3 0		

APPENDIX VIII—concl'd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. of P. 24,52,787 3 0		
284	...	Repair and maintenance to boring tools for 1930-31.	1,313 0 0	...	
285	...	Plant for testing pipes.	1,376 0 0	...	
286	...	Tools and plant, new supply.	4,201 0 0	...	
287	...	Estimate for loss of tools and plant.	12 3 6	...	
288	...	Estimate for boring tools and plant III (supplementary).	422 0 0	...	
289	...	Supplementary estimate for additional boring tools.	454 0 0	...	
290	...	Boring tools and plant IV (supplementary.)	441 0 0	...	
291	...	New supply of boring tools and plant (supplementary estimate).	2,070 0 0	...	
292	...	Temporary water-supply at Bihta Mela.	390 0 0	...	
293	...	Running 3 sets of Crossly pumps.	1,152 0 0	...	
294	...	Repair and maintenance to tools and plant.	4,600 0 0	...	
295	...	Temporary water-supply at Phulwari Mela.	278 0 0	...	
296	...	Temporary water-supply at Bargaon Mela.	596 0 0	...	
297	...	Temporary water-supply at Sonepur.	1,313 0 0	...	
298	...	Tools and plant, new supply.	74 0 0	...	
		Carried over ...	24,71,479 6 6		

APPENDIX VIII—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
		Brought forward ...	Rs. a. p. 24,71,429 6 6		
299	...	Tools and plant for 1930-31.	285 0 0	...	
300	...	Purchase of English stores.	4,600 0 0	...	
301	...	Apparatus for measuring depth of water inside tube-wells.	500 0 0	...	
302	...	Repairs and carriage of tools and plant in connection with Puri test pumping.	2,600 0 0	...	
303	...	Temporary water-supply at Bihta 2nd mela.	369 0 0	...	
304	...	Estimate for tools and plant.	2,548 0 0	...	
305	...	Tools and plant, new supply, in connection with Puri test pumping.	3,444 0 0	...	
306	...	Tools and plant, new supply.	201 10 0	...	
307	...	Repairs and maintenance to tools and plant.	1,950 0 0	...	
308	...	Tools and plant, new supply.	2,840 0 0	...	
309	...	Repairs and maintenance to tools and plant at Kanke waterworks—portion taken over from Mechanical Division.	750 0 0	...	
310	...	Special tools and plant in connection with Puri test pumping.	100 0 0	...	
		Carried over ...	24,91,687 0 6		

APPENDIX VIII—concl'd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Remarks.
1	2	3	4	5	6
			Rs. a. p.		
		Brought forward ...	24,91,667 0 6		
311	...	Supplementary estimate for tools and plant.	77 0 0	...	
312	...	Repairs and carriage of boring tools.	400 0 0	...	
313	...	Purchase of a cycle in connection with Puri water-supply.	120 0 0	...	
		Total ...	24,92,264 0 0		

APPENDIX IX.

List of works under construction in 1930-31 by the Public Health Department, Bihar and Orissa.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
			Rs.		Rs.
1	Bhagalpur...	Survey estimate for Bhagalpur Jail water-supply.	186	.....	113
2	Do. ...	Improvement to the water-supply to the Bhagalpur Central Jail.	500	In progress	59
3	Do. ...	Storm water drainage scheme for the Bhagalpur Central Jail.	1,275	Completed...	1,114
4	Do. ...	Water connection to the Silk Institute, Bhagalpur.	290	In progress	41
5	Do. ...	Providing standpost for 92 warders' barrack and kitchen, Central Jail, Bhagalpur.	1,090	Do. ...	841
6	Do. ...	Survey estimate for preparing C o l g o n g drainage scheme.	5-4	Completed...	2-4
7	Champaran	Sinking a 3" tube-well with hand pump for Motihari Jail.	1,470	In progress	1,375
8	Cuttack ...	Cuttack Ravenshaw College supplementary sewerage scheme.	17,000	Completed	2,130
9	Do. ...	Cuttack General Hospital and Medical School drainage and sewerage scheme.	1,41,000	In progress	24,920
		Carried over ...	...	...	30,595 4 0

APPENDIX IX—contd.

Serial no.	Name of district,	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 30,595 4 0
10	Cuttack ...	Cuttack Ravenshaw College additional tube-well with pumping plant water-supply.	14,000	In progress	10,164
11	Do. ...	Providing meter connection to the various buildings attached to the Ravenshaw College, Cuttack.	2,810	Completed	2,796
12	Do. ...	Cuttack Ravenshaw College sewerage construction effluent filter shifting to the south-east ward.	3,200	In progress	1,801
13	Do. ...	Providing shower roses to the existing bathing platforms for the Hostel students, Ravenshaw College.	560	Completed	526
14	Do. ...	Cuttack Ravenshaw College waterworks, internal water connection to the additional bathrooms attached to warder's quarters 2 nos.	38	Do. ...	32
15	Do. ...	Water connection to the Dhobikhana in the General Hospital compound, Cuttack.	400	Do. ...	356
16	Do. ...	Proposed internal water connection to the indoor patients' kitchen and table sinks of the Physiology and Chemical Laboratory, Cuttack General Hospital.	400	...	386
		Carried over ...	...	...	Rs. 46,656 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
			Rs.		Rs.
		Brought forward ...	...	...	46,656 4 0
17	Cuttack ...	Installation of sanitary fittings in the extended portion of the Botanical laboratory, Ravenshaw College, Cuttack.	1,200	Completed	711
18	Do. ...	Internal water connection to the office of the Deputy Director of Civil Veterinary Department, Orissa Range, Cuttack.	816	Do. ...	711
19	Do. ...	Construction of sullage disposal surface drains in the training school, Cuttack.	880	Do. ...	787
20	Darbhangha	Banwari Lal Hospital—Overhead tank, Laheriasarai.	7,600	In progress	565
21	Do. ...	Sinking a 2½" tube-well in the compound of Civil Surgeon, Laheriasarai.	1,566	Do. ...	498
22	Do. ...	Providing a water tap in the proposed bathroom of European Nurses' quarters, Darbhanga Medical School.	33	Completed	19
23	Gaya ...	Water-supply to new Criminal Court, Gaya.	470	Do. ...	399
24	Do. ...	Water-supply to Head Master's quarters, Gaya Zila School.	325	In progress	201
25	Do. ...	Water connection to Wool Weaving Institute, Gaya.	241	Do. ...	168
		Carried over ...	...	...	50,715 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 50,715 4 0
26	Gaya ...	Gaya drainage survey work.	63	...	11
27	Hazaribagh	Installation of a chloro- nome for the sterilization of the water-supply to the Central Jail and Reformatory School, Hazaribagh.	2,721	Completed	2,516
28	Do. ...	Provision of 3 additional standposts for supplying water to the staff of the Hazaribagh Reformatory School.	430	Do. ...	347
29	Manbhum	Survey estimate for water- supply to the office of the Chief Inspector of Mines and attached quarters.	5	Do. ...	5
30	Do. ...	Water connection to the Cashier's quarters at the Indian School of Mines, Dhanbad.	160	Do. ...	160
31	Monghyr...	Survey estimate for opening out existing main at different places for internal and external examination of Jamal- pur water-supply.	60	Do. ...	63
32	Do. ...	Water connection to the Sergeant-Major's quar- ters at Monghyr.	445	Do. ...	390
33	Do. ...	Internal water connection to bungalow no. 2, Monghyr Fort.	381	Do. ...	379
		Carried over ...	...	...	54,591 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 54,591 4 0
34	Monghyr ...	Water-supply to Monghyr Jail.	...	In progress	1,162
35	Muzaffarpur	Shifting water connection from old quarters for Assistant Jailor, Doctor and Compounder's quarters and refixing the same to 4 new quarters in Muzaffarpur.	375	Completed	272
36	Do. ...	Water connection to the office of the Commissioner, Tirhut Division, Muzaffarpur.	355	Do. ...	369
37	Do. ...	Providing sump with a hand pump and an overhead tank for internal water-supply to Jailor's quarters at Muzaffarpur.	315	Do. ...	270
38	Do. ...	Improvement to the drain, Principal's residence of Greer Bhumihar Brahman College, Muzaffarpur.	573	In progress	339
39	Patna ...	Providing an additional tap in the quarters no. A-2 on Road no. 36, now occupied by the Head Assistant, Development Department.	91	Completed	91
40	Do. ...	Providing an additional tap in the bathroom of the Anglo-Indian quarters B-8 on Mangle's Road, Patna, Chief Secretary's office.	148	Do. ...	148
		Carried over ...	...	...	57,226 4 0

APPENDIX IX—contd.

Serial n ^o .	Name of distr.ct.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 57,226 4 0
41	Patna ...	Water connection to the rooms of the Photo Section of the Criminal Investigation Department, Eihar and Orissa, Patna Secretariat.	102	Completed	100
42	Do. ...	Providing 2 additional taps to the residence of the Chief Engineer, Public Works Department, Irrigation Branch, Patna.	114	...	121
43	Do. ...	Addition and alterations in water-supply in the residence of the Director of Industries at Patna.	30	Completed	23
44	Do. ...	Shifting existing taps to the opposite side wall in the bathroom of quarters no. 9, Road no. 10 at Amlatola.	7	Do. ...	6
45	Do. ...	Constructing 3" tube-well with hand pump in the residence of the Hon'ble Member of Finance.	1,400	In progress	1,255
46	Do. ...	Installation of two water taps in the pantry attached to 2nd set of Chamber of Members of Legislative Council.	46	Do. ...	22
47	Do. ...	Water connection to two sets of quarters for the Assistant of Revenue Department.	130	Completed	116
		Carried over ...	...	...	58,975 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 58,975 4 0
48	Patna ...	Water connection to the five sets of "C" type quarters for the Assistants of the Board of Revenue.	400	Completed	345
49	Do. ...	Water-supply scheme for eight additional quarters for Orthodox members of Legislative Council.	790	Do. ...	610
50	Do. ...	Providing two additional taps with shower in 2 bath rooms of Anglo Indian quarters.	190	Do. ...	50
51	Do. ...	Water-supply to residence of the new Judge, Patna High Court.	680	Do. ...	639
52	Do. ...	Additions and alterations to the existing drains in the residence of the Hon'ble Justice Sir Jwala Prasad.	345	Do. ...	331
53	Do. ...	Providing water connection to the "C" type quarters for assistant of the Judicial Department.	75	Do. ...	66
54	Do. ...	Water-supply to overflow jail, Patna.	49,632	Do. ...	43,045
55	Do. ...	Drainage and sewerage construction to overflow jail at Patna.	14,735	Do. ...	13,258
56	Do. ...	Water supply to additional barrack for Police guard at overflow jail, Patna.	2,208	Do. ...	-1,344
57	Do. ...	Internal water connection to kitchen, Bankipur Jail, Patna.	55	In progress	11
		Carried over ...	...	...	1,19,175 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 1,19,175 4 0
58	Patna ...	Sanitary installation and water connection to the new hospital in Bankipur Jail.	628	Completed	500
59	Do. ...	Water connection to the quarters for the Deputy Superintendent and Superintendent's quarters, overflow jail.	312	Do. ...	273
60	Do. ...	Providing water tap in the new police hospital and outhouses attached thereto.	620	Do. ...	583
61	Do. ...	Providing a tap on upper storey Constables' barrack, Police Line, Patna.	384	Do. ...	357
62	Do. ...	Constructing a 3' tubewell with hand pump in the garden of Inspector-General of Prisons.	1,134	Do. ...	1,307
63	Do. ...	Fixing temporary water connection to the east of High Court for the use of the Police force deputed to Patna.	187	In progress	6
64	Do. ...	Temporary connection to camping ground, Patna.	294	Do. ...	5
65	Do. ...	Water connection to seven sets of "U" type quarters for the Electrical Division.	560	Do. ...	133
66	Do. ...	Shifting standposts in the residence of the Assistant Electrical Engineer, now occupied by Executive Engineer, University Division.	42	Completed	24
		Carried over ...	...	...	1,22,366 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 1,22,366 4 0
67	Patna ...	Water connection to the four sets of "C" type quarters in "B" Block for the staff of the Executive Engineer, Central Division.	230	Completed	248
68	Do. ...	Patna University water-supply and sanitary installation.	2,79,708	In progress	227
69	Do. ...	Extension of water-supply project for I. A. and M. A. Block.	18,658	Completed	765
70	Do. ...	Extension of water connection to the teacher's quarters, Bankipur, Girls' High English School.	310	In progress	293
71	Do. ...	Water fittings in the common room and Gymnasium, Science College, Patna.	116	Do. ...	107
72	Do. ...	Water-supply to Bayley Library, Patna.	681	Do. ...	624
73	Do. ...	Removing stoneware pipes from the Science College compound to the University Head Works.	75	Do. ...	75
74	Do. ...	Water connection to three sets of "C" type quarters for Assistant and staff of Director of Public Instruction, Amalola.	240	Do. ...	208
75	Do. ...	Addition and alteration to water-supply in the residence of the Assistant of Director of Public Instruction, Patna.	40	Do. ...	27
		Carried over ...	...	...	1,24,876

APPENDIX IX—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 1,24,876 4 0
76	Patna ...	Surface drainage scheme for the Muhammadan Hostel, Patna College.	2,121	Completed	2,072
77	Do. ...	Providing tap in the bath-room of the Assistant Superintendent, Bihar National College Hostel, Patna.	223	Do. ...	187
78	Do. ...	Temporary two-seated latrines and two-seated urinals for the use of the servants of Patna Law College Hostel.	350	Do. ...	330
79	Do. ...	Water connection to Bihar National College Hostel Superintendent's quarters, Patna.	171	Do. ...	153
80	Do. ...	Installation of meters for hot water Boiler House, Patna General Hospital.	...	Do. ...	123
81	Do. ...	Water-supply and sanitary installation for providing fume cup Board in the Physiological laboratory.	629	Do. ...	604
82	Do. ...	Sanitary installation in the proposed water closet and preparation room in X-Ray Block, Patna General Hospital.	975	Do. ...	80
83	Do. ...	Providing tap in the residence of the Professor of Physiology in the Civil Surgeon's compound, now occupied by Professor of Surgery, Prince of Wales Medical College.	13	Do. ...	11
		Carried over ...	...	...	1,58,441, 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 1,28,411 4 0
84	Patna ...	Providing tap in the residence of Professor of Physiology in the Commissioner's residence compound.	35	Completed	30
85	Do. ...	Water-supply to Hostel, Bihar College of Engineering, Patna.	2,372	In progress	1,954
86	Do. ...	Water connection to 2 sets of quarters for the staff of the Director of Industries in "E" Block, Patna.	150	Completed	132
87	Do. ...	Diversion of storm drains in the north of the area acquired for extension of Amlatola at Patna.	935	Do. ...	919
88	Do. ...	Providing water fittings in the residence of Superintending Engineer, Public Health Department, Patna.	24	Do. ...	20
89	Do. ...	Survey schemes for petty works.	60	...	26
90	Do. ...	Providing racks in the Divisional store godown, Patna.	386	Completed	379
91	Do. ...	Trial bore hole latrine at the site of proposed ejector station in connection with Patna main drainage.	290	...	124
92	Do. ...	Providing additional tap in the residence no. 2 for Assistant Engineer, Public Health Department, Patna.	78	Completed	63
		Carried over ...	...	...	1,32,093 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	...	...	1,32,093 4 0
92	Patna ...	Levelling and surveying in connection with the Patna Drainage scheme.	990	...	6
94	Do. ...	Patna City water-supply schemes survey.	420	...	91
95	Do. ...	Survey in connection with the drainage schemes for the area acquired for extension of Anlatola drainage.	25	Completed	25
96	Do. ...	Patna University storm drainage survey estimate.	76	...	44
97	Do. ...	Estimate for obtaining house connection meters of different types for testing them to be best type for use in Public Health Department, Bihar and Orissa.	660	..	124
98	Do. ...	Patna Veterinary College water-supply drainage and sewerage.	1,26,319	Completed	5,142
99	Do. ...	Patna Veterinary College water-supply drainage and sewerage for additional buildings.	6,550	Do. ...	5,376
100	Do. ...	Patna Veterinary College water connection to kitchen for Post-Graduate students, behind dog ward, etc., quarters for cook and servants.	350	Do. ...	295
101	Do. ...	Water connection to the staff quarters for the Director of Agriculture.	1,280	In progress	253
		Carried over ...	...	...	1,43,449 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 1,43,449 4 0
102	Patna ..	Phulwari Dairy farm water supply to staff quarters.	2,150	Completed	1,873
103	Do. ..	Common latrines for the use of the menials of the Government Cattle Farm, Phulwari.	635	Do. ...	560
104	Do. ...	Providing an additional tap and sink in the pantry and showers in the south-east of bathrooms in the 1st floor for the residence of Registrar, Co-operative Societies, Patna.	30	Do. ...	30
105	Do. ...	Water-supply to sub-jail at Gulzarbagh.	74	In progress	77
106	Do. ...	Gulzarbagh Press water-supply providing a clerostory window in the store room.	13	Completed	13
107	Do. ...	Type-casting machine for Government Press, Gulzarbagh, Patna.	49	In progress	36
108	Do. ...	Gulzarbagh Press water-supply, store room and quarters for Electrical Mistry and attendants.	1,818	Completed	129
109	Do. ...	Dinapur cantonment drainage survey.	56	...	9
110	Puri ...	Survey estimate for Pari water-supply scheme.	62	Completed	35
111	Purnea ...	Survey estimate for preparing drainage scheme for Safiganj Bazar, Katihar.	30	...	2
		Carried over ...	...	...	1,46,213 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward	Rs. ...	...	Rs. 1,46,213 4 0
112	Ranchi ...	Itki Sanatorium water-supply, sewerage, surface drainage scheme, Main scheme.	79,000	Completed	2,992
113	Do. ...	Itki Sanatorium water supply, sewerage and sanitary installation supplementary scheme.	24,152	Do. ...	6,823
114	Do. ...	Construction of a second well including a pump house for supply of water at Itki Sanatorium.	4,995	In progress	999
115	Do. ...	Provision of meter. Indian Mental Hospital, Kanke.	13,755	Completed	2,190
116	Do. ...	Water connection and sanitary installation to the permanent State Dispensary and staff quarters at Kanke.	1,300	Do. ...	67
117	Do. ...	Water connection and sanitary installation to the additional accommodation, Indian Mental Hospital, Kanke.	15,015	Do. ...	1,031.
118	Do. ...	Alteration of suction pipe from low lift pump at Kanke, Indian Mental Hospital.	233	...	27
119	Do. ...	Extension of surface drainage, Indian Mental Hospital, Kanke.	281	Completed	281
		Carried over ...	...	...	1,60,823 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
			Rs.		Rs.
		Brought forward ...	...	...	1,60,623 4 0
120	Ranchi ...	Survey estimate for preparing water-supply and drainage scheme for married and single attendants' quarters, Indian Mental Hospital, Kanke.	19	Completed	13
121	Do. ...	Provision of additional hose pipes with boxes in Indian Mental Hospital, Kanke.	1,740	Do.	1,706
122	Do. ...	Supplying and fixing an electrically-driven air compressor, Kanke.	3,150	Do. ...	1,007
123	Do. ...	Provision of sanitary fittings in the bathroom attached to the office of the Superintendent, Indian Mental Hospital, Kanke.	90	Do. ...	85
124	Do. ...	Construction of semi-circular screen walls in front of verandah tap in the male and female section, Indian Mental Hospital, Kanke.	240	Do. ...	196
125	Do. ...	Making the pump house water-tight, water-works, Indian Mental Hospital, Kanke.	450	...	303
126	Do. ...	Minor water connection, Indian Mental Hospital, Kanke.	1,355	Completed	459
127	Do. ...	Survey estimate for digging 2 nos. of test pits, Indian Mental Hospital, Kanke.	10	Do. ...	9
		Carried over ...	...	...	1,64,401 4 0

APPENDIX 1X—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 164,401 4 0
128	Ranchi ...	Installation of two water taps in the Kanke farm for the use of the staff.	240	Completed	225
129	Do. ..	Addition and alteration to the quarters occupied by the Charge-man of Kanke water-works, Indian Mental Hospital.	356	Do. ...	295
130	Do. ...	Improvement of sullage filter, Indian Mental Hospital, Kanke.	125	Do. ...	90
131	Do. ...	Provision of a double-acting semiro-tary booster pump in the rising main to the male section, infirmary ward, Indian Mental Hospital, Kanke.	85	...	32
132	Do. ...	Water-supply, sewerage, sanitary installation and hot water installation to the New Government House.	63,800	In progress	12,453
133	Do. ...	Construction of a well including test pumping at the race-course.			4,339
134	Do. ...	Construction of a well including test pumping, Radium institute.	34,000	Do. ...	5,736
135	Do. ...	Construction of rising main from the new 12-foot diameter well at Radium Institute compound to the existing 2' rising main, race-course well.			491
		Carried over ...	...	...	1,88,067 4 0

APPENDIX IX—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 1,88,067 4 0
136	Ranchi ...	Sanitary fittings to the kitchen block attached to the new Government House, Ranchi.	2,375	Completed	643
137	Do. ...	Survey estimate for examining the existing 2" G. I. rising main from the pumps at the existing race course well to the old Government House tank in connection with water supply to the new Government House, Ranchi.	230	Do. ...	170
138	Do. ...	Provision of hot water installation in the new staff house in the compound of new Government House, Ranchi.	800	Do. ...	791
139	Do. ...	Provision of fountain connection in the new Government House at Ranchi.	140	Do. ...	130
140	Do. ...	Provision of bathroom fittings to the new Government House, Ranchi.	2,164	In progress	1,871
141	Do. ...	Construction of rising main from the well of the compound of Superintending Engineer, Public Works Department, to the existing 2" rising main from the race-course well.	250	Completed	81
142	Do. ...	Survey estimate for carrying out a recuperation trial in connection with water-supply to the Hon'ble Minister's residence.	37	Do. ...	28
		Carried over ...	...	...	1,91,781 4 0

APPENDIX IX,—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 1,91,781 4 0
143	Ranchi ...	Provision of water-supply and two English baths and two wash-hand basins in the residence of Hon'ble Member at Ranchi.	4,228	In progress.	4,028
144	Do. ...	Providing garden watering Hydrant in the Government House lawn, Ranchi.	260	Completed	239
145	Do. ...	Lowering 3" G. I. rising main in the Government House, Ranchi.	100	Do. ...	87
146	Do. ...	2" G. I. rising main at Race course.	34,000	Do. ...	95
147	Sambalpur	Water-supply to the coal-field constabulary at Jogta and Jorapukur.	564	...	152
148	Saran ..	Sonepur water-supply scheme.	99,744	Completed	2,625
149	Shahabad...	Water connection to the residence of District Officer, Shahabad, Arrah.	1,144	Do. ...	986
150	Do. ...	Providing two additional taps in the Sub-Jail, Arrah.	252	In progress	187
151	Do. ..	Water connection to the quarters for the District Inspector of Schools, Arrah.	187	Completed	187
152	Do ..	Internal water connection to the quarters for the Head Master, Arrah Zilla School.	190	Do. ...	159
		Carried over ...	...	...	2,00,526 4 0

APPENDIX IX--*concl'd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward ...	Rs. ...	...	Rs. 2,00,526 4 0
153	Shahabad...	Internal water connection to the residence of the Civil Surgeon at Arrah.	750	Completed	0-10-0
154	Do. ...	Arrah drain flushing scheme—construction of trench north pillar.	325	...	3
155	Do. ...	Buxar Central Jail—Surface drainage scheme inside and outside the Jail.	3,700	In progress	2,373
156	Do. ...	Buxar Central Jail water-supply.	982	Do. ...	98
157	Do. ...	Taking out levels of existing drains west of Jhajharia bridge and making survey, etc., for Belwatia	103	...	66
158	Singhbhum	Survey estimate for water-supply, Natarhat.	20	Completed	20
159	Do ...	Natarhat water-supply scheme.	4,488	In progress	1,747
160	Santal Farganas.	Improvement to drainage system of the Dumka Jail.	2,300	Do. ...	1,890
161	Ditto ...	Madhupur surface drainage scheme—Survey estimate.	25	...	4
		Total ...	...	...	2,06,727 14 0
		Expenditure on 33-Public Health, Reserved and Transferred—Repair Works, Tools and Plant, Central Works, Deposit works and Post and Telegraph.	Plus	...	4,79,008
		Total expenditure ...	...	...	6,85,735

APPENDIX X.

List of works under construction on behalf of local bodies.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
			Rs.		Rs. as p.
1	Bhagalpur	Bhagalpur Reorganization scheme—Sinking tube-well and test pumping.	1,00,510	Completed	5,186 0 0
2	Do. ...	Installation of two electrically-driven unfiltered water pumping sets at the water works Bhagalpur.	25,241	Do. ...	20,306 0 0
3	Muzaffarpur	Muzaffarpur water-supply reorganization scheme.	69,121	In progress	48,401 6 4
4	Do. ...	Running temporary air lift pumping plant at Muzaffarpur.	7,062	Do. ...	8,947 7 4
5	Do. ...	Sinking 2" tube-well at Kachisarai.	200	Completed	147 1 3
6	Do. ...	Sinking tube-well at Samastipur.	2,000	...	100 0 0
7	Patna ...	Patna-Bankipur waterworks extension scheme.	3,44,000	In progress	25,477 0 2
8	Do. ...	Removal of meter chamber from its present position at the corner of Bayley Road near Allahabad Bank.	5,203	Completed	5,697 0 0
		Carried over ...	...	...	1,14,261 15 1

APPENDIX X—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward...	Rs. ...	...	Rs. a. p. 1,14,261 15 1
9	Patna ...	Independent water-supply at Amlatola.	1,00,000	Completed	21,159 3 11
10	Do. ...	Madho Mills surface drainage scheme.	2,807	Do. ...	24 1 0
11	Do. ...	Provision of spare meters and meter card boards.	660	...	612 6 0
12	Do. ...	Construction of pumping plant in connection with Patna-Bankipur Waterworks old scheme.	1,26,000	In progress	17,224 0 0
13	Do. ...	Construction of staff quarters at Digha.	20,156	Completed	377 0 0
14	Do. ...	Provision of stand-post in Jamal Road, Patna.	820	Do. ...	588 2 0
15	Do. ...	Shifting of pipe line near Wheeler Senate House.	155	Do. ...	171 9 6
16	Do. ...	Installation of phase service connection at Digha head works - Patna-Bankipur Waterworks.	100	Do. ...	92 2 0
		Carried over ...	...	...	1,54,510 7 6

APPENDIX X—contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward	Rs. ...	...	Rs. a. p. 1,54,510 7 6
17	Patna ...	Providing 3" main in Kazipur Lane.	1,492	Completed	100 0 0
18	Do. ...	Replacement of sewage pump at Amlatola.	18,837	..	293 0 0
19	Do. ...	Pumping plant, Government House Septic Tank.	2,490	Completed	100 0 0
20	Do. ...	Extension of mains for 10 sets of quarters 3A and 7C for the Engineer, Telephone staff, at Amlatola.	1,710	Do. ...	1,160 6 0
21	Do. ...	Providing two stand-posts in the new market area, Patna.	318	Do. ...	272 10 0
22	Do. ...	Extension of 2" C. I. main for water connection to additional quarters south of old distributary 3 sets of quarters for Director of Public Instruction's office.	1,286	Do. ...	1,168 2 0
23	Do. ...	Extension of 2" C. I. Main for water connection to the proposed additional quarters for the staff of the Executive Engineer, Central Division.	620	Do. ...	432 10 10
		Carried over ...	...	...	1,58,037 4 4

APPENDIX X--contd.

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward	Rs. ...	...	Rs. a. p., 1,58,027 4 4
24	Patna ...	Repairs and maintenance to Patna-Bankipur water-works.	73,200	In progress	69,758 13 0
25	Do. ...	Repairs and maintenance sewage pumping plant.	21,234	Do. ...	18,151 8 5
26	Do. ...	Special repairs to approach road, Digha.	3,204	Completed	3,187 1 4
27	Puri ...	Sinking tube-wells for location of sites for permanent tube-wells and for location of zones of diffusion of fresh and salt water.	4,950	Do.	(-) 191 0 0
28	Do. ...	Puri water supply scheme.	11,84,500	In progress	49,452 0 0
29	Ranchi ...	Alteration of suction pipe from low lift pump at European Mental Hospital, Kanke.	77	Completed	9 0 0
30	Do. ...	Providing showers in the two infirmary wards and paying patient wards in European Mental Hospital, Kanke.	254	Do. ...	236 0 0
		Carried over ...	...	...	2,98,640 11 1

APPENDIX X—contd.

Serial no.	Name of district,	Name of scheme and locality.	Estimated amount.	Progress.	Expenditure during the year.
1	2	3	4	5	6
		Brought forward	Rs. ...	...	Rs. a. p. 2,98,640 11 1
31	Ranchi ...	Supplying and fixing an electrically-driven air compressor, waterworks, European Mental Hospital, Kanke.	1/4th of 4,200	Completed	332 0 0
32	Do. ...	Making the pump house watertight, Kanke European Mental Hospital.	186	In progress	101 0 0
33	Do. ...	Addition and alteration to the Charge-man's quarters occupied by the Charge man of Kanke European Mental Hospital.	148	Do. ...	98 0 0
34	Do. ...	Providing additional tap in the newly-constructed vats in the Lhobikhana, European Mental Hospital, Kanke.	30	Completed	22 0 0
35	Do. ...	Provision of meters for Kanke European Mental Hospital.	12,877	...	311 0 0
36	Do. ...	Repairs and maintenance to distribution system and sanitary fittings in European Mental Hospital, Kanke.	300	Completed	666 0 0
		Carried over ...	...	...	3,00,170 11 1

APPENDIX X—*concl'd.*

Serial no.	Name of district.	Name of scheme and locality.	Estimated amount,	Progress.	Expenditure during the year,
1	2	3	4	5	6
		Brought forward	Rs. ...	...	Rs. a. p. 3,00,170 11 1
37	Ranchi ...	Repairs and maintenance to water-works, European Mental Hospital, Kanke.	6,116	Completed	5,605 0 0
38	Do. ...	Repairs and maintenance to distribution system, European Mental Hospital.	242	Do. ...	133 0 0
39	Do. ...	Repairs and maintenance to meters in European Mental Hospital, Kanke.	191	Do. ...	106 0 0
40	Do. ...	Special repairs to Public Health Department staff quarters.	167	Do. ...	38 0 0
41	Do. ...	Repairs and maintenance to Public Health Department staff quarters.	42	Do. ...	37 0 0
42	Do. ...	Special repair to drivers' shed, European Mental Hospital, Kanke.	62	Do. ...	41 0 0
43	Saran ...	Water-supply to Sonapur Mela.	17,515	Do. ...	1,557 10 6
44	Shahabad...	Construction of 3' well with hand pump in Buxar municipality.	2,000	In progress	100 0 0
		Total ...	...	...	3,07,791 5 7

APPENDIX XI.

List of detailed schemes under preparation.

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of scheme.	Remarks.
1	2	3	4	5
			Rs.	
1	Ealasure ...	Growse Hospital, Balasore, tube-well	2,300	
2	Bhagalpur ...	Water-supply reorganization scheme	5,00,000	
3	Do. ...	Outfall drainage scheme for Colgong municipality.	1,100	
4	Champaran ...	Tube-well for Sub-Deputy Collector's residence, Beltiah.	1,300	
5	Cuttack ...	Estimate for one wash-hand basin with cold water arrangement in the new laboratory attached to the new Anaesthetic room, Cuttack General Hospital.	1,400	
(b)	Do. ...	Estimate for one-seated latrine and urinal in the same.		
(c)	Do. ...	Estimate for one wash-hand basin with paddle action soap closet and towel rack in the same.		
6	Do. ...	Estimate for proposed sanitary installation and water connection to the new extension of the operation theatre, Cuttack General Hospital.	1,200	
7	Do. ...	Cuttack Ravenshaw College surface drainage and sewerage scheme—Proposed water connection to the Sewage Pumps.	90	
8	Do. ...	Internal water-supply and sanitary installation to the Botanical laboratory attached to the Ravenshaw College, Cuttack.	155	
9	Do. ...	Estimate for sinking a 3" tube-well and providing with a hand pump for Jaipur municipality.	1,670	
		Carried over ...	5,09,215	

APPENDIX XI—contd.

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of scheme.	Remarks.
1	2	3	4	5
			Rs.	
		Brought forward ...	5,09,215	
9(a)	Cuttack ...	Tube-well at Baldeoji temple, Kendrapara.	2,230	
10	Do. ...	Cuttack Ravenshaw College—proposed gas and sanitary fittings in the Furnace room of the Chemistry Block for the proposed B.Sc. Honours class.	310	
11	Do. ...	Ravenshaw College—sanitary installation and sewerage scheme. 2nd supplementary.	13,700	
12	Do. ...	Installation of a 3" tube-well with hand pump for water-supply to the residence of the Munsif of Kendrapara.	930	
13	Darbhanga ...	Tube-well—Darbhanga Jail ...	2,450	
13(a)	Do. ...	Sanitary installation and drainage for the Medical Hospital extension, Laheriasarai.	13,500	
14	Do. ...	Improvement to well no. 27/5 attached to 12 clerks' quarters, Pusa.	1,200	
15	Do. ...	Tube-well for Roserah municipality	2,000	
16	Gaya ...	Independent water-supply to Gaya Jail Press.	10,000	
17	Hazaribagh ...	Water connection to the residence of the Superintendent of the Reformatory School, Hazaribagh.	2,150	
18	Do. ...	Diver sion of drains discharging into Mittra Tank at Hazaribagh.	870	
19	Manbhum ...	Shifting of the existing stand-post to a new position in the compound of the police-station at Jharia.	170	
		Carried over ...	5,58,725	

APPENDIX XI—contd.

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of scheme.	Remarks.
1	2	3	4	5
		Brought forward ...	Rs. 5,58,725	
20	Muzaffarpur ...	Tube-well for Lalganj municipality	2,000	
21	Do. ...	Muzaffarpur Greer Bhumihar Brahman College water tower.	4,800	
22	Do. ...	Encasing suction pipe of Kachisarai tube-well.	1,600	
23	Do. ...	Water-supply to circuit house, Muzaffarpur.	1,604	
24	Do. ...	Extension of main for water-supply to circuit house, Muzaffarpur.	1,674	
25	Do. ...	Revised estimate for drainage of Principal's residence, Greer Bhumihar Brahman College, Muzaffarpur.	1,200	
26	Do. ...	Drainage scheme for the staff quarters, Greer Bhumihar Brahman College, Muzaffarpur.	2,000	
27	Palamau ...	Daltonganj water-supply scheme—Future extension, 2nd part.	45,850	
28	Patna ...	Tube-well for Barh municipality ...	20,00	
29	Do. ...	Tube-well for Barh police-station ...	1,800	
30	Do. ...	Patna City water-supply ...	7,47,600	
31	Do. ...	Extension of water-supply in Kadankuan area.	29,500	
32	Do. ...	Patna Medical College—Providing coal storage room.	1,000	
33	Do. ...	Additional tube-well in Patna Administration Committee area.	32,000	
34	Do. ...	Two-seated latrine for menial staff of the High Court Judge, Patna.	800	
35	Do. ...	Drainage for the Professor's residence, University area.	3,000	
		Carried over ...	14,36,533	

APPENDIX XI—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of the scheme.	Remarks.
1	2	3	4	5
			Rs.	
		Brought forward ...	14,36,553	
36	Patna ...	Water-supply and sanitary installation to the new Art Block, B. N. College.	2,100	
37	Do. ...	Providing additional meters in the residential buildings at Patna General Hospital.	600	
38	Do. ...	B. N. R. Training College for women—drainage scheme.	5,000	
39	Do. ...	Kadamkuan Estate surface drainage.	9,600	
40	Do. ...	Diversion of sewer and water main for construction of Gymnasium, Patna Medical College.	1,200	
41	Do. ...	Improvement to Bakerganj Nulla, Patna.	33,800	
42	Do. ...	Water connection to the residence of the Professor of Pharmacology, Patna.	700	
43	Do. ...	Providing a covered bathing platform with 10 taps near the hostel of Madrasa Islamia Shamsul Huda, Patna.	1,800	
44	Do. ...	Spill water drains from standpost in Bankipur area.	1,500	
45	Do. ...	Construction of a cinder path to Veterinary College sewage pumping station.	165	
46	Do. ...	Bankipur new Police Hospital outfall drain.	800	
47	Do. ...	Water-supply and sanitary installation in the proposed Radium Institute, Patna.	10,000	
		Carried over ...	15,03,818	

APPENDIX XI—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of the scheme.	Remarks.
1	2	3	4	5
		Brought forward ...	Rs. 15,03,818	
48	Patna ...	Patna water-supply to the proposed "D" Type residence for the Deputy Postmaster-General.	800	
49	Do. ...	Sanitary installation to the Bayley Memorial Library.	2,150	
50	Do. ...	Providing orifice meters in the rising main at Amlatola.	3,530	
51	Do. ...	Providing a gate and a tap for Gulzarbagh press pumping station.	400	
52	Do. ...	Drainage and water-supply for the land acquired at Amlatola for the Secretariat and High Court clerks' quarters.	24,000	
53	Do. ...	Providing a down pipe and covered drain for the Criminal Investigation Department Photo Room, Patna Secretariat.	85	
54	Do. ...	Extension of main leading to holding no. 57A, 57B, Patna.	1,200	
55	Do. ...	Intercepting drain for Professors' quarters, Science College, Patna University.	4,516	
56	Do. ...	Lawn watering scheme for Science College, Patna.	11,410	
57	Do. ...	Patna New Capital Sewerage and special repair to two sets of sewage filters at Beur.	3,990	
58	Do. ...	Temporary arrangement for the drainage from wash basins in the office of the Registrar, Patna University and Senate House.	475	
59	Do. ...	Water-supply and sanitary installation to the new Arts Block, B. N. College, Patna.	1,900	
		Carried over ...	15,58,244	

APPENDIX XI—*contd.*

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of scheme.	Remarks.
1	2	3	4	5
			Re. a. p.	
		Brought forward ...	15,58,244	
59(a)	Patna	... Patna University—constructing a four-seated day urinal and converting three existing bathrooms into night urinal for Science College Hostel no. 2.	1,508	
59(b)	Do.	... Patna main drainage scheme ...	15,53,765	
60	Puri	... Puri Zila School drainage ...	13,100	
61	Purua	... Katihar drainage in Safganj Bazar	5,550	
62	Do.	... Tube-well for Forbeganj municipality.	2,000	
63	Do.	... Tube-well for Katihar municipality	2,000	
64	Do.	... Tube-well for Kissenganj municipality.	2,000	
65	Ranchi	... Itki Sanatorium—Extra water closet in the Superintendent's residence.	646	
66	Do.	... Modification of the scheme for the construction of office and godown at Kanke waterworks.	8,000	
67	Do.	... Kanke Indian Mental Hospital sewerage scheme—Disposal of effluent at outfall no. 3.	13,000	
68	Do.	... Water-supply, drainage and sanitary installation for additional accommodation at Indian Mental Hospital, Kanke.	13,280	
69	Saran	... Tube-wells for Chapra municipality	4,000	
70	Do.	... Water-supply to the residence of Babu Nirsu Narain Singh, Sonepur.	250	
71	Do.	... Fixing a double-mouthed standpost near Sub-Registry office, Sonepur.	150	
		Carried over ...	31,77,793	

APPENDIX XI—*contd.*

Serial no	Name of district.	Name of scheme and locality.	Probable cost of scheme, ₹	Remarks.
1	2	3	4	5
			Rs.	
		Brought forward ...	31,77,793	
72	Shahabad ...	Water connection to the residence of a Sub-Judge and a Munsif at Arrah.	977	
73	Do. ...	Tube-well for Jagdispur municipality	2,000	
74	Do. ...	Bhabua drainage scheme (Supplementary).	12,000	
		Total ...	31,92,770	

APPENDIX XII.

List of outline schemes under preparation.

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of scheme.	Remarks.
1	2	3	4	5
			Rs.	
1	Patna	Storm drainage scheme for Patna University area.	10,000	
2	Do.	Drainage for the residence on the east of Gardiner Road, Patna.	16,000	
3	Do.	Improvement to water-supply in the compound of Patna Museum.	16,000	
4	Do.	Sanitary installation, water-supply and sewerage for the proposed Radium Institute in the Medical College compound, Patna.	16,000	
5	Purnea	Kissenganj supplementary drainage scheme.	24,000	
6	Shahabad	Arrah drain flushing schemes and drainage improvement.	1,20,000	
7	Do.	Arrah water-supply improvement outline scheme.	2,24,570	
		Proposal A	2,24,570	
		Do. B	1,84,763	
		Do. C	2,03,000	
8	Do.	Improvement to the Central Nulla, Dumraon municipality.	15,000	
		Total	4,51,570	

APPENDIX XI.

List of schemes to be prepared.

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of the scheme.	Remarks.
1	2	3	4	5
			Rs.	
1	Bhagalpur ...	Bhagalpur Jail water-supply scheme.	25,000	
2	Champanan ...	Mctihari water-supply scheme ...	1,50,000	
3	Cuttack ...	Tube-well at Chandaneswar ...	5,000	
4	Do. ...	Cuttack town water-supply scheme	6,00,000	
5	Darbhanga ...	Providing an Abyssinian tube-well behind the Railway station quarters. Pusa.	500	
6	Manbhum ...	Dhanbad town water-supply (Rough Forecast).	2,00,000	
7	Do. ...	Dhanbad town drainage scheme (Urgent portion).	70,000	
8	Do. ...	Purulia Jail water supply ...	20,000	
9	Muzaffarpur ...	Additional taps in the post office compound, Muzaffarpur.	200	
10	Do. ...	Water-supply to the proposed hostel for Tirhut Technical Institute, Muzaffarpur.	500	
11	Patna ...	Water connection and drainage for 3 sets of Sub-Deputy Collectors' residences.	3,000	
12	Do. ...	Patna Science College--Lawn watering scheme.	20,000	
13	Do. ...	Khagaul drainage ...	...
14	Do. ...	Providing a hand pump in the well of Patna City school.	400	
		Carried over ...	10,94,600	

APPENDIX XIII—contd.

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of the scheme.	Remarks.
1	2	3	4	5
			Rs.	
		Brought forward ...	10,94,600	
15	Patna ...	Tube-well in Mainpura Town police-station.	1,400	
16	Do. ...	Water-supply to the old Hostel (B. N. College) being converted into Principal's residence.	500	
17	Do. ...	Water connection to double-storied hostel-Madrassa, Patna.	300	
18	Do. ...	Water connection to 5 sets of "C" type quarters for the assistants of Chief Secretary's office.	400	
19	Do. ...	Water connection to the office and residence of Lady School Medical Officer, Patna.	500	
20	Do. ...	Water connection to 2nd compounder's residence, Gardaniabagh Dispensary.	100	
21	Do. ...	Provision of additional taps in quarters no. B-2, Hardinge Road, Patna	30	
22	Do. ...	Water connection to 4 "C" type quarters for the assistants of the office of the Inspector-General of Prisons at Patna.	50	
23	Do. ...	Construction of a drinking trough near the junction of Bakerganj-Kalamkuan Road.	250	
24	Do. ...	Provision of a standpost for Gardaniabagh Thakurbari.	300	
25	Do. ...	Provision of inspection boxes on the rising main from High Court Sewage Pumping Station.	400	
		Carried over ...	10,98,710	

APPENDIX XIII—concl'd.

Serial no.	Name of district.	Name of scheme and locality.	Probable cost of the scheme.	Remarks.
1	2	3	4	5
			Rs.	
		Brought forward ..	10,98,710	
26	Purnea ...	Tube-well for Madanpura Mela ...	2,000	
27	Saran ...	Chapra flood protection scheme ...	20,000	
28	Do. ...	Chapra water-supply scheme ...	1,50,000	
29	Santal Parganas	Dunka town drainage scheme. ...	50,000	
30	Do. ...	Giridih drainage scheme ...	1,62,000	
31	Do. ...	Improvement to water-supply in the sub-jail, Rajmahal.	4,000	
32	Shahabad ...	Bhabua Municipal Market ...	8,000	
33	Do. ...	Buxar Jail Drainage—Supplementary estimate.	400	
34	Do. ...	Sasaram market extension ...	20,000	
		Total ...	14,55,110	

No. 7786-L.S.-G.

GOVERNMENT OF BIHAR AND ORISSA.
(MINISTRY OF LOCAL SELF-GOVERNMENT.)

R E S O L U T I O N .

Dated the 18th September 1931.

READ—

The annual report of the Public Health Engineering Department for 1930-31.

2. The expenditure on Government works decreased (in thousands of rupees) from 6,70 to 3,78. Expenditure on deposit works carried out on behalf of local bodies increased from 1,75 to 3,08. The total expenditure on works decreased from 8,45 to 6,86 and on works carried out under the supervision of the Department from 13,36 to 12,49.

3. The estimated cost of projects for which detailed schemes were prepared increased from 9,95 to 24,92 and the estimated cost of projects for which preliminary and outline schemes were prepared decreased from 19,81 to 13,39. There was an increase in the total estimated cost of schemes under preparation from 30,68 to 36,44 while the preparation of schemes estimated to cost 14,55 as compared with 31,91 in the previous year had to be kept pending for lack of staff. The establishment charges of the Department rose from 2,76 to 3,09 and the increase seems to be justified by the very large increase in the cost of schemes for which estimates were prepared. The fees earned by the Department for work done on behalf of local bodies amounted to 44 against 28 of the previous year.

4. The most important Government project carried out during the year was the water-supply project to the overflow jail at Phulwari costing Rs. 55,420. Other works of importance, though of lesser magnitude, were (1) completion of the two large diameter wells for water-supply to the Government House at

Ranchi, (2) provision of meters at the Indian Mental Hospital buildings at Kanke and water-supply and drainage for the additional buildings recently constructed at the same institution.

5. Of the works taken up on behalf of local bodies the most noteworthy is the project for water-supply at Puri which is of first-rate importance, from the public health point of view, not only to this province but to other provinces as well. Puri is a place whereto pilgrims from all parts of India resort throughout the year and in particular seasons in very large numbers. It is a danger spot from which cholera spreads and a source of supply of uncontaminated water is expected to go a long way in preventing spread of cholera. A detailed scheme amounting to Rs. 11,84,500 was completed and work was started on the construction of six nine-inch diameter tube-wells with the object of completing and testing them before the rains of 1931. Up to the end of March 1931 four tube-wells had been completed and two accepted by the Department after test. The scheme for the extension of the Patna-Bankipur water-supply to the eastern half of the Patna City municipality for which a grant of Rs. 6,14,000 was sanctioned by Government last year was under preparation. Another important scheme for which plans and estimates have been prepared and which is now under the consideration of Government is the drainage and sewerage scheme of the Patna City at an estimated cost of Rs. 15,53,765.

Electrically-driven pumping sets have been installed at Bhagalpur and Muzaffarpur in connection with the schemes for improvement of water-supply at those places. A grant of Rs. 60,000 was made by Government to the Daltonganj municipality during the year for the improvement of water-supply at the station.

The policy inaugurated by the Ministry last year for popularizing a cheap form of safe water-supply amongst smaller municipalities which cannot afford a pipe water system by making a grant of Rs. 2,000 to each for the construction of tube-wells with overhead tanks and taps was continued during the year under report and similar grants were made to 12 municipalities.

6. The Department continued to pay the same care and attention as in previous years to the inspection and supervision of municipal waterworks in the province. Sixteen Government pumping stations were maintained by the Department during the year.

7. Mr. Platt continued to hold charge of the Department throughout the year and the thanks of Government are due to him for the energetic and efficient way in which he carried out his duties. Government are also pleased to record their appreciation of the general satisfactory work of the Department during the year.

By order of the Government of Bihar and Orissa

(Ministry of Local Self-Government),

M. N. SEN,

Offg. Secretary to Government.