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HISTORIES
OF
RAILWAY PROJECTS,
INCLUDING TRAMWAYS,

CORRECTED UP TO 30TH JUNE 1906.

ISSUED BY THE
RAILWAY BOARD.



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Kosamba-Velachha-Zankavao-Vajipur (Bombay)	18	
Kotri-Karachi (Bombay)	33	See "Light railways in Sind."
Krishnagar-Jalangi (Bengal)	24	
Kuchaman-Sirsa chord (Rajputana and Punjab)	17	
Kumbakonam-Mannargudi (Madras)	45	
Kunch-Madhogarh (United Provinces) (<i>New project</i>)	30	
Kurla-Trombay (Bombay) (<i>New project</i>)	31	
Kurnool Road-Kurnool (Madras)	44	
Kutwa-Ahmadpur (Bengal)	28	

Names of projects.	Page.	Remarks.
L		
Lakh (or Belapur)-Sangamner (Bombay)	29	
Lalgola-Gheria (Bengal)	24	See "Gheria extension, Ranaghat-Godagari railway."
Larkhana-Kambar-Shahdadpur (Bombay)	38	
Lashio-Kunlong (Burma)	20	
Light railways in Sind (Bombay) (<i>New projects</i>)	33	
Lodhran-Mailsi (Punjab)	38	
Lower Sind branches (Bombay)	39	
M		
Mandra-Chakwal (Punjab)	39	
Mangaldai tramway (Eastern Bengal and Assam)	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Margao-Karwar (Bombay and Portuguese territory) (<i>New project</i>) ...	44	
Mauli-Nathdwara (Rajputana)	48	
Miraj-Bijapur (Bombay) (<i>New project</i>)	6	
Mirpur Buttora-Dhindee (Bombay) (<i>New project</i>)	33	} See "Light railways in Sind."
Mirpur Khas-Jhudo (Bombay) (<i>New project</i>)	33	
Mirpur Khas-Sangur (Bombay) (<i>New project</i>)	33	
Mirzapur-Maihar (United Provinces and Central India)	28	
Miyagam-Sinor (Bombay)	18	
Moulmein-Myawaddy (Burma) (<i>New project</i>)	20	
Moulmein-Ye (Burma) (<i>New project</i>)	21	
Multai-Chhindwara (Central Provinces)	31	See "North and South railway."
Munsar-Ramtek (Central Provinces)	11	See "Kampti-Deolapar railway."
Murshidabad-Azimganj (Bengal)	24	
Murtajapur-Pisgaon (Central Provinces)	31	
Muttra-Aligarh (United Provinces)	31	
Muzaffarpur-Mohammadpur (Bengal) (<i>New project</i>)	8	
Muzaffarpur-Sitamarhi (Bengal) (<i>New project</i>)	8	
Mymensingh-Netrokona-Bara-Ari (Eastern Bengal and Assam)	23	See "Dacca-Mymensingh railway extensions."
Mysore-Tellicherry (Mysore and Madras)	44	
N		
Nadiad-Kapadvanj (Bombay)	17	
Nagpur-Barosa (Central Provinces) (<i>New project</i>)	12	See "Nagpur-Chhindwara railway."

Names of projects.	Page.	Remarks.
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Nagpur-Chhindwara (Central Provinces) (<i>New project</i>)...	12	
Nagpur-Pandharna (Central Provinces)	31	See "North and South railway."
Nanjangud-Erode (Mysore and Madras)	45	
Nar-Nadiad loop (Bombay)	18	
Nattore-Rampur Boalia (Eastern Bengal and Assam)	24	
Netrokona-Langar Bazar (Eastern Bengal and Assam) (<i>New project</i>)	23	See "Dacca-Mymensingh railway extensions."
Naupada-Parlakimedi (Madras)	11	See "Ganjam District light railways."
Nawadah-Madhupur (or Baidyanath)-Nalhati (Bengal)	28	
Nerbudda Valley (Central India)	15	
Nidamangalam-Vedaraniem (Madras) (<i>New project</i>)	46	
North and South railway (Central Provinces and Hyderabad, Nizam's).	31	
Northern India and Ceylon connection	31	See "North and South railway."
P		
Paddapenki-Parvatipur (Madras)	11	See "Ganjam District light railways."
Palakodu-Bangalore (Madras and Mysore)	34	
Palghat (or Podanur)-Palni (Madras)	34	
Panchkura-Luff Point (Bengal)	12	
Pandharpur-Miraj (Bombay) (<i>New project</i>)	6	
Parlakimedi-Baruva (Madras)	11	See "Ganjam District light railways."
Pathankot-Baijnath (or Palampur) (Punjab)	38	See "Kangra Valley railway."
Pathar Kandi Bazar-Magura Cherra tramway (Eastern Bengal and Assam).	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Patiala-Jakhal (Punjab) (<i>New project</i>)	17	
Pegu-Syriam (Burma)	21	
Pertabganj-Birpur-Ghoraghat (Bengal)	8	
Phirangipuram-Gurzala (Madras)	44	
Phulbari-Sumjhia (Eastern Bengal and Assam)	24	
Pilibhit-Barmdeo (United Provinces)	42	
Pilibhit-Sitapur (United Provinces) (<i>New project</i>)	42	
Podanur (or Palghat)-Palni (Madras)	34	
Pokhrayan-Auriya (United Provinces)	32	
Prome-Magwe-Meiktila (Burma)	21	
Prome-Zadabin (Burma)	19	See "Assam-Burma Connection railway."
Puri-Astrang (Bengal)	12	
Pynmana-Magwe (Burma)	21	

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Raichur-Wondalli (Hyderabad, Nizam's)	32	
Raipur (or Sambalpur)-Khurda (Central Provinces and Bengal) ...	12	} See "Sambalpur (or Raipur)-Khurda railway."
Raipur-Sonpur (Central Provinces and Bengal)	13	
Rangamati ghat-Ghagrapara tramway (Eastern Bengal and Assam)	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Rangya-Tezpur (Eastern Bengal and Assam) (<i>New project</i>) ...	24	
Rawalpindi-Murree (Punjab)	39	
Rewah-Sutna (Central India)	28	
Rosa-Bakharpur (United Provinces)	41	See "Rosa-Sitapur railway."
Rosa-Sitapur (United Provinces)	41	
Rowsara-Khagaria (Bengal)	8	
S		
Saidpur-Titalia (Eastern Bengal and Assam)	24	
Salem-Attur (Madras)	34	
Salem-Porto Novo (Madras)	35	
Samastipur-Rowsara (Bengal)	8	
Samastipur-Rowsara-Padri (Bengal) (<i>New project</i>)	8	
Sambalpur (or Raipur)-Khurda (Central Provinces and Bengal) ...	12	
Santipur-Kalna (Bengal)	25	
Sara bridge (Eastern Bengal and Assam)	23	See "Ganges bridges at Sara and Godagari."
Sara-Sirajganj-Jagannathganj (Eastern Bengal and Assam) ...	25	
Sarai Kala-Abbottabad-Srinagar (North-West Frontier Province and Kashmir).	39	
Satara Road-Satara City (Bombay) (<i>New project</i>)	44	
Sealtick-Lala Bazar tramway (Eastern Bengal and Assam) ...	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Sendurzana-Amraoti (Central Provinces)	31	See "North and South railway."
Shadipalli-Mehoo Suboo (Bombay) (<i>New project</i>)	33	} See "Light Railways in Sind".
Shadipalli-Samara (Bombay) (<i>New project</i>)	33	
Shambhuganj-Gauripur (Eastern Bengal and Assam)	23	See "Dacca-Mymensingh railway extensions."
Shorkot Road-Chichoki (Punjab)	39	
Shibnibash-Kotchandpur-Magura (Bengal)	25	
Shwebo-Thabeitkyin (Burma)	21	
Silchar-Duarbund tramway (Eastern Bengal and Assam) ...	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Silchar-Tikalpur tramway (Eastern Bengal and Assam) ...	5	Ditto.

Names of projects.	Page.	Remarks.
<i>N—concl'd.</i>		
Nagpur-Chhindwara (Central Provinces) (<i>New project</i>)...	12	
Nagpur-Pandharna (Central Provinces)	31	See "North and South railway."
Nanjangud-Erode (Mysore and Madras)	46	
Nar-Nadiad loop (Bombay)	18	
Nattore-Rampur Boalia (Eastern Bengal and Assam)	24	
Netrokona-Langar Bazar (Eastern Bengal and Assam) (<i>New project</i>)	23	See "Dacca-Mymensingh railway extensions."
Naupada-Parlakimedi (Madras)	11	See "Ganjam District light railways."
Nawadah-Madhupur (or Baidyanath)-Nalhati (Bengal)	28	
Nerbudda Valley (Central India)	15	
Nidamangalam-Vedaraniem (Madras) (<i>New project</i>)	46	
North and South railway (Central Provinces and Hyderabad, Nizam's).	31	
Northern India and Ceylon connection	31	See "North and South railway."
P		
Paddapenki-Parvatipur (Madras)	11	See "Ganjam District light railways."
Palakodu-Bangalore (Madras and Mysore)	34	
Palghat (or Podanur)-Palni (Madras)	34	
Panchkura-Luff Point (Bengal)	12	
Pandharpur-Miraj (Bombay) (<i>New project</i>)	6	
Parlakimedi-Baruva (Madras)	11	See "Ganjam District light railways."
Pathankot-Baijnath (or Palampur) (Punjab)	38	See "Kangra Valley railway."
Pathar Kandi Bazar-Magura Cherra tramway (Eastern Bengal and Assam).	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Patiala-Jakhal (Punjab) (<i>New project</i>)	17	
Pegu-Syriam (Burma)	21	
Pertabganj-Birpur-Ghoraghat (Bengal)	8	
Phirangipuram-Gurzala (Madras)	44	
Phulbari-Sumjhia (Eastern Bengal and Assam)	24	
Pilibhit-Barmdeo (United Provinces)	42	
Pilibhit-Sitapur (United Provinces) (<i>New project</i>)	42	
Podanur (or Palghat)-Palni (Madras)	34	
Pokhrayan-Auriya (United Provinces)	32	
Prome-Magwe-Meiktila (Burma)	21	
Prome-Zadabin (Burma)	19	See "Assam-Burma Connection railway."
Puri-Astrang (Bengal)	12	
Pyinmana-Magwe (Burma)	21	

Names of projects.	Page.	Remarks.
R		
Raichur-Wondalli (Hyderabad, Nizam's)	32	
Raipur (or Sambalpur)-Khurda (Central Provinces and Bengal) ...	12	} See "Sambalpur (or Raipur)-Khurda railway."
Raipur-Sonpur (Central Provinces and Bengal)	13	
Rangamati ghat-Ghagrapara tramway (Eastern Bengal and Assam)	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Rangya-Tezpur (Eastern Bengal and Assam) (<i>New project</i>) ...	24	
Rawalpindi-Murree (Punjab)	39	
Rewah-Sutna (Central India)	28	
Rosa-Bakharpur (United Provinces)	41	See "Rosa-Sitapur railway."
Rosa-Sitapur (United Provinces)	41	
Rowsara-Khagaria (Bengal)	8	
S		
Saidpur-Titalia (Eastern Bengal and Assam)	24	
Salem-Attur (Madras)	34	
Salem-Porto Novo (Madras)	35	
Samastipur-Rowsara (Bengal)	8	
Samastipur-Rowsara-Padri (Bengal) (<i>New project</i>)	8	
Sambalpur (or Raipur)-Khurda (Central Provinces and Bengal) ...	12	
Santipur-Kalna (Bengal)	25	
Sara bridge (Eastern Bengal and Assam)	23	See "Ganges bridges at Sara and Godagari."
Sara-Sirajganj-Jagannathganj (Eastern Bengal and Assam) ...	25	
Sarai Kala-Abbottabad-Srinagar (North-West Frontier Province and Kashmir).	39	
Satara Road-Satara City (Bombay) (<i>New project</i>)	44	
Sealtick-Lala Bazar tramway (Eastern Bengal and Assam) ...	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Sendurzana-Amraoti (Central Provinces)	31	See "North and South railway."
Shadipalli-Mehoo Suboo (Bombay) (<i>New project</i>)	33	} See "Light Railways in Sind".
Shadipalli-Samara (Bombay) (<i>New project</i>)	33	
Shambhuganj-Gauripur (Eastern Bengal and Assam)	23	See "Dacca-Mymensingh railway extensions."
Shorkot Road-Chichoki (Punjab)	39	
Shibnibash-Kotchandpur-Magura (Bengal)	25	
Shwebo-Thabeitkyin (Burma)	21	
Silchar-Duarbund tramway (Eastern Bengal and Assam) ...	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Silchar-Tikalpur tramway (Eastern Bengal and Assam) ...	5	Ditto.

Names of projects.	Page.	Remarks.
<i>S—concl'd.</i>		
Singhani-Sheropre-Nalatabari (Eastern Bengal and Assam) ...	23	See "Dacca-Mymensingh railway extensions."
Singia-Madaripur-Chandpur (Bengal and Eastern Bengal and Assam),	26	
Sirajganj-Ullapara (Eastern Bengal and Assam)	26	
Sonaripur-Ramnagar Ghat (United Provinces)	42	
Sonepat-Saharanpur (Punjab and United Provinces)	28	
Songad-Palitana (Kathiawar, Bombay)	14	
Sointilla-Sonpur (Bengal)	13	
Southern Shan States (Burma)	21	
Sri Madhopur-Borawar (Rajputana)	17	
Sri Madhopur-Sikar (Rajputana)	17	
Srimangal-Manumukh tramway (Eastern Bengal and Assam) ...	5	See "Tramways in the Cachar, Sylhet and Darrang districts."
Sutang-Madna tramway (Eastern Bengal and Assam)	5	Ditto.
Sylhet tramways (Eastern Bengal and Assam)	5	Ditto.
T		
Talap-Saikwaghat extension (Eastern Bengal and Assam) (<i>New project</i>).	22	
Tando Muhammed Khan-Mirpur Buttora (Bombay)	39	See "Lower Sind branches."
Taragupet (Bangalore)-Chikballapur (Mysore)	43	
Taungup branch (Burma)	19	See "Assam-Burma connection railway."
Tinnevely-Tiruchendur (Madras)	46	
Tramways in the Cachar, Sylhet and Darrang districts (Eastern Bengal and Assam),	5	
Trichinopoly-Thondi (Madras)	46	
Trichinopoly-Tirukkoyilur (Madras)	46	
Tumsar Road-Katangi (Central Provinces) (<i>New project</i>)	13	
V		
Vadnagar (or Visnagar)-Vijapur (Bombay)	18	
Vaigai Valley (Madras)	47	
Virangam-Malia (Bombay)	15	
Visnagar (or Vadnagar)-Vijapur (Bombay)	18	
Vizianagram-Bimlipatam (Madras)	13	
Y		
Yerragudipad-Jammalamadugu (Madras)	35	
Z		
Zadabin-Zibingyi (Burma)	19	See "Assam-Burma connection railway."

NOTE.

In order to facilitate reference the projects have been grouped under the several railway systems, but this is not to be taken as an expression of opinion that any unallotted scheme is to be constructed by the administration which works the system.

2. Tramways have been included in the list of railway projects, but negotiations regarding them will be carried on through the Local Government of the locality in which they are situated.

(3. Lines in Native States can be constructed only with the approval of the rulers of the States, and all negotiations for their construction must be conducted through the Government of India.)

4. The terms on which offers will be considered by the Railway Board for the construction, by the agency of private companies, of branch lines forming feeders, whether to lines worked by the State or railways worked by companies, are outlined in Government of India resolution* No. 514 R. C., dated the 17th April 1896.

* Printed at the end of this report.

5. In the above resolution financial assistance is offered in one or other of the following alternative forms, but modifications of the rebate terms have been arranged in several cases :—

(a) *Guarantee*.—An absolute guarantee of interest at a rate *not exceeding* 3 per cent. per annum on the actual expenditure in the capital account of the branch railway company as entered in rupees in the company's books in India, with such share of the surplus net profits as may be agreed upon ; or

(b) *Rebate*.—Such a sum to be paid out of, but not exceeding, the net earnings obtained by the main line from traffic interchanged with the branch as will, together with the net earnings of the branch itself, suffice to give a dividend of 3½ per cent. per annum on the actual capital expenditure on the branch as entered in rupees in the company's books in India.

6. In the case of a concession given on an absolute guarantee, the total capital expenditure to be incurred on the line has to be included in the Government of India programme of railway construction, and not merely the amount of the guarantee for which Government are liable.

The programme is limited in amount, while the mileage of open lines, and consequently the share of the available total which must be reserved for open line expenditure, increases yearly.

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7. Statement A, which is appended to this note, shows the railways which have been finally sanctioned and brought under construction since the issue of the last edition of the Histories of Railway Projects.

STATEMENT A.

Statement of railways shown as under consideration in the Histories of Railway Projects for June 1905 which have since been finally sanctioned and brought under construction.

No.	Name of railway.	Name of promoters.	Agency for construction.	REMARKS.
1	Baran-Kotah branch ... (5' 6" gauge, 40 miles, cost Rs. 37,58,680.)	State ...	State ...	Will form an integral part of the Nagda-Mutra railway.
2	Bezawada-Masulipatam railway ... (3' 3½" gauge, 49.50 miles, cost* Rs. 27,89,406.)	Kistna District Board.	Southern Mahratta railway.	* Including land and rolling stock.
3	Cutch State railway ... Anjar to Bhuj. (2' 6" gauge, 25.38 miles, cost Rs. 6,14,500.)	Cutch Durbar ...	Cutch Durbar.	
4	East Daga Loop railway ... Neikban to Begayat. (3' 3½" gauge, 66.25 miles, cost Rs. 40,04,800.)	State ...	Burma railways.	
5	Dholpur-Bari railway ... (2' 6" gauge, 19.25 miles, cost Rs. 5,79,770.)	Dholpur Durbar ...	Dholpur Durbar.	
6	Hooghly-Kutwa branch ... (5' 6" gauge, 65.20 miles, cost Rs. 58,46,030.)	State ...	East Indian railway.	
7	Kalaura-Sylhet branch ... (3' 3½" gauge, 30.69 miles, cost Rs. 22,05,502.)	State ...	Assam-Bengal railway	Commencement of work sanctioned only on the section from Kalaura station to Khoosecara river, 16 miles.
8	Kutwa-Azimganj-Barharwa railway with two short ghat lines. (5' 6" gauge, 102.70 miles, cost Rs. 86,37,000).	State ...	East Indian railway.	
9	Lodhran-Khanewal railway ... (5' 6" gauge, 56.59 miles, cost Rs. 82,94,873).	State ...	State ...	Will be worked by the North-Western railway.
10	Manund Road-Bechraji with a branch from Chansama to Harij (3' 3½" gauge, 39 miles, cost Rs. 14,19,581).	Baroda Durbar ...	Bombay, Baroda and Central India railway.	
11	Mehsana-Kheralu railway ... Extension from Kheralu to Dabhora. (3' 3½" gauge, 7.73 miles, cost Rs. 3,27,410).	Baroda Durbar ...	Bombay, Baroda and Central India railway.	
12	Purnia-Banchi branch ... (2' 6" gauge, 72.28 miles, cost Rs. 39,82,918.)	State ...	Bengal-Nagpur railway.	
13	Visianagram-Raipur railway ... (5' 6" gauge, 310.62 miles, cost Rs. 2,50,42,336).	State ...	Bengal-Nagpur railway.	

ADEN RAILWAY.

ADEN RAILWAY.

The more recent proposals for railways in Aden and the adjacent British territory are:—

1. For the construction of a 2' 6" gauge line from Aden to Nobat Dakim *via* Lahej, 40 miles long, with the usual concessions of free land, etc.
2. For the construction of a railway from Aden to Sheikh Othman and D'thala. No concessions mentioned.

The Government of Bombay have been authorized to invite definite proposals from other applicants of good financial position who, in the past, had expressed a desire to open up railway communications with the Aden hinterland, and the reply of the Local Government is awaited.

**ASSAM-BENGAL RAILWAY
SYSTEM.**

BORJAN-SUNTAK STEAM TRAMWAY.

Proposals have been received from the Assam Company for the construction of a steam tramway from the coal-field of the Company at Borjan in the Naga Hills district to the terminus of the ballast siding of the Assam-Bengal railway at Suntak in the Sibsagar district.

The line has not been surveyed. It will be about 8 miles in length, of which about 6 miles will be on the metre gauge and the remaining 2 miles on the 2' gauge. It will not be used for public traffic.

The proposals are under consideration.

HAJIGANJ-SHATNAL BRANCH.

This branch was proposed in 1897 by the Assam-Bengal railway with a view to establishing communication between that line and the Eastern Bengal railway in conjunction with the Goalundo-Narayanganj extension of the latter railway and a wagon ferry between Shatnal and Narayanganj. It was surveyed and a project prepared by the Assam-Bengal railway in 1899. The length will be 24.39 miles, and the cost on the metre gauge, including the wagon ferry but excluding rolling stock, is estimated at Rs. 32,81,500.

TRAMWAYS IN THE CACHAR, SYLHET AND DARRANG DISTRICTS.

The following lines have been proposed in the interests of the tea industry and as feeders to the Assam-Bengal railway, and surveys more or less in detail have been made on behalf of the promoters in the years noted below. The estimated capital required is shown against each group, the figures being for tramways on the 2' 6" gauge :—

	Length.	Capital required.
	Miles.	Rs.
<i>Tramways in the Sylhet District.</i>		
(Reconnoitred in 1898.)		
SUTANG TO MADNA	30	11,54,407
SIRMANGAL TO MANUMUKH	22½	8,81,567
KALAUHA, <i>viâ</i> Sylhet, to CHHATAK	53	20,04,376
(Reconnoitred in 1897.)		
KARIMGANJ TO CHANDI KHIRA, with branch from PATHAR KANDI BAZAR TO MAGURA CHERRA	43	12,00,000
<i>Tramways in the Cachar District.</i>		
(Reconnoitred in 1897.)		
SEALTICK TO LALA BAZAR	24	14,75,405
SILCHAR TO DUARBUND	22	
SILCHAR TO TIKALPUR	14	
<i>Tramway in the Darrang District.</i>		
(Reconnoitred in 1896.)		
RANGAMATI GHAT TO GHAORAPARA (Mangaldai tramway)... ..	35	7,00,000

The concessions asked for by the promoters were generally (i) the free use of existing roads, (ii) use of Government land rent free, (iii) free use of timber for sleepers, bridges and buildings, and (iv) a direct guarantee of 3 per cent. The concessions (i), (ii) and (iii) present no difficulties, but the projects have fallen through owing to the inability of the Local Administration to offer the guarantee asked for under (iv).

The Kalaura-Sylhet line, which is now under construction, supersedes the Kalaura-Chhatak project.

BARSI LIGHT RAILWAY.

PANDHARPUR-MIRAJ AND MIRAJ-BIJAPUR EXTENSIONS.**NEW PROJECTS.**

The Agent, Barsi Light Railway Company, has submitted an application for sanction to survey and subsequently to construct, on the 2' 6" gauge, the following extensions of the Company's line:—

- (a) Pandharpur to Miraj on the Southern Mahratta railway, about 77 miles, with bridges over the Bhimā at Pandharpur and the Man, south of Sangola.
- (b) Miraj *viā* Athani to Bijapur, a length of about 77 miles, which will form a chord between the Poona and Bijapur branches of the Southern Mahratta railway.

The proposals, which are supported by the Government of Bombay, are under consideration.

**BENGAL AND NORTH-WESTERN
RAILWAY SYSTEM,
INCLUDING THE TIRHOOT STATE RAILWAY.**

ALLAHABAD-BENARES RAILWAY.

This line has been proposed by the Bengal and North-Western railway administration with a view to placing the metre gauge lines of the Doabs in direct and unbroken communication with the capital of the United Provinces and to afford direct communication between the head-quarters of the Benares and Allahabad Divisions and important localities not now served by any other line of railway. The line, which will be about 75 miles in length and on the metre gauge, is under survey by the Bengal and North-Western railway.

AZAMGARH-GOSHAINGANJ RAILWAY.

NEW PROJECT.

Sanction has been accorded to a survey of the above line being made by the Bengal and North-Western railway. It will connect the Oudh and Rohilkhand railway, Loop line, at Goshainganj and will be about 59 miles in length.

BACHHWARA (BEGUM SARAI)-ROWSARA BRANCH, TIRHOOT STATE RAILWAY.

This branch was proposed in 1895 as a feeder to the Tirhoot railway and to serve Rowsara, which is an important town. It has not been surveyed, but the cost of a line, 14 miles long, on the metre gauge, is assumed to be Rs. 5,50,000.

BANSDIH ROAD-MANEER GHAT BRANCH, BENGAL AND NORTH-WESTERN RAILWAY.

NEW PROJECT.

This branch has been proposed by the Bengal and North-Western railway as a feeder from the river Gogra to their main line.

The Railway Board have sanctioned a survey of the branch by the agency of the main line administration. It will be about 23 miles in length.

BHATNI-BETTIAH EXTENSION, BENGAL AND NORTH-WESTERN RAILWAY.

The Bhatni-Bettiah line, 50 miles in length, forms the last link in the group of metre gauge lines which, while connecting the Tirhoot and the Bengal and North-Western railway systems across the Gandak river, will serve the rice-growing districts in the north of Tirhoot. The survey was carried out in 1903 up to the east bank of the Gandak river, about 42 miles, and was then abandoned.

BURHWAL-SITAPUR RAILWAY.

A detailed survey of this line was carried out and a project prepared in 1904 by the Bengal and North-Western railway at the cost of Government. The line will be 59.8 miles in length and is estimated to cost Rs. 23,40,095 or Rs. 39,130 per mile on the metre gauge.

Proposals for its construction as an integral part of the Bengal and North-Western railway are under consideration.

CAPTAINGANJ-PADRAUNA BRANCH, BENGAL AND NORTH-WESTERN RAILWAY.

The Captainganj-Padrauna line will form a branch to the Gorakhpur-Bagaha extension and will be about 18 miles in length. It has not been surveyed.

CHUPRA-MASHRAK RAILWAY.

NEW PROJECT.

Sanction has been accorded to a survey of the above line being carried out by the agency of the Bengal and North-Western railway administration who proposed it. It will be about 21 miles in length.

- (1) DARBHANGA-KHAGARIA, (2) MUZAFFARPUR-MOHAMMADPUR, (3) MUZAFFARPUR-SITAMARHI AND (4) SAMASTIPUR-ROWSARA-PADRI EXTENSIONS, TIRHOOT STATE RAILWAY.

NEW PROJECTS.

The above lines, aggregating about 140 miles in length, have been proposed by the Bengal and North-Western railway administration in the interest of the Tirhoot State railway.

The first three will form chords between existing sections of the Tirhoot-railway, while the fourth will connect (1) the Darbhanga-Khagaria line with Samastipur and Rowsara.

The Railway Board have sanctioned surveys of the above lines by the agency of the Bengal and North-Western railway.

The first and fourth lines are alternative to the projects put forward by the District Boards of Darbhanga and Monghyr for a line from Samastipur *via* Rowsara to Khagaria (see below).

GOGRA BRIDGE AT CHAND-DEARA GHAT.

NEW PROJECT.

The Railway Board have accorded sanction to a survey and the preparation of plans and estimates for the above bridge being undertaken by the agency of the Bengal and North-Western railway.

The submission of the detailed project is awaited.

PERTABGANJ-BIRPUR-GHORAGHAT RAILWAY.

This line has been surveyed by the Bengal and North-Western railway on the metre gauge, but the results have not yet been received by the Railway Board. It will extend from Pertabganj on the Kosi extension *via* Birpur to Ghoraghat on the Kosi river, and will be about 15 miles in length, and has been proposed to take the place of the existing Pertabganj-Khanwa Ghat section, which will be abandoned.

ROWSARA-KHAGARIA LIGHT RAILWAY.

This line was proposed by the District Board of Monghyr in 1905. It will be about 44 miles in length and has apparently been reconnoitred by the District Engineer, who estimates the capital outlay on the project at Rs. 10 lakhs.

In conjunction with the Samastipur-Rowsara railway, proposed by the District Board of Darbhanga (see below), it will form a chord line to the Tirhoot State railway between Samastipur and Khagaria stations.

The District Board have since signified their intention of withdrawing their proposal in favour of the lines (see above) proposed by the Bengal and North-Western railway (a) from Darbhanga to Khagaria and (b) from Samastipur *via* Rowsara to some suitable point on (a), provided that the work is taken in hand within 3 years.

SAMASTIPUR-ROWSARA LIGHT RAILWAY.

Proposals were submitted in 1905 by the District Board of Darbhanga for the construction, through the agency of a company under the Bengal Tramways Act, III of 1883, of a light railway from Samastipur on the Tirhoot State railway to Rowsara, a length of 17½ miles. The line has not been surveyed. It is, however, estimated to cost Rs. 6½ lakhs.

This line is alternative to the one proposed by the Bengal and North-Western railway from Samastipur *via* Rowsara to some suitable point on the Darbhanga-Khagaria line also projected by the same railway administration (see above). The District Board of Darbhanga have since intimated that they are willing to withdraw their proposal in favour of the project put forward by the Bengal and North-Western railway if the line is undertaken within a reasonable time.

BENGAL DOOARS RAILWAY.

BAURA-MATABHANGAH-KONAGHAT EXTENSION.

This extension, which will be about 20 miles in length, is intended to serve the three important trade centres of Matabhangah, Falakhata and Dhubguri and develop their trade in jute.

A Survey of the line by the agency of the Bengal Dooars railway, who proposed it, was sanctioned by the Government of India in 1900, but the results have not yet been received.

**BENGAL-NAGPUR RAILWAY
SYSTEM,
INCLUDING THE NORTHERN PORTION OF
THE LATE EAST COAST RAILWAY.**

KURA (OR BISHENPUR)-CALCUTTA CHORD RAILWAY.

The principal object of this connection is to afford a route, alternative to that by the existing East Indian railway, from the United Provinces and Northern India to the port of Calcutta. It would connect the Midnapore-Jharia railway at Bishenpur, south-east of Bankura, with Calcutta, either over the existing bridge between Hooghly and Naihati or over a new bridge near Cossipore, or both.

The line was surveyed and a detailed project prepared by the Government of India in 1902. The length and cost of the line on the 5' 6" gauge are as follows :—

	Length.	Cost.	
		Double line.	Single line.
	Miles.	Rs.	Rs.
Section No. 1, Bishenpur to Bhandarhati... ..	53'13	1,07,13,210	73,82,410
„ No. 2, Bhandarhati to Hooghly	18'31	25,42,266	17,19,945
„ No. 3 „ to Howrah	27'87	39,97,915	26,92,427
Total <i>without</i> bridge	99'31	1,72,53,391	1,17,94,782

To the above has to be added the cost of a bridge over the Hooghly and approaches (double line), estimated at Rs. 72,57,856 for 5'92 miles, if constructed at Cossipore, or Rs. 54,46,956 for 5'19 miles, if constructed at Panihati.

BHOJUDIH-DALTONGANJ RAILWAY.

A survey was made by the Bengal-Nagpur railway in 1897-98 for a 5' 6" gauge line from Bhojudih to Ramgarh, a distance of 62'85 miles, estimated to cost Rs. 60,26,816.

The section from Ramgarh to Daltonganj forms part of a line surveyed in 1889-90 in connection with a general scheme for opening up the district and giving a shorter route between Benares and Cuttack. Its length would be, approximately, 108 miles and the cost was originally estimated at about Rs. 1 lakh per mile or, say, Rs. 108 lakhs. The length of the whole line from Bhojudih to Daltonganj would, therefore, be about 171 miles and it would cost about Rs. 168 lakhs.

BILASPUR-MUNGELI-MANDLA BRANCH.

NEW PROJECT.

Sanction has been accorded to a survey being made by the Bengal-Nagpur railway for a line on the 2' 6" gauge from some point on the Mandla branch of the Satpura railway, to Bilaspur *via* Mungeli, a length of about 170 miles. The projected line will shorten the distance between Nainpur, the centre of the Satpura system, and Calcutta by about 56 miles.

GANJAM DISTRICT LIGHT RAILWAYS.

Proposals were made in August 1899 for the construction, by a syndicate, of certain 2' 6" gauge light railways in the Ganjam district in connection with the railway, on the same gauge, constructed by the Raja of Parlakimedi between Parlakimedi town and Naupada station on the late East Coast Railway, which the syndicate proposed to take over from the Raja on terms to be arranged.

The total length of the system proposed to be constructed and worked by the syndicate will be about 245½ miles, and the capital required is estimated at Rs. 65,32,500.

The mileages of the proposed extensions and their cost are given as follows :—

Proposed extensions.	Length.	Cost.
	Miles.	Rs.
(i) CHICACOLE ROAD TO GUNIPUR	65	17,85,000
(ii) Ditto to CALINGAPATAM	24	6,00,000
iii) Ditto to PARVATIPUR	42	10,50,000
(iv) PARLAKIMEDI TO BARUVA ON THE late East Coast railway ...	35	8,75,000
(v) BERHAMPORE, ON THE late East Coast railway, TO RUSSELKONDA	47	14,10,000
(vi) BERHAMPORE TO GOPALPUR	8	2,00,000
(vii) NAUPADA TO PARLAKIMEDI	24½	6,12,500
Total ...	245½	65,32,500

The survey of the Berhampore-Russelkonda branch was carried out by the late East Coast railway in 1899, the line having been located so as to utilise the existing road bridges over the Godahada and Rushikulya rivers. On the 2' 6" gauge the line, which will be 49.08 miles in length, is estimated to cost Rs. 14,90,711.

The same syndicate also suggested a light railway from the Dusi bridge on the north-east section of the Madras Railway to Salur, *via* Bobbili, with a branch from Paddapenki to Parvatipur, but its execution depends on the completion of successful negotiations for the Berhampore-Russelkonda branch.

GURUMAISHINI-SINI RAILWAY.

This line has been projected in connection with Messrs. Tata and Sons' scheme for iron and steel works near Sini.

A survey is being carried out by the Bengal-Nagpur railway for a line on the 2' 6" gauge, 52 miles in length, from the Gurumaishini hill in the Mourbhanj State *via* Chaibassa to a point on the Bengal-Nagpur railway between Chakardharpore and Sini, together with a reconnaissance of a line of about 35 miles from the hill to a point on that railway between Nursinghur and Chakulia stations. The results of the survey are awaited. Meanwhile, the Secretary of State has sanctioned the project as a line on the 2' 6" gauge.

Messrs. Tata and Sons have since represented that the line should be constructed on the 5' 6", instead of on the 2' 6", gauge. The question is under consideration.

KAMPTEE-DEOLAPAR RAILWAY.

A firm applied in 1903, through the Chief Commissioner, Central Provinces, for permission to construct a light railway, on the 2' or 2' 6" gauge, from the north bank of the Kanhan river at Kamptee to Deolapar with a branch from Munsar to Ramtek. The line, which will be about 34½ miles in length, is designed to carry the produce of the manganese mines in the Ramtek area and is proposed to be laid along such portion of the public road as would be practicable without interfering with the road-borne traffic. It has not been surveyed.

KAMPTEE-RAMTEK RAILWAY.

NEW PROJECT.

This line has been proposed with a view to serving the manganese deposits in the Central Provinces.

It will probably take off from the main line of the Bengal-Nagpur railway just east of the Kanhan river, near Kamptee, and, with necessary sidings, will be about 20 miles in length, and on the 5' 6" gauge.

The Railway Board have sanctioned a survey of the line by the agency of the Bengal-Nagpur railway, and the results are awaited.

NAGPUR-CHHINDWARA RAILWAY.

NEW PROJECT.

The construction of this line on the 2' 6" gauge is urged by the Chief Commissioner of the Central Provinces in order to develop trade in manganese ore and to enable Nagpur to obtain cheap coal for its mills, etc., from the Pench Valley deposits. The Local Administration gives this line preference over the Kamptee-Seoni project on the 2' 6" gauge for which provision has been made in the programme of railway construction for the triennial period 1906-09.

The Bengal-Nagpur railway have submitted a detailed project, which is based on the surveys carried out by the Great Indian Peninsula railway administration on the 5' 6" gauge, for a 2' 6" gauge railway from Nagpur to Barosa as forming part of the Nagpur-Chhindwara line. The report and estimates, which amount to Rs. 23,34,145 for 47.04 miles, are under consideration.

Further surveys will probably be required before deciding on the alignment to be adopted for the line to Chhindwara.

PANCHKURA-LUFF POINT RAILWAY.

Proposals were made by the Bengal-Nagpur Railway Company in 1900 to establish an export coal depôt at Luff Point connected by a line with their railway at Panchkura station, a distance of about 25 miles.

The Commission which was appointed in 1903 to investigate the question came to the following conclusions:—

- (a) A coal depôt at Luff Point would be of little use to the industry as a whole and it is not desirable to establish one there at present.
- (b) It would be practicable to establish a coal depôt, if required, but it would probably be costly.
- (c) If established, it should be in the hands of the Port Commissioners of Calcutta.

The Government of Bengal expressed the opinion, with which the Government of India agreed, that the control of a rival port in the Hooghly should not be permitted to fall into the hands of private individuals. If, therefore, any private firm or company desires the establishment of a coal depôt or jetties at Luff Point or in its neighbourhood, the Government of India consider that the Port Trust of Calcutta should first be given the opportunity of constructing such depôts or jetties. In the event of the Port Commissioners declining to undertake the work, the Government of India will be prepared to consider definite proposals from any substantial private firm or company for undertaking at their own risk and responsibility the entire scheme, including the connecting link between Panchkura station on the Bengal-Nagpur railway and Luff Point.

PURI-ASTRANG BRANCH.

This branch has not been surveyed and no reliable estimates of cost or probable traffic are available.

Its length would be about 34 miles, and it is estimated to cost Rs. 27,20,000 on the 5' 6" gauge. It is stated that, if aligned parallel to the sea shore and about 6 or 8 miles away, it would pass through thickly-populated tracts and have a certain protective value in famine times.

SAMBALPUR (OR RAIPUR)-KHURDA RAILWAY.

The Sambalpur-Khurda line was surveyed by the Bengal-Nagpur railway in 1892. It would be 190 miles in length and is estimated to cost Rs. 2,37,00,000 on the 5' 6" gauge.

The alternative line from Raipur to Sonpur on the Sambalpur-Khurda alignment was reconnoitred by the same railway in 1894. The length from Raipur to Sonpur would be 160 miles, as compared with 54½ miles from Sambalpur to Sonpur.

The Sambalpur line would be of value in opening up the Tributary States in the event of famine, and in accommodating pilgrim traffic, and would also have a protective value for the States of Garjhat, Boad, Daspalla and Khandpara and for the British parts of the Puri District.

The Government of Bengal has recently urged the early construction of the Sambalpur-Khurda line by the State on administrative and political grounds.

SOINTILLA-SONPUR BRANCH, VIZIANAGRAM-RAIPUR RAILWAY.

This branch was surveyed by the Government of India in 1898 to connect at Sonpur with the line surveyed by the Bengal-Nagpur railway from Sambalpur *via* Sonpur, to Khurda station on the late East Coast railway. It will be 48.24 miles in length and is estimated to cost on the 5' 6" gauge Rs. 30,62,444, or Rs. 63,483 per mile, including rolling-stock.

TUMSAR ROAD-KATANGI RAILWAY.

NEW PROJECT.

Sanction has been accorded to a survey of this line being carried out by the agency of the Bengal-Nagpur railway. It will be on the 2' 6" gauge and about 50 miles in length, inclusive of necessary sidings, and has been projected for the purpose of serving the manganese deposits in the Central Provinces.

The results of the survey are awaited.

VIZIANAGRAM-BIMLIPATAM BRANCH.

This branch has not been surveyed. It would be 15 miles in length and would cost approximately Rs. 9,39,000 on the 5' 6" gauge.

A Madras firm has recently urged its construction by the State in the interests of traffic in manganese ore, but the Madras Government do not support the scheme.

**BHAVNAGAR-GONDAL-JUNAGAD-
PORBANDAR RAILWAY SYSTEM.**

DHOLKA-DHANDHUKA-RANPUR EXTENSION.

Proposals were received in 1904 from the Government of Bombay for an extension, to be constructed by the Ahmedabad-Dholka Railway Company, of their line to Dhandhuka, a distance of about 41½ miles, and for the construction, by an independent local company, of a steam tramway from Ranpur station on the Bhavnagar-Gondal-Junagad-Porbandar railway to Dhandhuka. The Bhavnagar State consider they have a prior right over any outside agency to construct the extension and are ready to undertake the portion from Ranpur to Dhandhuka at once, extending afterwards to Dholka.

The proposed new chord will shorten the existing distance between Ahmedabad and Ranpur by some 20 miles.

A reconnaissance survey of the length from Ranpur to Dhandhuka, 16½ miles, was carried out by the Bhavnagar-Gondal-Junagad-Porbandar railway authorities in 1903. The alignment and gradients on this length are said to be easy and a fair traffic is expected especially in passengers and cotton. The cost is estimated to be about Rs. 4,62,000 or Rs. 28,000 a mile, which will be reduced if the existing road is used.

The Railway Board have sanctioned a survey of the Dholka-Dhandhuka line on the metre gauge by the agency of the Bombay, Baroda and Central India railway, and the results are awaited.

The question of construction of the proposed extension is still under consideration.

JAMNAGAR-SALAYA EXTENSION OF THE RAJKOT-JAMNAGAR RAILWAY.

The earthwork for a line on the metre gauge from Jamnagar to Salaya Port, 35 miles, was sanctioned in 1900 as a famine relief work, but the work was not actually undertaken.

The project would probably be undertaken at the expense of the Durbar.

KHIJADIA-AMRELI RAILWAY.

NEW PROJECT.

This line, which will pass for the most part through the territory of His Highness the Gaekwar, has been proposed by the Baroda Durbar with a view to undertaking earthwork as a measure of famine relief. The Durbar contemplate extending it to Chhallala and thence, *via* Khamba, to the Velan bunder.

The line will be about 10½ miles in length, on the metre gauge, and, when constructed, will probably be worked by the Bhavnagar-Gondal-Junagad-Porbandar railway with which it will connect at Khijadia. The Amreli-Machiala section, about 6 miles in length, has been surveyed by the Durbar.

SONGAD-PALITANA BRANCH RAILWAY.

At the instance of the Palitana Durbar a project was prepared in 1887 for the construction of a metre gauge railway from Sihor station, 12½ miles west of Bhavnagar, to Palitana, a distance of 17 miles. For want of the necessary funds, estimated at Rs. 5,20,791, excluding the provision of rolling-stock, the project has remained in abeyance.

The line would be a great convenience to the large number of pilgrims who twice a year flock to the sacred shrines of Palitana. It would also form part of the direct route to the port of Shia Bet on the south coast of Kathiawar. It would probably be constructed at the expense of the Durbar.

**BOMBAY, BARODA AND CENTRAL
INDIA RAILWAY SYSTEM.**

AGRA-HATHRAS RAILWAY.

NEW PROJECT.

Sanction has been accorded to the survey by the Bombay, Baroda and Central India Railway Company of a metre gauge railway from Agra to Hathras, a distance of about 29 miles.

The results of the survey are awaited.

BARAN-AJMER-MARWAR RAILWAY, WITH JEHAZPUR-NASIR- ABAD AND JEHAZPUR-PAONDERO EXTENSIONS.

Two lines were surveyed in 1898-99— one from Baran, on the Goona-Baran railway, to Nasirabad, on the Rajputana-Malwa railway; the second from Baran to Marwar junction, on the Rajputana-Malwa and Jodhpur-Bikaner railways, the portion common to both being from Baran to Jehazpur, about 93 miles.

The line from Baran to Nasirabad will be 153.29 miles long and has been estimated to cost approximately on the metre gauge Rs. 96,11,662, or Rs. 62,703 per mile. The principal difficulty of this line was the crossing of the three large rivers, the Kali Sind, the Chambal, and the Banas, which raised the cost of an otherwise easy line with a maximum grade of 1 in 150.

The line from Baran to Marwar, the alignment of which is identical with that of the Baran-Nasirabad project up to Jehazpur, will be 213.39 miles long, and is estimated to cost on the metre gauge approximately Rs. 1,36,66,806, or Rs. 64,046 per mile. In addition to the bridging of the three large rivers above mentioned, a very heavy ghât is encountered on the Arravalli range of hills, 20 miles from Marwar junction. This ghât extends for 12.68 miles and the easiest grade obtainable is 1 in 55 with curves of 10°.

During the season 1899-1900 a re-survey of the Pipli ghât was carried out on a grade of 1 in 40 with 10° curves. This has reduced the length of the ghât by 3 miles. But the estimated cost is Rs. 25,87,810, compared with Rs. 20,91,946 by the other route, owing to more tunnelling being necessary.

A survey from Jehazpur to Suroli or Darudera, on the Jaipur-Siwai-Madhupur railway, was also put in hand in 1899 for the purposes of famine work, the earthwork being started as soon as the field work was completed. Work, however, was only done in 9 miles of Tonk, and in 3 of Jaipur, territory. The line has been taken from Jehazpur direct to Tonk city and on to the junction at Paondero on the Jaipur railway. The length will be 70.85 miles and the estimated cost on the metre gauge Rs. 31,62,877, or Rs. 44,642 per mile.

The Baran-Kotah section, a length of about 40 miles, has been sanctioned for construction on the 5' 6" gauge as a branch of Nagda-Muttra railway, owing to the latter line having been realigned to pass through Kotah.

BARWAHA-BODELI (NERBUDDA VALLEY) LIGHT RAILWAY.

Proposals were received in 1904 for the construction, on the 2' 6" gauge, of the above-line from Barwaha station on the Rajputana-Malwa railway through the territories of the States of Baroda, Chota Udaipur, Ali Rajpur, Gwalior, Indore and Dhor to Bodeli on the Gaekwar's Dabhoi railway, to develop the Nerbudda Valley and as a measure of protection against famine. The line would be 163 miles in length, of which about 77 miles will run along the right bank of the Nerbudda river. On the data available the capital cost is estimated at Rs. 52,48,600, on which a return of 3.89 per cent. per annum is anticipated without river competition, otherwise a return of 2.06 per cent. only. The line would probably be constructed at the cost of the interested Durbars.

The Railway Board have sanctioned a survey of the above line on the 2' 6" gauge, with an alternative to Nandod the terminus of the Rajpipla railway, by the agency of the Bombay, Baroda and Central India railway. The results of the survey are awaited.

BOMBAY-SIND CONNECTION RAILWAY.

The project as proposed is for a line from Viramgam, on the Bombay, Baroda and Central India railway, *viâ* Malia, Bhuj and Lakhpat in Cutch, to Badin in Sind.

The line was first surveyed in 1878, and the more difficult portion between Bhuj and Mughal-Bhin, *viâ* Lakhpat, was re-surveyed in 1897-98.

A detailed project on the 5' 6" gauge has been prepared for the first section from Viramgam to Malia, 83.41 miles. The commencement of work has not, however, been authorized pending the results of the reconnaissance, which has lately been sanctioned, of the country between Viramgam and Badin by alternative routes to the north and south of the Runn of Cutch.

The length and cost (exclusive of rolling-stock) of the remaining sections are estimated as follows:—

	Miles.	Cost. Rs.	Cost per mile. Rs.
MALIA TO BHUJ	74	59,20,000	80,000
BHUJ TO LAKHPAT	84	64,00,000	76,200
LAKHPAT TO BADIN	54	35,10,000	65,000

The completion of the 5' 6" gauge line between Viramgam and Badin is considered of the very highest importance to link up Bombay and Sind.

DEESA-THARAD RAILWAY, WITH DIODAR-RADHANPUR AND ABASANA-SUIGAM BRANCHES.

This railway will be a feeder to, and an extension of, the existing Palanpur-Deesa railway.

A detailed survey was carried out in 1900 under the orders of the Local Government. The Deesa-Tharad line, including the branch to Radhanpur, will be 84·84 miles in length and is estimated to cost Rs. 22,71,957 on the metre gauge. Earthwork and the collection of ballast were begun in 1900 as famine relief work.

With a view to providing for further famine relief work, the Government of Bombay in 1903 proposed a short branch, about 16 miles in length, to connect Abasana (a station proposed on the Deesa-Tharad section of this project) with Suigam. It was surveyed, but no report or detailed estimates have been received.

IDAR ROAD-BRAHMA KHED EXTENSION, AHMEDABAD-PARANTIJ RAILWAY.

NEW PROJECT.

The Agents of the Ahmedabad-Parantij Railway Company have submitted proposals for extending the Company's line from Idar Road to Brahma Khed, a length of 32 miles. The proposals are under consideration; meanwhile sanction has been accorded to the carrying out of a survey of the proposed extension by the agency of the Bombay, Baroda and Central India railway.

JAKHAL-HANSI RAILWAY.

This line, which will connect the Southern Punjab railway at Jakhal and the Rajputana-Malwa railway at Hansi, was surveyed by the Bombay, Baroda and Central India railway during 1904-05 and a detailed project prepared. It will be 50·57 miles in length and is estimated to cost Rs. 20,45,764 on the metre gauge.

This project may, however, be superseded by a line (see page 17) projected by the Durbars interested from Patiala to Jakhal, and thence *via* Hissar to Narnaul on the Rewari-Phulera chord line.

JALESAR ROAD-KASGANJ TRAMWAY.

NEW PROJECT.

The Raja of Awa has applied to the Government of the United Provinces for a concession to utilise the existing road, and the canal and road bridges, for the purpose of constructing, on the 2' 6" gauge, a steam tramway from Jalesar Road on the East Indian railway, *via* Awa and Etah, to Kasganj on the Bombay, Baroda and Central India railway, a length of about 50 miles. The line has apparently not been surveyed.

KARAULI BRANCH, NAGDA-MUTTRA RAILWAY.

NEW PROJECT.

The construction of this branch has been urged by the Karauli Durbar with a view to undertaking earthwork as a measure of a famine relief. It will connect Karauli with the Nagda-Muttra railway at Gungapur and will be about 25 miles in length. It has not been surveyed.

KUCHAMAN-SIRSA CHORD.

This line, which has not been surveyed, would be about 170 miles in length and cost on the metre gauge about Rs. 58,31,000, or Rs. 34,300 per mile, without rolling-stock.

It would form a chord between Sirsa on the north and Kuchaman Road on the south both on the Rajputana-Malwa railway.

It will probably be superseded by the Hissar-Borawar (or Degana) railway which has been projected by the Jodhpur and Bikaner Durbars (see page 33).

NADIAD-KAPADVANJ BRANCH.

This branch, which has been put forward as a profitable feeder to the Bombay, Baroda and Central India railway, will be about 28 miles long, and is assumed to cost Rs. 8,73,360 on the standard (5' 6") gauge.

The District Board of Kaira have under contemplation the question of financing this line with the help of a loan obtained through the Local Government.

PATIALA-JAKHAL RAILWAY.

NEW PROJECT.

This line has been proposed by the Patiala Durbar. It will form a chord between the Rajpura-Bhatinda and the Southern Punjab railways and will be about 50 miles in length. Sanction has been accorded to a survey of the line being made by the North Western railway at the cost of the Durbar and to the preparation of alternative projects on the metre and 5' 6" gauges.

Proposals for an extension of this line *via* Hissar, Loharu, and Kanaud to Narnaul on the Rewari-Phulera chord railway are under consideration. The extension will be about 131 miles in length and has been proposed by the Durbars interested. It has not been surveyed.

SRI MADHOPUR-BORAWAR CHORD, REWARI-PHULERA RAILWAY.

The Sri Madhopur-Borawar chord has been suggested in order to reduce the through metre gauge mileage between Delhi and Karachi.

SRI MADHOPUR-SIKAR BRANCH, REWARI-PHULERA RAILWAY.

The Sri Madhopur-Sikar branch, which will connect Sikar with the Rewari-Phulera chord railway, has been surveyed. It will be 30.68 miles in length and is estimated to cost Rs. 8,69,413.

Baroda Durbar's projects.

(1) BAHADARPUR (GARDA)-SONGHIR EXTENSION, DABHOI RAILWAY.

This line will lie within the territory of the Baroda State, and will be constructed by the Durbar when considered advisable. The length to Heran river is 8 miles and it is estimated to cost Rs. 5.84 lakhs on the 2' 6" gauge.

(2) BARODA-SAVLI RAILWAY.

This project of 32 miles on the 2' 6" gauge will be eventually constructed by the Baroda Durbar as part of the Dabhoi system.

(3) BROACH-JAMBUSAR-MASOR ROAD (KANJAT) BRANCH.

In 1903 the construction of a branch on the 2' 6" gauge, about 31 miles in length, from the Broach station of the Bombay, Baroda and Central India railway, to Jambusar, was under the consideration of the Baroda Durbar, who offered to construct the line and to connect it, *via* Kanjat, with His Highness the Gaekwar's Vishvamitri railway. The project, however, has since been abandoned by the Durbar.

(4) KOSAMBA-VELACHHA-ZANKAVAO-VAJIPUR BRANCH.

This branch, which lies entirely in Baroda territory and will be constructed on the 2' 6" gauge at the expense of His Highness the Gaekwar, will join the Bombay, Baroda and Central India railway at Kosamba station and extend to Vajipur on the right bank of the Tapti river.

The Kosamba-Zankavao section, 26.43 miles in length, was surveyed by the Bombay, Baroda and Central India railway in 1900, and the Zankavao-Vajipur section, 37.12 miles, in 1903, but no detailed project has yet been submitted.

(5) MIYAGAM-SINOR BRANCH.

This branch, which will lie within the territory of His Highness the Gaekwar of Baroda, will be about 20 miles long and is estimated to cost Rs. 5,76,032 on the 2' 6" gauge.

It will run from Miyagam, a station on the Bombay, Baroda and Central India railway, to Sinor, a town on the banks of the Nerbudda in the Baroda division.

(6) NAR-NADIAD LOOP RAILWAY.

Surveys have been made of the length from Petlad to Dewa Talpad, of the Dewa Talpad-Nadiad section and of the length between Sojitra and Nar, a station on the Petlad-Cambay extension, at the request of the Baroda Durbar.

The line, 20.25 miles, from Nar to Nadiad on the 5' 6" gauge is estimated to cost Rs. 11,56,713, exclusive of rolling-stock. The Baroda Durbar has since expressed a desire to construct the line on the 2' 6" gauge instead of on the 5' 6" gauge, and had the Nar-Piej section, 17 miles, surveyed in 1905 on the 2' 6" gauge by the agency of the Bombay, Baroda and Central India Railway.

Some earthwork within the Durbar's territory has been executed by famine relief labour.

(7) VISNAGAR (OR VADNAGAR)-VIJAPUR EXTENSION, MEHSANA RAILWAY.

This line, whether from Visnagar or, as an alternative, from Vadnagar to Vijapur, lies entirely within Baroda territory and will be constructed at the expense of His Highness the Gaekwar of Baroda. The line from Visnagar to Vijapur will be 16 miles in length and is estimated to cost Rs. 5,34,280 on the metre gauge. The Vadnagar-Vijapur alternative (16.92 miles) was surveyed in 1904 by the Bombay, Baroda and Central India railway on the metre gauge, but the Baroda Durbar has since had it resurveyed on a different alignment.

Earthwork for famine relief purposes was sanctioned in 1904.

BURMA RAILWAYS SYSTEM.

ASSAM-BURMA CONNECTION RAILWAY.

During the year 1892-93 orders were issued for the examination of a route from Chittagong, along the Arakan Coast and over the Aeng Pass into Burma, with a view to connect in this way the Assam-Bengal railway, then under construction, with the system of railways in Burma. A reconnaissance of the route was made during the cold weather of 1892-93. The report submitted was a favourable one and was followed by the issue of orders for a detailed survey. Work on this survey was begun during the following working season, and it was found that the difficulty of taking a railway over the Aeng Pass had been under-estimated and that a line by this route would prove to be an exceedingly costly one.

There are strong military objections to a line which would follow this route, and it was, therefore, considered desirable, if a connection was to be made between the Assam and Burma systems of railways, that some other route should be discovered which, while satisfying the requirements of the Military Department, would, if possible, be less costly than the Aeng Pass route proved to be.

There were only two routes which gave any prospect of satisfying these conditions. The first, leaving the Assam-Bengal railway in the neighbourhood of Lumding, passed by way of Manipur into the Kubaw valley at Tammu, and, crossing the Chindwin near Yuwo, joined the Mu Valley railway in the neighbourhood of Wuntho; this was known as the Manipur route. The second started from the neighbourhood of Makum, in the north-east corner of Assam, and, crossing the Patkai range, entered Burma by way of the Hukong valley, connecting with the Burma railways system at Mogaung. This was known as the Hukong valley route.

Briefly summarized the results brought out by the reconnaissances are as follows :—

- (1) the Chittagong-Akyab-Minhla connection, or Aeng Pass route, would cost about Rs. 7 crores for a total distance of about 450 miles ;
- (2) the connection by the Manipur route would cost about Rs. 6½ crores for a length of 385 miles;
- (3) the connection by the Hukong valley route would cost about Rs. 3·83 crores for a total distance of 284 miles.

The last route was reported to be the most feasible, and it was stated that it would run for about 150 miles through an open country capable of cultivation, whilst the other two routes are almost entirely through hilly country.

The results of the several surveys were furnished to the Secretary of State for India in 1896, and the Government of India then recorded the opinion that they were unable to support the immediate construction of any of the lines for the following reasons :—

- (a) that, in the then state of the country, there was no prospect of any of the lines being commercially successful ;
- (b) that, politically, it was not considered that railway connection between India and Burma was a matter of any urgency ;
- (c) that, for military purposes, it was considered, after consulting the military authorities who preferred the route through Manipur, there was no immediate necessity for the connection.

The Government of Burma has since proposed a still more southerly route than that to Minhla by the Aeng Pass. For this last alternative the Local Government during 1903-05 carried out from Provincial funds a detailed survey for a line from Prome to Taungup, and a reconnaissance from Zadabin (whence the line to Taungup branches off) to Zibingyi, from which point Akyab can be reached by a launch journey of 31 miles. The results are as follows :—

Section.	Length.		Estimated cost.	
	...	Miles.	...	Rs.
Prome to Zadabin	...	109½	...	2,48,89,800
Branch Zadabin to Taungup	...	4	...	2,72,500
Zadabin to Zibingyi	...	170	...	1,87,00,000

The Local Government now recommends the carrying out from Imperial funds of the detailed survey of a line from Zadabin to Chittagong, including a branch to Akyab, with a view to establishing through connection between Burma and Assam, the length between Chittagong and Akyab being first taken in hand.

Meanwhile, the Arakan Company, Limited, are negotiating with the Government of Burma for the construction by that Company of a metre gauge line to connect Buthidaung with Maungdaw, a distance of 17.25 miles, with the possibility of its ultimate absorption in the Prome Zadabin-Chittagong scheme.

Both proposals are under consideration.

BHAMO-MOMEIN (TENGYUEH) RAILWAY.

This line was reconnoitred in 1905. The results of the reconnaissance show that it will be about 124 miles in length and its cost, on the 2' 6" gauge, Rs. 1,14,42,100, or Rs. 92,275 per mile. A detailed survey has been sanctioned and the results are awaited.

DALLA-DEDAYE RAILWAY.

This line, which was proposed to serve the delta of Lower Burma, was reconnoitred in 1902. It will start from Dalla, a suburb of Rangoon on the opposite bank of the river of the same name, and run to a point opposite Dedaye, an important and flourishing centre of trade, with a branch to Twante. The length and estimates of cost on the metre gauge are as follows:—

	Length.	Estimated cost.
	Miles.	Rs.
Dalla to Dedaye ...	34.75	16,85,814
Twante branch ...	14.25	7,11,472

As the line would have to contend against keen river competition, its prospects are not promising. The question of its construction is, therefore, not likely to be taken up till remunerative lines have been provided for.

HSIPAW-MONG NAI EXTENSION.

The estimate of the cost of the first section of this extension, from Hsipaw to Manpan, 50 miles in length, amounts to Rs. 35,61,178. The second section, from Manpan to Mong Nai, about 150 miles, has not been surveyed.

The Burma Government do not press for this line, as they prefer the Shan States to be served, in the first instance, by a line from Nyaungyan running eastwards into the hills, referred to as the Southern Shan States railway (see page 21).

LASHIO-KUNLONG EXTENSION.

A reconnaissance survey for a metre gauge line from Lashio to the Kunlong ferry on the Salween river was made by the Burma Railways Company in 1888-89.

The results of the alternative routes examined are as follows:—

	Length.	Total cost.
	Miles.	Rs.
Hsenwi (Theinni) route ...	90	1,01,41,298
Hsupkyet (Supkyet) route ...	93½	1,03,54,840

The Theinni route is considered in every respect inferior to the Supkyet route, but the extension beyond Lashio is not considered desirable at present.

MOULMEIN-MYAWADDY RAILWAY.

NEW PROJECT.

The Railway Board have sanctioned a reconnaissance of the above line, which will be 80 miles in length. The work will be carried out by the Government of Burma.

MOULMEIN-YE RAILWAY.

NEW PROJECT.

A detailed survey of this line which is an extension of the Moulmein-Wagaru project mentioned in the last year's publication, has been sanctioned by the Railway Board and the work will be carried out by the Government of Burma. The proposed line will be 92 miles in length.

PEGU-SYRIAM RAILWAY.

A detailed survey of this line, which will be 67 miles in length, was sanctioned by the Government of India in December 1904 in connection with the Burma railways extension surveys. The survey has been carried out by the Government of Burma and the report and estimates are awaited.

PROME-MAGWE MEIKTILA EXTENSION.

This line, which would be an extension of the existing Rangoon-Prome railway, was recommended in 1895 by the Chief Commissioner of Burma for consideration as a project which would open out the country between Magwe and Meiktila and also tap the prosperous oil-fields at Yenanchoung. The line has not been surveyed. It would be about 176 miles in length and cost, approximately, Rs. 1,13,00,000 or Rs. 64,205 per mile on the metre gauge.

PYINMANA-MAGWE RAILWAY.

This line was proposed by the Government of Burma in 1905 with a view to providing useful work in case famine should occur in the adjoining dry zone districts. The Local Government was authorised to carry out the survey from Provincial funds. The line will, it is considered, be 112 miles in length and cost Rs. 100 lakhs.

SHWEBO-THABEITKYIN RAILWAY.

This line, which was proposed to tap the Kabwet collieries and to open up the Ruby Mines district, was surveyed during 1899-1900. It will be 30.05 miles long and is estimated to cost Rs. 14,42,845 on the metre gauge. If, however, the line stops at Letkobin, in which case the collieries will be served equally well, the length would be 22.75 miles and the estimated cost Rs. 9,93,840.

The line is not at present recommended by the Burma Railways Company, and in the opinion of the Government of Burma it should not be considered until more important projects have been taken in hand.

SOUTHERN SHAN STATES RAILWAY.

The highly successful results which followed the introduction of wheat cultivation in the Southern Shan States have rendered railway communication necessary between the wheat-growing districts and the port of Rangoon, in order to increase the prosperity of these States. Surveys were, therefore, sanctioned in 1900 as a charge against Provincial funds for a light line from some point on the Rangoon-Mandalay section of the Burma railways to Taungyi. The work was carried out during 1901-02 under the orders of the Government of Burma, and the report, which was received in 1903, shews that the prospects of the railway being remunerative are very doubtful.

The projected line starts from Nyaungyan, about 299 miles from Rangoon, and terminates at Sang Hai, which is 7 miles short of Taungyi by the cart road. It will be 112.2 miles in length and is estimated to cost, on the 2' 6" gauge, Rs. 68,57,667, being at the rate of Rs. 61,120 per mile.

An officer was deputed by the Railway Board in February 1906, to examine on the spot the project as prepared, with a view to reporting on the alignment selected, the estimates framed and the traffic prospects of the line. His report is under consideration.

DIBRU-SADIYA RAILWAY.

TALAP-SAIKWAGHAT EXTENSION, DIBRU-SADIYA RAILWAY.**NEW PROJECT.**

This extension was proposed by the Chief Commissioner of Assam in March 1905 as an economical substitute for metalling the road, necessitated by the growth in the cart traffic, between Talap, the present terminus of the Dibru-Sadiya railway, and Saikwaghat. The line, which will be about 8½ miles in length, will be constructed by the Dibru-Sadiya Railway Company who will obtain from the Local Government a subsidy of Rs. 600 per mile for 10 years besides certain timber concessions and free grant of land.

The project has been sanctioned by the Government of India, but work has not been started pending the results of surveys, which are in hand.

**EASTERN BENGAL RAILWAY
SYSTEM.**

DACCA-MYMENSINGH RAILWAY EXTENSIONS AND GOALUNDO-NARAYANGANJ EXTENSION.

Preliminary surveys were carried out by the Eastern Bengal railway during 1899-1900, and the estimates for a line on the metre gauge are as follows :—

- (i) Dacca to Aircha, opposite Goalundo, length 45 miles; cost, including land, with a ferry over the Dhallessary river, Rs. 58,13,640, or with a bridge instead of a ferry, Rs. 76,71,060.

An alternative route, Tangi, on the Dacca State railway, to Aircha, *via* Dassora, was also surveyed at the same time. The length of this route is also 45 miles, and the cost, with a ferry over the Dhallessary, Rs. 75,72,105.

- (ii) Mymensingh to Netrokona and thence to Bara-Ari, with a branch from Shambhuganj to Gauripur, length 36½ miles.

The various alternative estimates of cost for (ii) are as shown below :—

	Cost, Rs.
Including land and rolling-stock, but excluding bridge over the Brahmaputra river.	30,92,797
Including rolling-stock, but excluding land and bridge	18,73,797
Including bridge, but excluding land and rolling-stock	22,15,812

- (iii) Singhjani to Sherpore and thence to Nalitabari, length 25 miles. The cost, including land, for a cheap line, with ferry, is estimated at Rs. 9,21,250, and without ferry, Rs. 8,40,250; and that for a well-equipped line with ferry at Rs. 12,38,886.

Sanction was accorded to the survey by the Eastern Bengal railway for a metre gauge line from Netrokona to Langar Bazar, in Assam, a length of about 40 miles, for the purpose of developing the country as well as to connect the capital of the Eastern Bengal and Assam province with the summer residence of the Local Government. The survey is in hand.

Proposals were received in 1904 from a syndicate for the construction of (ii) the Mymensingh-Netrokona railway on the metre gauge and of (iii) the Singhjani-Sherpore-Nalitabari line on the 2' 6" gauge. The terms on which a concession can be granted have been communicated to the promoters and their final reply is awaited.

The object of the Goalundo-Narayanganj extension is not only to improve communication between the sections of the Eastern Bengal railway, but also with the Assam-Bengal railway *via* Chandpur. The scheme involves a metre gauge railway from Lakhee Khal Hat, opposite Faridpur, to Munshiganj, some 6 miles below Narayanganj. The length is 40 miles, and the estimated cost Rs. 58,46,738 including Rs. 15,000 per mile for rolling-stock, and Rs. 18,42,500 for an ordinary transshipment ferry at Faridpur and a wagon and passenger ferry at Munshiganj. In connection with it the Assam-Bengal Railway Company projected in 1897 a wagon ferry from Narayanganj to Chandpur or Shatnal.

GANGES BRIDGES AT SARA AND GODAGARI.

The results of the investigations which were undertaken by the Government of India to decide the question of a suitable site for a bridge over the Ganges at Sara, or in its neighbourhood, to deal with the combined traffic of the metre gauge lines situated on the north of that river, were submitted to the Secretary of State in November 1903. Of the three sites examined, *vis.*, Godagari, Isabpur and Sara, the balance of advantages being at that time in favour of the Sara site, the Government of India recommended the construction of a bridge at that place. The Secretary of State, however, has deferred a decision on the question pending an examination of the effect of the construction of the Ranaghat-Ganges-Katibar line on the direction and volume of traffic. The opening of this line will probably have the effect of transferring a large portion of metre gauge traffic to and from Calcutta from Mokameh where it is now transhipped to the East Indian railway to Godagari.

A wagon ferry will probably be first established at both places and the relative volumes of traffic passing each place will enable the Government of India to determine which permanent bridge site should take precedence. Meanwhile it has been decided to maintain the existing transshipment ferry at Sara.

GHERIA EXTENSION, RANAGHAT-GODAGARI RAILWAY.

This is an extension of the Ranaghat-Godagari railway from Lalgola to the mouth of the Bhagirathi river near Gheria, and has been designed to provide a *ghât* station, which can be relied on in the high water season, on the right bank of the Ganges for the Godagari-Lalgola ferry. It has been surveyed for a 5' 6" gauge line by the Government of India, and is estimated to cost Rs. 9,18,060 for a length of 13.47 miles.

It has been decided to await the results of working at Lalgola Ghat before undertaking the construction of the line.

KISSENGUNGE-JALPAIGURI RAILWAY.

NEW PROJECT.

This is an extension of the Barsoi-Kissengunge branch (metre gauge) of the Eastern Bengal railway, *via* Titalia, to Jalpaiguri, and will be 59 miles in length. It is likely to prove remunerative and would afford an alternative route, *via* the Ranaghat-Katihar railway, for traffic from Calcutta to Darjeeling.

The Railway Board have sanctioned a survey of the line by the main line administration.

KRISHNAGAR-JALANGHI RAILWAY.

A detailed survey for this line, on the 2' 6" gauge, which was sanctioned by the Government of India in December 1904, has been carried out by the Eastern Bengal railway on behalf of the Government of Bengal, the cost being met by the District Board of Nadia. The line will be 56.10 miles in length and the total cost, including that of the second-hand rolling-stock from the Cooch Behar railway, it is considered will not exceed Rs. 25,000 per mile. The detailed project and estimates are awaited.

MURSHIDABAD-AZIMGANJ LINK.

The link, which consists practically of a bridge over the Bhagirathi river below Azimganj and its two approaches, was proposed to connect the Ranaghat-Godagari railway with the Nalhati branch of the East Indian railway. It was surveyed and a detailed project prepared by the Government of India in 1904. The line would be 5.82 miles in length and is estimated to cost Rs. 18,05,616 on the 5' 6" gauge.

The scheme has since been abandoned.

PHULBARI-SUMJHIA BRANCH.

This branch would start from Phulbari station on the northern section of the Eastern Bengal railway, and run in a westerly direction to Sumjhia on the Atrai river.

The length would be 13½ miles and the estimated cost, for a metre gauge railway, is Rs. 4,41,745, or Rs. 32,722 per mile.

RANGYA-TEZPORE RAILWAY.

NEW PROJECT.

This line, which will start from Rangya station on the Gauhati extension of the Eastern Bengal railway, is strongly supported by the Government of Eastern Bengal and Assam on the grounds that it would serve an important tea district in the Mangaldai subdivision and afford a powerful stimulus to the reclamation of the savannah country which is becoming gradually settled with time-expired garden coolies. The Railway Board have sanctioned a survey of the line, which will be 78 miles in length, and on the metre gauge, by the agency of the Eastern Bengal railway administration. The survey is in progress.

SAIDPUR-TITALIA AND NATTORE-RAMPUR BOALIA BRANCH RAILWAYS.

These branches were surveyed by the Eastern Bengal railway during 1895-96.

The Saidpur-Titalia railway will be 66 miles long, and, on the metre gauge, is estimated to cost Rs. 24,55,000 without rolling-stock, or with rolling-stock Rs. 29,84,000. The project has been held over until the site for the new Ganges bridge and the system of lines connected with it are finally settled.

The Nattore-Rampur Boalia extension will be 24.43 miles in length, and, on the metre gauge, is estimated to cost Rs. 11,14,875 including fencing and rolling-stock.

SANTIPUR-KALNA EXTENSION.

Orders were issued by the Government of India in 1904 for the preparation of a detailed project for an extension, on the 2' 6" gauge, from Santipur to Kalna, about 6½ miles in length, of the existing Ranaghat-Krishnagar light railway, and of alternative estimates for connecting the light railway with the Ranaghat-Godagari railway on the 5' 6" gauge—

- (1) by means of a 2' 6" gauge line from Raghampur station, about 3½ miles from Ranaghat, to meet the standard (5' 6") gauge branch on the west side of the Churni bridge;
- (2) by extending (1) over the bridge right up to Ranaghat along the standard gauge alignment on a 4-rail mixed gauge.

The detailed project estimates are awaited.

SARA-SIRAJGANJ-JAGANNATHGANJ RAILWAY.

In connection with the Sara bridge project the Manager, Eastern Bengal railway, proposed the construction of a 5' 6" gauge line connecting Sirajganj with Nattore or such other place on the northern section of that system where the transshipment station north of the Ganges might be situated. Sanction was accorded in 1904 to the preparation of a detailed project for a line from the neighbourhood of Sara to a point opposite Jagannathganj, a distance of about 70 miles. The survey of the Sara-Sirajganj section has been completed by the Eastern Bengal railway, while that of the extension to opposite Jagannathganj is at present in abeyance.

The Sara-Sirajganj line will be about 49½ miles in length and is estimated to cost approximately Rs. 62,09,669. The project, however, has been held over pending a decision on the question of a bridge over the Ganges at Sara (see page 23).

SHIBNIBASH-KOTCHANDPUR-MAGURA BRANCH RAILWAY.

This branch was proposed on the 2' 6" gauge by a Calcutta firm in 1896 as a feeder to the Eastern Bengal railway, and is alternative to a scheme put forward by the late Bengal Central railway administration in 1897 for a 5' 6" gauge branch from Bongong station on their line to Kotchandpur.

The Government of India are of opinion that, while each route has advantages of its own, the balance lies decidedly in favour of the branch from Shibnibash and that it should be constructed on the same gauge (5' 6") as the parent line.

The project for a line on the 5' 6" gauge was prepared by the Eastern Bengal railway in 1901 on three separate alignments as follows :—

				Cost as revised by the Director of Railway Construction.	
				Miles.	Rs.
SCHEME No. I—					
<i>via</i> Khallispur, Durgapur and Jhenida	...	...	...	51.75	
Branch from Jhenida to Sulkopa	...	...	...	12.00	
			Total	63.75	49,94,494
SCHEME No. II—					
<i>via</i> Khallispur and Kaliganj direct to Magura	...	...	...	48.00	
Branch from Kaliganj to Sulkopa	...	...	...	19.75	
			Total	67.75	53,07,874
SCHEME No. III—					
<i>via</i> Khallispur and Kaliganj to Jhenida and Magura	...	...	...	55	
Branch from Jhenida to Sulkopa	...	...	...	12	
			Total	67	52,49,115

Statistics of the probable traffic of the line, and the advantages of taking it *via* Khallispur or *via* Mohespur, have been investigated, and the Manager, Eastern Bengal railway, recommends a line, *via* Khallispur, Kaliganj and Jhenida to Magura (scheme No. III), the branch to Sulkopa being postponed until it has been seen what route the traffic on the Kumar river north of Magura would take.

SINGIA-MADARIPUR-CHANDPUR RAILWAY.

This line was surveyed by the Government of India in 1896-97. The cost by sections is as follows :—

		Length, Miles.	Total cost. Rs.	Cost per mile. Rs.
Singia to Madaripur	...	63.34	1,23,46,885	1,94,961
Madaripur to Bhedarganj	...	18.81	69,18,948	3,67,833

The section from Madaripur to Bhedarganj is considered impracticable on the grounds of cost ; and the estimate for the Singia-Madaripur section is susceptible of reduction to about Rs. 106.5 lakhs, or Rs. 1.7 lakhs per mile.

SIRAJGANJ-ULLAPARA RAILWAY.

Proposals were made in 1903 for the construction, by a private enterprise, with the aid of a guarantee from the Local District Board, of a light railway, 18 miles in length, on the 2' 6" gauge, from Sirajganj to Ullapara, with the view of serving the jute and other traffic, and of affording a local passenger service, in that neighbourhood.

The cost of the line is estimated by the promoters at Rs. 11,00,000, upon which they anticipate a return of 11½ per cent.

Further proposals are awaited from the promoters.

EAST INDIAN RAILWAY SYSTEM.

BAUSI-BAIDYANATH RAILWAY.

A concession for the Bhagalpur-Bausi-Baidyanath line was held by a syndicate but was withdrawn, since the negotiations, which were begun in 1894, had not, up to March 1901, resulted in the formation of a company. The alternative estimates for a line on the 5' 6" gauge are as follows:—

	Length	Cost excluding land and rolling-stock.	Cost including land, but excluding rolling-stock.
	Miles.	Rs.	Rs.
(i) Bhagalpur, <i>viâ</i> Bausi, Hasdia and Deoghur, to Baidyanath ...	75'47	52,06,250	55,39,203
(ii) Bhagalpur, <i>viâ</i> Bausi, Hasdia and Deoghur, to Adjai ...	75'98	52,68,083	56,25,733

The Secretary of State has sanctioned an estimate amounting to Rs. 23,21,361 for the Bhagalpur-Bausi section, 31'04 miles, which is at present under construction, as an integral part of the East Indian railway. The remaining section will also probably be constructed by the same railway as soon as funds can be made available.

CALCUTTA CENTRAL RAILWAY.

This project was put forward by a syndicate in 1898. The capital it was proposed to raise was £1,500,000, or £2,750,000 if a broad avenue to afford access to the central station from Howrah was to be included in the scheme. The concessions asked for were a toll of 1½ pies per maund on all goods except minerals received at, or despatched from, all Calcutta stations of the connected railways including the Kidderpore Docks.

The scheme comprises—

- (1) a permanent road and railway bridge to carry four lines of rails over the Hooghly river at the site of the existing floating bridge.
- (2) a central passenger station at Calcutta, and
- (3) an elevated junction railway to unite the East Indian and Eastern Bengal railways and the Kidderpore Docks.

In view of the objections of the special committee appointed to report on the scheme, the opinions expressed by the Government of Bengal and the fact that the project had not received the support of those most interested in its execution, the syndicate's offer for the formation of a company to undertake the works on the terms proposed has not been accepted.

CAWNPORE-HAMIRPUR RAILWAY.

The line has not been surveyed, but is assumed to cost Rs. 6 lakhs on the 2' 6" gauge. Its construction was proposed in 1897 by a native firm, but the proposals were rejected as they did not conform with the terms and conditions of the Government of India, Public Works Department resolution No. 514 R. C., dated the 17th April 1896.

In 1904 the Government of the United Provinces submitted proposals for the construction, by a local firm, of a steam tramway on the 2' gauge from Cawnpore to the left bank of the Jumna opposite Hamirpur, a distance of 35½ miles. It was proposed to form a company with a share capital of Rs. 10 lakhs, the District Board of Cawnpore agreeing to guarantee interest on the working capital at 4 per cent. on the condition that they received a moiety of surplus profits over that figure. The promoters intimated in 1905 that they did not desire to proceed with the scheme.

FATEHPUR-MARKUNDI CHORD.

This scheme was proposed by a syndicate in 1898 and several routes were examined by the Government of India during 1900-01. The estimated cost of three main alternative lines, on the 5' 6" gauge, are as follows:—

	Length	Cost.
	Miles.	Rs.
(i) FATEHPUR-MARKUNDI ...	72'2	98,46,166
(ii) FATEHPUR-KARWI ...	52'0	72,59,200
(iii) KHAGA-MANIKPUR ...	56'7	85,98,362

The negotiations for the construction of the lines have, however, been dropped by the promoters.

The Government of the United Provinces is of opinion that this line will not be required in the event of the projected Karwi-Rajapur line (see page 30) being constructed *via* Pahari.

KARNAL-KAITHAL-NABHA AND SONEPAT-SAHARANPUR BRANCHES.

The proposed lines have not been surveyed, nor have the traffic prospects been examined. The Karnal-Kaithal-Nabha branch would be about 70 miles in length and the Sonapat-Saharanpur, 60 miles. The cost of both, on the 5' 6" gauge, is assumed at Rs. 80,000 per mile.

KUTWA-AHMADPUR AND BURDWAN-KUTWA RAILWAYS.

These lines have been surveyed by the East Indian railway, and their lengths and cost on the 5' 6" gauge are estimated as under :—

			Length Miles.	Cost. Rs.
KUTWA-AHMADPUR (surveyed in 1901-02)	...	...	31½	28,22,765
BURDWAN-KUTWA (" 1896)	...	...	34	26,49,418

Owing to the construction, which is now in progress, of the Sainthia-Ondal Chord, the point of junction with the Kutwa lines will probably be at Sainthia instead of at Ahmadpur. The Kutwa-Sainthia section has not yet been surveyed.

These lines will probably be constructed by the East Indian railway as part of their undertaking and as extensions of the Hooghly-Kutwa line now under construction when funds are available.

MIRZAPUR-MAIHAR CHORD.

This chord line, from Mirzapur station on the main line of the East Indian railway to Maihar on the Jubbulpore branch, was proposed in 1901 by the East Indian railway administration as one that would open up the Rewah State, passing, as it would, through the centre of that country and the town of Rewah.

A reconnaissance of the proposed chord was carried out by the railway administration in 1900. The length would be 140 miles and the cost, excluding rolling-stock, is estimated to be Rs. 155 lakhs.

The project is not considered to be of sufficient importance at present to require investigation.

NAWADAH-MADHUPUR (OR BAIDYANATH)-NALHATI AND BHAGALPUR-NALHATI (OR AHMADPUR) RAILWAYS.

The first line will form a connection between Nawadah, on the South Behar railway, and either Baidyanath or Madhupur, on the chord line of the East Indian railway, and Nalhati. The second line will connect Bhagalpur with either Nalhati or Ahmadpur on the loop line. The lines will probably be constructed by the East Indian Railway Company.

REWAH-SUTNA LIGHT RAILWAY.

The initiation of this project was due to the scarcity prevailing in the Rewah State and the necessity of throwing up the earthwork as a measure of famine relief.

The line will start from Rewah, the capital of the Rewah State, and connect at Sutna with the East Indian railway.

The line was surveyed by the Durbar in 1899. It will be 32 miles in length and is estimated by them to cost Rs. 7,61,810 on the 2' 6" gauge, and to give a return of about 4½ per cent. on the outlay. The Durbar is considering the question of its construction.

**GREAT INDIAN PENINSULA
RAILWAY SYSTEM.**

AMRAOTI-ELlichPUR LIGHT RAILWAY.

This line, which will pass through well cultivated country, was surveyed by the Great Indian Peninsula railway in 1899. It will run along the metalled road from Amraoti, the terminus of a short branch of the Great Indian Peninsula railway, to the cantonment of Ellichpur.

It will be 30·64 miles in length, is estimated to cost Rs. 7,92,953 on the 2' 6" gauge, and will probably be constructed and worked by the Great Indian Peninsula Railway Company.

BELAPUR (OR LĀKH)-SANGAMNER BRANCH.

A reconnaissance of this branch was made by the Great Indian Peninsula Railway Company in 1900, but estimates of cost have not been submitted.

The proposed line, on the 5' 6" gauge and 32·86 miles long, will run from Lakh station, on the Dhond-Manmad railway, to Sangamner. An alternative alignment, four miles shorter, from Belapur station, *viā* Bablishwar, and thence along the former alignment to Sangamner, was also examined in 1900.

CAWNPORE-RAE BARELI-FYZABAD RAILWAY.

Proposals for the construction of this connection on the 5' 6" gauge were put forward by the late Indian Midland Railway Company in 1899. It was assumed to be 140 miles in length and to cost Rs. 1,12,00,000.

The Railway Board, in December 1905, sanctioned a survey of the Cawnpore-Rae Bareli section, 58 miles, by the agency of the Oudh and Rohilkhand railway administration.

DAMOH-ATARRA LIGHT RAILWAY.

This project was put forward in 1899, by the late Indian Midland Railway Company as a feeder to their railway system. It would connect Damoh, on the Saugor-Katni extension, with Atarra, on the Manikpur branch, *viā* Hatta, Pannah, Kārtal and Sihonda.

A reconnaissance of the line was made in 1899, and it was estimated that it would be about 151 miles in length and cost about Rs. 27,18,000, or Rs. 18,000 per mile, on the 2' 6" gauge.

DHULIA-AMALNER BRANCH.

The extension from Dhulia to Amalner, 20 miles long and estimated to cost Rs. 20 lakhs on the 5' 6" gauge, has been surveyed by the Great Indian Peninsula Railway Company with a view to its future construction.

HARDA-HINDIA AND ITARSI-ELlichPUR RAILWAYS.

These were recommended as feeder lines by the Great Indian Peninsula railway administration. The lines have not been surveyed.

HARPALPUR-KALPI AND HARPALPUR-NOWGONG LIGHT RAILWAYS.

The Harpalpur-Rath and Harpalpur-Nowgong lines were first proposed by the late Indian Midland railway authorities. In 1901 the Great Indian Peninsula Railway Company applied for their construction on the 2' 6" gauge as part of their system, with an extension of the former line to Kalpi, *viā* Hamirpur.

The length and approximate cost of the lines on the 2' 6" gauge are as follows:—

			Length.	Cost.
			Miles.	Rs.
HARPALPUR <i>viā</i> HAMIRPUR TO KALPI	...	...	102	15,90,924
HARPALPUR TO NOWGONG	...	...	19·22	2,71,762

The Government of the United Provinces prefers a line on the 2' 6" gauge from Harpalpur to Kalpi, *viā* Rath, instead of *viā* Hamirpur, and the Railway Board have authorized the Great Indian Peninsula railway to start the survey if they are prepared to support the proposal. The Harpalpur-Rath section has already been surveyed and is estimated to cost Rs. 4,06,200 for 25·88 miles on the 2' 6" gauge.

KARWI-RAJAPUR RAILWAY.

NEW PROJECT.

This line will connect Karwi on the Indian Midland railway with Rajapur on the river Jumna and will be on the 5' 6" gauge.

The Railway Board have sanctioned its survey by the agency of the Great Indian Peninsula railway administration, who proposed it, by the following alternative routes:

(1) Karwi to Rajapur direct.	...	...	...	...	...	18 miles.
(2) Karwi, <i>via</i> Pahari, to Rajapur	...	...	...	...	...	21 miles.

KHAMGAON-JALNA RAILWAY.

This line has been surveyed and is estimated to cost, on the 2' 6" gauge, Rs. 32,65,151 for a length of 93.55 miles. It will start from Khamgaon, the terminus of a short branch railway, leaving the Great Indian Peninsula railway at Jalamb, and run south to Amrapur, then turning westwards will pass through the important town of Chickli, and thence through Devalgaon Raja, a place of some importance on account of a large annual fair held there, to Jalna, a railway station on the Hyderabad-Godavari Valley railway.

No traffic statistics have been collected. Earthwork and collection of ballast were carried out on this line in 1900 as a famine relief work.

It will probably be constructed by the Great Indian Peninsula Railway Company.

KHANDWA-AKOLA-BASIM-PURNA (OR NANDED) RAILWAY.

The northern section of this project, Khandwa to Basim, was proposed in April 1899. It follows part of the alignment of the Akola-Hingoli railway, which was surveyed in 1884-85, and is an extension of that line.

The proposed line, which will start from Khandwa, the junction of the Rajputana-Malwa and Great Indian Peninsula railways, and run to Purna (or Nanded) on the Hyderabad-Godavari Valley railway, *via* Akola and Basim, will form the link connecting the metre gauge railways in the Deccan and Rajputana.

The Khandwa-Basim section was surveyed by the Government of India, and the Basim-Purna section by the Nizam's Guaranteed State Railways Company, during 1899-1900. The whole line will be about 252½ miles in length and is estimated to cost Rs. 170 lakhs.

Earthwork and collection of ballast were carried out on certain sections of this line in 1900 as a famine relief work.

The Bombay, Baroda and Central India railway have applied for permission to construct the Khandwa-Akola section as an integral part of the Rajputana-Malwa railway, and His Highness the Nizam's Guaranteed State railway propose to construct the section from Akola to Purna (or preferably Nanded) on the Hyderabad-Godavari Valley railway terms, provided the Khandwa-Akola section is constructed and worked as part of the Rajputana-Malwa railway.

The question was taken up for investigation at a meeting of the Railway Board held at Hyderabad in July 1905 in connection with the proposal to link up the metre gauge systems of Northern and Southern India. The Railway Board have formulated their recommendations which are under the consideration of the Government of India.

The importance of the line lies in its being the main link in the proposed through connection.

KUNCH-MADHOGARH RAILWAY.

NEW PROJECT.

This will be an extension of the existing Ait-Kunch railway, *via* Jalaon, to the bank of the river Jumna opposite Auriya, with a branch from Jalaon to Madhogarh. It will be 54 miles in length and on the 5' 6" gauge.

The Railway Board have sanctioned a survey of this line by the Great Indian Peninsula railway. The survey is in progress, and earthwork is being carried out by the Government of the United Provinces behind the survey party as a measure of famine relief.

KURLA-TROMBAY RAILWAY.

NEW PROJECT.

The Railway Board have sanctioned a survey being made, by the agency of the Great Indian Peninsula Railway Company, for a line from Kurla, the first station on the Great Indian Peninsula railway outside Bombay island, south-east to Trombay. The line will be on the 5' 6" gauge and 5½ miles in length.

MURTAJAPUR-PISGAON RAILWAY.

This line is under survey by the Great Indian Peninsula railway. It will be on the 2' 6" gauge, and about 135 miles in length.

The results of the survey are awaited.

MUTTRA-ALIGARH RAILWAY.

The line was surveyed by the Government of India and alternative projects on the 5' 6" gauge, as noted below, were submitted :—

	Length.	Estimated
	Miles.	cost. Rs.
(i) Muttra, <i>via</i> Brindaban, with a new bridge near that place over the Jumna, and thence direct to Aligarh	40'80	40,54,603
(ii) Muttra, <i>avoiding</i> Brindaban, and utilising the existing bridge over the Jumna at Muttra, and thence direct to Aligarh	38'25	33,53,688

It has been decided that the route *via* Brindaban shall be accepted.

The line will be constructed by the State and will probably form an integral part of the Agra-Delhi chord line.

NORTH AND SOUTH RAILWAY.

Proposals were received in 1902 from a syndicate for the construction of a railway on the 5' 6" gauge from Nagpur to Itarsi, with a branch on the same gauge from Sendurzana to Amraoti and a 2' 6" gauge branch from Multai to Chhindwara; also from another syndicate to construct a 2' 6" gauge branch from Nagpur to Pandharna, which would partly traverse the alignment of the Nagpur-Itarsi project.

The consideration of the foregoing proposals was deferred pending the results of surveys, which were being carried out by the Great Indian Peninsula railway, for a 5' 6" gauge railway from Itarsi, *via* Multai to Nagpur or Wardha, and from Bellarpur to Warangal or Kazipet *via* Ahiri and Sironcha. The reports of these surveys which were received in 1905, favour Nagpur, rather than Wardha, as the objective of the North and South connection, and the western alignment *via* Pandharna and Multai, which follows for a great part, the route of the proposed Nagpur-Pandharna light railway, rather than the eastern route passing near Chhindwara town and the Pench Valley Colliery. The length of this line will be 179'72 miles and the estimated cost Rs. 2,02,43,748. A detailed project has also been prepared of the Bellarpur-Warangal line, which, including the branch of about 7½ miles to Kazipet, will be 190'73 miles in length, and is estimated to cost Rs. 2,32,30,222. The report and estimates, however, have not been considered pending the results of surveys, which are in progress, of certain alternative routes to Warangal and of a chord line from Bori on the Nagpur branch to Hinganghat on the Wardha branch.

The lines surveyed by the Great Indian Peninsula railway administration, together with the intermediate length from Warora to Bellarpur, at present under construction as an extension of the Wardha Coal branch of that railway, will eventually afford direct standard (5' 6") gauge connection between Northern and Southern India.

A Railway Commission, which assembled in Madras in February 1903 to advise the Government of India in regard to the general question of the best means of effecting broad gauge connection between the Indian system of broad gauge railways and the Ceylon railways on the same gauge, submitted its report in April 1903. Starting from the south, the Commission recommended an alignment from Ramesvaram, *via* Ramnad, more or less direct to Trichinopoly, and, running, in a north-easterly direction, joining the South Indian railway at a point between Tirukkoyilur and Penruti; thence, from whichever junction be selected between these limiting points, northward either by—

- (i) a new line direct to Arkonam and the conversion to broad gauge of the Renigunta-Gudur section of the South Indian railway, or

- (ii) by the conversion to broad gauge of the Villupuram-Madras section of South Indian railway and the addition of a third rail between Villupuram and the point of junction between Tirukkoyilur and Penruti, above referred which may ultimately be decided upon, coupled with the conversion to broad gauge, which in this case is considered necessary, of the Chinglep Arkonam branch of the South Indian railway ;

the northern terminus of the new broad gauge link thus being either Arkonam or Madras. The link so recommended, together with the projected connection from Waragal to the North-East line of the Great Indian Peninsula railway, would complete the required connection between the broad gauge systems of northern India and Ceylon. After considering the report it was decided that immediate action was not required, and the Government of Madras have since intimated that, in their opinion, the 5' 6" gauge connection is not necessary.

POKHRAYAN-AURIYA BRANCH.

A reconnaissance of the country between Pokhrayan, a station on the Jhansi-Cawnpore section of the Great Indian Peninsula railway, and the town of Auriya, a large trading centre three miles north of the Jumna river, was undertaken in 1899 in connection with a proposal for a 2' gauge line between these places, but the results have not yet been received. The line would be about 28 miles in length and cost approximately Rs. 7,28,000.

RAICHUR-WONDALLI RAILWAY.

This is a scheme which was put forward in 1899 by a syndicate for a line on the 2' 6" gauge to connect the joint station of the Great Indian Peninsula and the Madras Railway Companies at Raichur with Wondalli, a distance of 43 miles, with probably an extension of about 28 miles to the market town of Madgal.

A preliminary survey of the line was made by the promoters in 1899, and the length of 43 miles from Raichur to Wondalli is estimated to cost Rs. 12,53,336.

The line, while satisfying the gold-mining interests of the Raichur Doab, will also serve the agricultural interests of the tract of country it will traverse, and will form a feeder to the Great Indian Peninsula and Madras railways.

The proposals were approved by His Majesty's Secretary of State in June 1900, but the scheme has not advanced.

**JODHPUR-BIKANER RAILWAY
SYSTEM.**

BORAWAR (OR DEGANA)-HISSAR RAILWAY.

NEW PROJECT.

This line has been proposed by the Jodhpur and Bikaner Durbars for construction and working as part of the Jodhpur-Bikaner railway. It will be on the metre gauge and 180 miles in length if the line starts from Borawar, and 190 miles if Degana is the point of departure. A survey of the line is being carried out by the Jodhpur-Bikaner railway administration. The alignment will be entirely within the Durbar's territory and will connect Rajgarh, Churu, Sujangarh and Didwana, all considerable towns inhabited by wealthy Marwaris, with the metre gauge system.

The financial prospects of the line are therefore considered very favourable by the Durbars.

The proposals are under consideration.

This line will probably supersede the Kuchaman-Sirsa chord railway (see page 17).

LIGHT RAILWAYS IN SIND.

NEW PROJECTS.

Preliminary enquiries were made in 1900 by a Calcutta firm in regard to the construction of a system of feeder lines in Sind on either the metre or the standard gauge, or both, but no definite proposals have yet been received. Meanwhile detailed projects were prepared by the Government of India in 1901-02 for light feeder lines to the North Western railway in the country in Lower Sind lying between the Indus river and the Runn of Cutch, and one of these, the Hyderabad-Badin branch, which will eventually form part of the proposed Bombay-Sind connection railway, was completed and opened for traffic in October 1904 as an integral part of the North Western railway.

Proposals were also made in 1901 by a Karachi firm for the construction, on rebate terms, of a metre gauge railway from Kotri *via* Jerruck and Tatta to Karachi. They were, however, rejected on the grounds that the facilities for the carriage of traffic to the port were adequate, and that the necessity for the extension of the metre gauge to Karachi had not arisen in the public interest.

Another Karachi firm has since applied for permission to form a company in England with a capital of £250,000 for financing the following light railways in Sind :

- (1) From Mirpur Khas (on the British section of the Jodhpur-Bikaner railway) southwards to Jhudo.
- (2) From Mirpur Khas northwards to Sangur.
- (3) From Shadipalli northwards to Mehoo Suboo.
- (4) From Shadipalli southwards to Samara (and possibly onwards to meet the Chhor-Tatta chord—*vide* No. 5).
- (5) From Chhor to Tatta, *via* Umarnkot, Jhudo, Tulher, Mirpur Buttora, and Belo (with a ferry over the Indus between Belo and Tatta).
- (6) From Mirpur Buttora northwards to Dhindee.
- (7) From Belo southwards to Shahbunder.
- (8) From Hyderabad (or Kotri) to Karachi, *via* Tatta, or from Tatta to Karachi.

Definite proposals have been submitted for (i) which it is proposed to take in hand at first. The concessions asked for are a rebate from the traffic interchanged with the Jodhpur-Bikaner railway to make up a dividend of 3½ per cent., and those usually granted to Branch line companies. The line will be on the metre gauge and about 46 miles in length. It is proposed that it be constructed and worked by the Jodhpur-Bikaner railway.

The line is supported by the Karachi Chamber of Commerce and the Government of Bombay. Proposals for its construction are under consideration.

The Jodhpur-Bikaner railway administration also advocates extensions of its metre gauge system to serve Lower Sind and Karachi *via* Tatta. No definite proposals have been submitted.

**MADRAS RAILWAY SYSTEM,
INCLUDING THE SOUTHERN PORTION OF
THE LATE EAST COAST RAILWAY.**

BEZWADA-JAGGIAPETT BRANCH.

This branch, which was put forward in 1895, has not been surveyed. It would be 54 miles in length and cost, approximately, 43½ lakhs on the 5' 6" gauge. The proposed starting point is Bezwada station, on the North-East line of the Madras railway, whence the line would follow the left bank of the Kistna river in a north-westerly direction, to Jaggiapett on that river.

DHARMAPURI-KRISHNAGIRI AND PALAKODU-BANGALORE RAILWAYS.

Sanction was accorded in 1905 to the Madras Railway Company to carry out an engineering and a traffic survey of the following lines on the 2' 6" gauge :—

- (1) Dharmapuri, the terminus of the Morappur-Dharmapuri railway, *via* Palakodu to Krishnagiri, the terminus of the Tirupattur-Krishnagiri railway, a length of about 32 miles ;
- (2) Palakodu on (1) to Bangalore on the Southern Mahratta railway, a length of about 60 miles.

PODANUR (OR PALGHAT)-PALNI RAILWAY.

This railway will connect at Palni with the projected line from Dindigul, *via* Palni Dharapuram and Tiruppur, to Satyamangalam on the proposed Nanjangud-Erode extension (see page 45).

A detailed survey was carried out by the South Indian railway during 1904 for a line on the 5' 6" gauge, and the results are as follows :—

Section of line.	Length.	Cost.
(1) PALNI-POLLACHI	40'00	52,75,228
(2) POLLACHI-PODANUR	25'24	35,29,079
(3) POLLACHI-PALGHAT	26'35	31,06,868
Total	91'59	1,19,11,175

An alternative alignment of (3) *via* Kollengode, 38 miles, is at present under survey by the same Company.

The Palghat-Palni railway and its extension to Dindigul (see page 45) have been included in the programme of railway construction for the triennial period 1906-09 for construction out of State funds.

SALEM-ATTUR BRANCH.

A branch, about 7½ miles in length, was proposed by the Government of Madras in 1898 from Suramangalam (Salem) station, on the Madras railway, past Salem town and the civil station, to the foot of the ghat ascent to the Shevaroy Hills.

It has since been decided that, when opportunity offers, a connection should be made between Salem town and the top of the Shevaroy plateau by means of a metalled road. This decision makes it unnecessary to extend the railway beyond Salem town to the foot of the hills, and has brought into prominence the desirability of extending it along the existing road from Salem eastward to Attur, an important town likely to afford a profitable traffic and the distributing centre for a large area.

In September 1903 the Secretary of State sanctioned an estimate amounting to Rs. 17,59,555 for the construction of the line from Salem to Attur, 36'06 miles in length, on the 5' 6" gauge as a State railway, but commencement of work has not been authorised, pending provision of funds.

Proposals for financing this line by the District Board of Salem (who have levied a special cess for its construction) with the help of a loan through the Provincial Loan Account are under consideration.

SALEM-PORTO NOVO RAILWAY.

This line was surveyed by the Government of Madras in 1885-86 and was estimated to cost Rs. 69,86,000 on the metre gauge. It was proposed by the Local Government in 1887 as a famine protective line, and again by the Madras railway administration in 1895 as a feeder to their railway system.

The approximate cost for a line, 116 miles in length, on the 5' 6" gauge, is estimated to be Rs. 86,00,000. At Salem it would leave the South-West line of the Madras railway and would run parallel to the existing portion of the South Indian railway to Porto Novo, a port on the East or Coromandel coast.

The Government of Madras have since proposed the Trichinopoly-Tirukkoyilur chord line in substitution of this project. (See page 46).

YERRAGUDIPAD-JAMMALAMADUGU BRANCH.

In 1899 the Madras Railway Company suggested the construction of a light, 2' 6" gauge, railway from Yerragudipad, through Proddatur, to Jammalamadugu, a distance of 24'05 miles.

They have surveyed the line, which will serve a highly cultivated district. On the 2' 6" gauge it is estimated to cost Rs. 10,45,904 and on a light 5' 6" gauge Rs. 12,46,831.

NIZAM'S RAILWAY SYSTEM.

HYDERABAD-KISTNA RIVER RAILWAY.

Preliminary surveys were ordered by His Highness the Nizam's Government in 1905 for a line of railway from Hyderabad to the Kistna river, opposite Kurnool, and from Hyderabad to the neighbourhood of Guntakal, with a view to selecting the route to be finally adopted. The surveys have been completed, but the results have not been received by the Railway Board.

The question of construction of this line as part of the proposed through metre gauge connection between the railways in Northern and Southern India was considered at a meeting of the Railway Board with all the interested parties held at Hyderabad in July 1905. The Railway Board have formulated their recommendations which are now under the consideration of the Government of India.

**NORTH WESTERN RAILWAY
SYSTEM.**

CHANGA MANGA-CHUNIAN-PAKPATAN BRANCH.

A committee appointed by the Government of the Punjab in 1896 to report upon railway feeder schemes selected this branch as the most suitable out of many projects put forward for serving the rich irrigated tract on the right bank of the Sutlej.

The line has not been surveyed and no estimate of traffic has been received. Its length would be about 70 miles, and the cost about 56 lakhs on the 5' 6" gauge; though a light line, either on the 5' 6" or a smaller gauge, would cost considerably less.

The line will probably be constructed and worked by the State.

DERA GHAZI KHAN-SAKHI SARWAR BRANCH.

This branch would be about 35 miles in length and the cost, on the 5' 6" gauge, has been assumed at Rs. 35,00,000 without rolling-stock. It has not been surveyed and no statistics of traffic have been submitted. A considerable pilgrim traffic exists between these places.

JAMMU-SRINAGAR RAILWAY.

Surveys for a light electric railway, 180 miles in length, *via* the Larulari and Banihal passes, were carried out during 1899-1900 under the orders of the Kashmir Durbar. The line was estimated to cost Rs. 1,71,53,000 on the 2' 6" gauge and Rs. 1,93,36,000 on the metre gauge.

At the request of the Durbar, an officer was specially deputed in 1901 by the Government of India to examine the project prepared and to advise generally on the question of railway connection with Srinagar. His reports dealt with the following routes:—

	Length. Miles.	Gauge.	Capital cost. Rs.	
JAMMU—SRINAGAR RAILWAY.				
(1) Larulari-Banihal route	186½	2' 6"	2,38,61,500	
(2) Chenab valley-Banihal route	173	2' 6"	2,54,57,500	
SARAI KALA—SRINAGAR RAILWAY.				
(3) Abbottabad route {	Sarai Kala to Abbottabad	48	5' 6"	51,00,000
	Abbottabad, <i>via</i> Baramula, to Srinagar	145	2' 6"	1,17,00,000

A detailed project was prepared in 1903 for the section from Tawi (Jammu) to Talwara in the Riassi coal-fields. It will be 32.59 miles in length and is estimated to cost Rs. 50,52,678 on the 5' 6" gauge and Rs. 35,53,179 on the 2' 6" gauge. A project was prepared in February 1905 for the remainder of the line from Talwara to Srinagar, *via* the Golabgarh route, which, although necessitating a tunnel about 5 miles long under the Dedam Pir, is reported to be practicable. The whole line from Tawi to Srinagar would be 156.17 miles in length and is estimated to cost, on the 2' 6" gauge, Rs. 3,34,73,596 or Rs. 2,14,301 per mile.

It is generally agreed that the Sarai Kala-Abbottabad route (see page 39) into Kashmir is more feasible than the Jammu-Banihal route.

JHANG-SANGLA RAILWAY.

NEW PROJECT.

A survey of this line from Jhang, *via* Chiniot, to Sangla, has been sanctioned by the Railway Board. It will be about 70 miles in length and on the standard (5' 6") gauge.

The line will be undertaken by the State as an integral part of the North Western railway, but its construction has been deferred at the request of the Local Government till the completion of more important lines designed to serve the irrigation tracts parallel to the rivers.

JULLUNDUR-HOSHIARPUR RAILWAY.

This branch was surveyed in 1895-96. The length would be 23.92 miles and the cost, on the 5' 6" gauge, if constructed up to the standard of the main line, is estimated at Rs. 14,10,000.

JULLUNDUR-KAPURTHALA-SULTANPUR RAILWAY.

This line was surveyed in 1903. It will be 28.82 miles in length and is estimated to cost, on the 2' 6" gauge (with alignment and land for the Jullundur-Kapurthala section suitable for a 5' 6" gauge line), Rs. 10,41,376, of which Rs. 2,99,484 appertain to the section in British territory. The Secretary of State, in sanctioning the estimates in 1903, suggested a reconsideration of the question of its construction as a light 5' 6" gauge line from the outset. The question is still under consideration.

The Government of the Punjab has recently put forward a proposal to extend this line *via* Malsian, Nakodar, Nur Mahal and thence between Jandiala and Bandala to Phagwara and on to Nawa Shahar, with extensions to Garhshankar on the north and Rahon on the south, and to treat this extended line and the Jullundur-Hoshiarpur railway (see page 37) as one project for construction either on the 5' 6" or 2' 6" gauge as may be decided after consideration of the project estimates on both gauges. The Railway Board have accepted the proposal and have agreed to have the necessary surveys carried out during the next working season.

KANGRA VALLEY RAILWAY.

The proposed railway will run from Pathankot to Palampur, with extensions and branches to Baijnath and Dunera, and possibly to Kalka and up to the Sutlej towards Simla.

A concession, now lapsed, was held by a London Syndicate for the construction of the first section of the above line which extends from Pathankot to Palampur, 75 miles, with a branch from Aund (near Nurpur) to Dunera, 12 miles, or 87 miles in all. A reconnaissance was carried out by the syndicate in 1903 and the estimates amount to Rs. 57,85,440 on the 2' 6" gauge.

KHANPUR-CHACHRAN RAILWAY.

Proposals were received in 1905 from the Bahawalpur Durbar for the construction, at the expense of the Durbar, of a railway from Khanpur on the North Western railway to Chachran on the Indus, with a steam ferry between the latter place and Mithankot. The line would be about 22 miles in length and probably on the light standard (5' 6") gauge.

The Railway Board have sanctioned a survey of the above line to be carried out by the North Western railway administration at the cost of the Durbar.

LARKHANA-KAMBAR-SHAHDADPUR RAILWAY.

A preliminary survey was made during 1899-1900 of this feeder to the North Western railway, which would be 32.2 miles in length. The estimate of cost amounts to Rs. 11,68,118 on the 2' 6" gauge or Rs. 36,277 per mile. On the 5' 6" gauge the cost is estimated at Rs. 19,31,676, and for a light line Rs. 13,07,200.

It is considered that the traffic prospects will be fair when certain improvements to the Begari canals have been carried out.

LODHRAN-MAILSI RAILWAY.

This line was surveyed and a detailed project on the 5' 6" gauge was prepared by the North Western railway administration in 1904. It will connect with the North Western railway at Lodhran on the Multan-Karachi section, 261½ miles from Lahore and 561½ miles from Kiamari. The length will be 39.7 miles and the estimated cost Rs. 17,94,793 or Rs. 45,209 per mile.

The line will be constructed by the State as an integral part of the North Western railway, and will probably ultimately form part of a scheme for a through line connecting Patti with Malsi, *via* Kasur on the North Western railway and Chunian and Pakpattan on the projected Changa Manga-Chunian-Pakpattan railway, (see page 37).

LOWER SIND BRANCHES.

Detailed projects for the following extensions of the North Western railway in Lower Sind were prepared by the Government of India in 1901-02.

	Length. Miles.	Estimated cost. Rs.
BADIN to JUNGSHAHI	70	37,41,833
TANDO MUHAMMED KHAN to MIRPUR BUTTORA ...	33	17,19,269

The question of construction of the Badin-Jungshahi line is under consideration.

MANDRA-CHAKWAL BRANCH.

A committee appointed by the Government of the Punjab in 1896 to report on railway feeder schemes placed this branch on the list of projects recommended by them for construction.

The length would be about 40 miles, but the line has not been surveyed.

RAWALPINDI-MURREE RAILWAY.

Proposals were received in 1903 for the construction, by a company domiciled in India, of a railway on the 2' 6" gauge from Rawalpindi to Murree, with extensions to Kuldana, Gharial and the Kashmir frontier.

Revised proposals were submitted in 1905 for the construction of the line on the 3' 3½", instead of on the 2' 6", gauge, 40 miles in length, and designed to serve the military cantonments at Rawalpindi and Murree, the extension to the Kashmir frontier being excluded from the scheme. The estimates for an electric railway amount to Rs. 44,78,537 including, and Rs. 36,88,537 excluding, interest during construction and maintenance and promotion charges. The concession has been approved by the Secretary of State and the promoter has been advised of the terms that will be granted.

SARAI KALA-ABBOTTABAD-SRINAGAR RAILWAY.

Detailed projects were prepared in 1893 for a railway to Kashmir, both on the standard (5' 6") and the metre gauges by alternative routes (1) from Sarai Kala, *via* Abbottabad, (2) from Mandra, *via* Panjar.

The results are as follows :—

	Length. Miles.	Cost. Rs.
On the 5' 6" gauge—		
(1) <i>via</i> Abbottabad	200	2,98,85,284
(2) <i>via</i> Panjar	182	3,02,04,184
On the metre gauge—		
(1) <i>via</i> Abbottabad	203	2,44,93,474
(2) <i>via</i> Panjar	185	2,42,66,519

The route *via* Abbottabad, though longer, is preferred in all other respects.

The project, as now revised, provides for a 5' 6" gauge line from Sarai Kala to Abbottabad worked as part of the North Western railway, and for a metre gauge line worked by electricity from Abbottabad along the Jhelum river to Srinagar, the portions within British and Kashmir territory to be constructed and owned by the Government of India and the Durbar respectively. Arrangements are in contemplation for starting work on the British and Native State sections as a connected project.

SHORKOT ROAD—CHICHOKI RAILWAY.

The Government of India in 1904 sanctioned the carrying out of a survey by the North Western railway administration for a line from Chuharkana on the projected Shahdara-Sangla railway, *via* Manawala, Nankana, Buchiana and Barala to Shorkot Road on

the Wazirabad-Khanewal railway and the preparation of a project for the following alternatives :—

- (a) a cheap light 5' 6" gauge line,
- (b) a 2' 6" gauge line, and
- (c) a mono-rail on the Caillet system.

The Manager, North Western railway, considers that the importance of the traffic to be carried by the projected railway demands a 5' 6" gauge line and a preliminary project on the 5' 6" gauge has accordingly been prepared. It has since been decided to start the line from Chichoki, 13½ miles from Shahdara on the Shahdara-Sangla railway, instead of from Chuharkana, and the Railway Board have sanctioned a detailed survey of the Shor-kot Road-Chichoki railway by the agency of the main line administration. The line will be about 150 miles in length and will be constructed by the State as an integral part of the North Western railway.

**ODDH AND ROHILKHAND RAIL-
WAY SYSTEM.**

BALAMAU-SITAPUR RAILWAY.

This line has been surveyed by the Oudh and Rohilkhand railway. It will be 37·12 miles in length and is estimated to cost Rs. 19,45,446 on the 5' 6" gauge.

The question of agency of construction is under consideration.

DEHRA-MUSOOREE-LANDOUR RAILWAY.

A preliminary survey for a 2' 0" gauge railway between Dehra Dun and Mussooree was made in 1900 at the expense of the Government of the United Provinces. Several possible approaches to Mussooree have been examined, and that which has been chosen for the estimate shows that the length of the line will be 27 miles and the estimated cost Rs. 32,52,895, or at the rate of Rs. 1,20,477 per mile, including land and rolling-stock. A final decision has not yet been come to as to the alignment of the proposed railway.

An alternative scheme would be to extend the Hardwar-Dehra railway on the 5' 6" gauge to Rajpur, or some place at the foot of the hills, and to connect the hill station of Mussooree by a rope incline.

Permission was accorded in 1902 to a syndicate to make a survey for an electric mountain railway from Dehra Dun to Mussooree and Landour, about 14 miles in length, with a branch, to be worked as a tramway, from a point near Landour, to the Charleville Hotel, 4½ miles long.

GAJROULA-CHANDPUR AND HARDOI-SANDI BRANCHES.

The Gajroula-Chandpur branch was surveyed and a detailed project prepared by the Oudh and Rohilkhand railway in 1904. It would be 22·15 miles in length and is estimated to cost, on the 5' 6" gauge, Rs. 5,05,953, or Rs. 22,842 per mile. The traffic prospects, however, are very poor.

The Hardoi-Sandi line, which would also be on the 5' 6" gauge, 14·39 miles in length and estimated to cost Rs. 3,62,004, will serve the area south of the Oudh and Rohilkhand railway. Its construction has been deferred.

ROSA-SITAPUR RAILWAY.

This is an extension of the Rosa-Bakharpur survey which was sanctioned by the Government of India in January 1905. The line from Rosa to Sitapur will be about 52 miles in length; the gauge is under consideration.

The survey is being carried out by the Oudh and Rohilkhand railway administration who proposed it.

This line will be alternative to the Shahjahanpur-Sitapur section of the Pilibhit-Sitapur railway proposed by the Rohilkund and Kumaon Railway Company (see page 42).

**ROHILKUND AND KUMAON
RAILWAY SYSTEM.**

DUDHWA BRANCH EXTENSION TO RAMNAGAR GHAT.

In 1895 the Rohilkund and Kumaon Railway Company proposed to construct this branch as a part of the Lucknow-Bareilly State railway. It was, however, considered to be of the nature of a forest siding, which could be extended gradually as the forests were opened out and their produce made available to the public.

The Agent, Rohilkund and Kumaon railway, has since proposed its construction for the development of the company's system.

The line, when complete, will be about 26 miles long, and the total cost is estimated by the railway administration at Rs. 10,00,000. Detailed statistics of traffic are not available.

The extension of the Lucknow-Bareilly State railway from Dudhwa to the Mohan river (Chandan Choki), 5.93 miles, was opened for traffic on the 1st May 1903, while the rest of the projected line from Sonaripur to Ramnagar Ghat, a distance of 20.79 miles, was surveyed by the Rohilkund and Kumaon railway in 1905, but the results have not been received by the Railway Board.

KATHGODAM-NAINITAL BRANCH.

This line was proposed by private enterprise in 1896 for the development of Kumaon and the Nainital district. It was to be on the 2' gauge, 13 miles in length, and was estimated to cost Rs. 12 lakhs.

The concession lapsed in 1898.

PILIBHIT-BARMDEO BRANCH.

It has been decided to construct this line from funds to be provided by the State as an extension of the Lucknow-Bareilly State railway, to which it will act as a feeder. It will also serve lower Kumaon and the forests on the banks of the Sarda river, and will be 38.44 miles in length.

The line was surveyed by the Rohilkund and Kumaon railway in 1903. A re-survey has been sanctioned with a view to the revision of the project in accordance with the wishes of the Company's Home Board.

PILIBHIT-SITAPUR RAILWAY.

NEW PROJECT.

The Rohilkund and Kumaon Railway Company have applied for sanction to survey for a line on the metre gauge from Pilibhit; *via* Bisalpur, to Shahjahanpur and thence to Sitapur, a length of about 105 miles.

The proposals are under consideration.

The Shahjahanpur-Sitapur section of this line will be alternative to the Rosa-Sitapur railway (see page 41) which is under survey by the Oudh and Rohilkhand railway administration.

**SOUTHERN MAHRATTA RAILWAY
SYSTEM.**

ARSIKERE-MANGALORE RAILWAY.

A complete project for this 2' 6" gauge line, 135·71 miles long, to cost Rs. 85,43,784, was received in 1902. The line is intended to afford connection between the coffee estates on and near the top of the Mysore plateau with Mangalore port.

The eastern 28·71 miles of this line, between Arsikere and Hassan, is estimated for a metre gauge substructure, owing to the probability of its eventually forming part of the Mysore-Arsikere chord of the Mysore State system of railways worked by the Southern Mahratta Railway Company.

The Southern Mahratta and Madras railways, and the Planters' Association and local opinion in Coorg, prefer the Mysore-Tellicherry railway, while the Mysore Durbar favour the construction of the Arsikere-Mangalore line, although they decline to offer a guarantee.

BAGALKOT-HUNGUND BRANCH.

The survey of this line was completed in 1900 by the Southern Mahratta Railway Company. It will start from Bagalkot, on the Bijapur branch of the Southern Mahratta railway to which it will form a feeder, and run east to Hungund in the direction of Raichur, a distance of 31 miles, and is estimated to cost Rs. 24,41,757 on the metre gauge.

BANGALORE (TARAGUPET)-CHIKBALLAPUR LIGHT RAILWAY.

A company was formed in 1902 under the provisions of the Mysore Companies Regulations, 1895, for the purpose of constructing the above line. In 1903 the Mysore Durbar authorized the Company to carry out a survey, the results of which were submitted in 1904. The estimates framed are for a line on the 2' 6" gauge, 38·99 miles in length, costing Rs. 7,19,765 or Rs. 18,454 per mile, including rolling-stock.

No application has yet been made to the Railway Board for the construction of the line.

BOMBAY-SOUTHERN MAHRATTA RAILWAY CONNECTION.

The scheme was suggested in the interests of the Southern Mahratta railway, and in 1894 a preliminary report was prepared by the railway administration for a line from Karad Road station on the Poona branch, *via* Chiplun, northwards to Hogg Island (Bombay) and southwards to Vingorla.

The cost of a metre gauge railway, 202 miles in length, was assumed, at the rate of Rs. 78,262 per mile, to be Rs. 1,58,09,000, exclusive of 6 miles of steam ferry service.

In 1896 an application was made by a Syndicate for the grant of a concession for the construction of this railway *via* Mahad and Chiplun, with 6 miles of steam ferry service, but it was not supported by the Local Government as the project was of doubtful utility, would be costly to make, maintain and work, while the traffic would, so far as could be judged, give a very trifling return on the capital cost.

GADAG-YALVIGI RAILWAY.

This line, which will be on the metre gauge and form a chord between the main line and the Harihar branch of the Southern Mahratta railway, was proposed by the railway administration in 1905 as a link in the future direct metre gauge connection between northern and southern India *via* Khandwa and Hotgi. Part of it will also supply a branch to the Dharwar gold-fields.

The line will be 38½ miles in length and is under survey by the Southern Mahratta railway.

GUNTUR-REPALLI BRANCH.

This line from Guntur station on the Southern Mahratta railway to Repalli, a distance of 38 miles, has been proposed by the Kistna District Board, at whose desire it was surveyed by the administration of the Southern Mahratta railway in 1902. It is estimated to cost Rs. 17,33,687 on the metre gauge.

The District Board of Kistna are desirous of financing this line with the help of a loan through the Provincial loan account. Owing, however, to a diminution of both the area and the resources of the Board in consequence of the proposed redistribution of certain collectorates in the Madras Presidency, the project is in abeyance.

KURNOOL ROAD-KURNOOL BRANCH.

The branch will be 32 miles long and has been estimated to cost Rs. 7,11,000. It will form part of the through metre gauge connection between northern, and southern India if the projected Hyderabad-Kistna river railway (see page 36) is aligned to pass through Kurnool Road Station.

The District Board of Kurnool, who have submitted an application for a loan in order to finance the line with the help of a loan through the Provincial loan account, is pressing for its early construction. The question of its construction as a State line by the agency of the Southern Mahratta railway and as part of the North and South metre gauge connection is under consideration.

MARGAO-KARWAR RAILWAY.

NEW PROJECT.

This line, which has been reconnoitred by the Government of Bombay, will start from Margao on the West of India Portuguese railway and run to Sadashivgarh ferry opposite Karwar. It will be about 36½ miles in length, of which about 30 miles will be situated in Portuguese territory and the remaining 6½ miles in British territory, and is estimated to cost about Rs. 28 lakhs.

The line has been designed to open up communication with Karwar, which is practically cut off from all intercourse with the outer world during the south-west monsoon when the coasting steamers cease running, and would be a valuable feeder to the West of India Portuguese and Southern Mahratta railways.

MYSORE-TELLICHERRY RAILWAY.

A complete project for this 2' 6" gauge railway was received in 1902. Its length will be 144.69 miles and its cost Rs. 81,00,000.

Its object is (a) to open up a part of the Mysore plateau, (b) to give the coffee and other products of Coorg connection with Mysore and with the seaport of Tellicherry, and (c) to open part of the Malabar district and to act as a feeder to the Madras and Southern Mahratta railways.

The Southern Mahratta and Madras railways and the Planters' Association and local opinion in Coorg favour the construction of this line, while the Mysore Durbar are of opinion that the Arsikere-Mangalore project (see page 43) should have the preference.

PHIRANGIPURAM-GURZALA BRANCH.

It was originally proposed that this branch should start from Narasaravupet station on the Bellary-Kistna section of the Southern Mahratta railway, and run to Pondugul, the centre of trade of the Kistna District. The alignment was altered and a survey was made by the Southern Mahratta railway in 1901, from Phirangipuram to Gurzala. The line will be 50.64 miles in length and is estimated to cost Rs. 12,59,641 on the metre gauge.

SATARA ROAD-SATARA CITY RAILWAY.

NEW PROJECT.

This line to connect Satara, the ancient capital of the Deccan, with the Southern Mahratta railway at Satara Road station, was reconnoitred by the Government of Bombay in 1904. It will be 11 miles in length and is estimated to cost roughly Rs. 4½ lakhs.

Sanction has been accorded to the carrying out of a detailed survey by the agency of the Southern Mahratta railway for a line on the metre gauge.

SOUTH INDIAN RAILWAY SYSTEM.

CUDDALORE-VRIDDHACHALAM RAILWAY.

NEW PROJECT.

Under the orders of the Government of Madras the South Indian railway carried out in 1905 an engineering and a traffic survey of this line on behalf of the South Arcot District Board, but the results have not been received by the Railway Board. The line will be 34 miles in length and on the metre gauge.

DINDIGUL-SATYAMANGALAM RAILWAY.

This line, including a branch from Satyamangalam to Mettupalaiyam, has been surveyed by the South Indian railway and the results, for the metre gauge, are as follows :—

Section of line.	Length.	ESTIMATED COST.	
		Total.	Rate per mile.
	Miles.	Rs.	Rs.
Dindigul to Palni	35'21	33,52,000	95,700
Palni to Tirupur	51'22	47,64,121	93,012
Tirupur to Satyamangalam...	33'14	36,68,919	1,10,709
Total Dindigul-Satyamangalam	119'57	1,17,85,040	98,570
Mettupalaiyam branch	17'53	25,03,225	1,42,791

An alternative project on the 5'6" gauge has also been prepared for the Dindigul-Palni section. The estimate amounts to Rs. 44,47,000 for 35'21 miles, or Rs. 1,26,299 per mile.

The Dindigul-Palni line, together with its extension to Palghat (see page 34), has been included in the programme of railway construction for the triennial period 1906-09 for construction out of State funds.

DINDIGUL-UTTAMAPALAIYAM RAILWAY.

NEW PROJECT.

This line, which will run from Dindigul on the South Indian railway, *via* Periyakulam, to Uttamapalaiyam on the projected Vaigai Valley railway (see page 47), has been proposed by the District Board of Madura, who have resolved to levy, with effect from 1st July 1906, a special cess with a view to promoting railway construction in the district.

The Government of Madras have authorized the South Indian railway to carry out a survey of the line at the cost of the District Board. The line will be on the metre gauge and 72 miles in length.

KALIKIRI-RAYACHOTI BRANCH.

This branch would be 34'42 miles long. It was designed to start from a point in the neighbourhood of the Kalikiri, or Piler, on the South Indian railway—of which it would form a branch—and to connect with Rayachoti, which in 1898 was considered an important centre for food distribution in a famine area. Surveys were made by the South Indian railway during 1899-1900 and it was estimated that a line on the metre gauge would cost Rs. 10,75,736.

KUMBAKONAM-MANNARGUDI BRANCH.

In 1905 the Government of Madras authorized the South Indian railway to carry out, on behalf of the District Board of Tanjore, an engineering and traffic survey of this line, which was put forward by the District Board in 1897. The survey has been completed but the results have not yet been received by the Railway Board. The line will be on the metre gauge and 22'57 miles in length.

The branch would leave the Kumbakonam station of the South Indian railway and run southwards to Nidamangalam station on the Negapatam branch, and thence to Mannargudi. The Government of Madras consider this line to be more important than the Nidamangalam-Vedaraniem line (see page 46) proposed by the Tanjore District Board.

NANJANGUD-ERODE RAILWAY.

This line, which will link up the Southern Mahratta railway system with the South Indian railway system in the south, was surveyed by the South Indian Railway Company in 1898.

It is estimated to cost, on the metre gauge, Rs. 1,23,03,700 for a length of 120.70 miles. The section in Mysore territory, that is, from Nanjangud southward to the Mysore frontier, 33.70 miles in length and estimated to cost Rs. 20,81,764, has been sanctioned for construction by, and at the cost of, the Mysore State, but the Durbar do not propose to construct this section until the British section is put in hand. The connection will be the most southern of the proposed links of the metre gauge systems of North and South India.

A connection between Satyamangalam, on this line, and Mettupalaiyam, the lower terminus of the Nilgiri railway, has been surveyed and a detailed project prepared (see page 45).

NIDAMANGALAM-VEDARANIEM RAILWAY.

NEW PROJECT.

This is an extension of the Kumbakonam-Mannargudi line (see page 45) from Nidamangalam, *via* Mannargudi and Tirutaraipundi, to Vedaraniem on the east coast. It is proposed by the District Board of Tanjore, who urge the construction of the Tirutaraipundi-Vedaraniem section in preference to the Kumbakonam-Mannargudi line.

The Madras Government have authorized the South Indian railway to carry out, on behalf of the Tanjore District Board, a survey of the Tirutaraipundi-Vedaraniem section, 20 miles, on the metre gauge, with a view to having the rival claims of this and the Kumbakonam-Mannargudi line more fully investigated.

TINNEVELLY-TIRUCHENDUR RAILWAY.

This line, which was proposed by the District Board of Tinnevelly in 1903, was surveyed by the South Indian railway administration during 1904, at the cost of the District Board. It will be 37.60 miles in length and is estimated to cost Rs. 20,52,003 on the metre gauge. Proposals for its financing are awaited from the District Board who have levied a special cess in order to form a railway construction fund for the district.

TRICHINOPOLY-THONDI BRANCH.

This project was recommended by the Government of Madras in May 1897, but it has not been surveyed. The approximate cost on the metre gauge is assumed to be Rs. 37,50,000 for a line of railway 86 miles in length, or at Rs. 43,064 per mile, which probably excludes rolling-stock. The line would open up the Pudukota State and give the traffic an outlet on the east coast at Thondi.

In September 1897 the Government of Madras submitted for sanction an estimate for surveying this branch, the cost being divisible between the Pudukota State and the South Indian Railway Company.

The Madras Government after discussion agreed to the postponement of the survey, on the understanding that this decision was come to without prejudice to the question of the advisability of later on surveying, at the cost of the Pudukota State, a short branch from Trichinopoly to serve the State, but not to extend beyond its southern or eastern boundaries.

The Madura District Board in 1902 resolved to levy a cess in order to give a guarantee for the construction of a portion of this project.

TRICHINOPOLY-TIRUKKOYILUR RAILWAY.

This north and south line was recommended by the Government of Madras in 1899 in substitution of the west to east, Salem-Porto Novo, project. Either line would about bisect a large quadrangular 10,000 square-mile area of unserved country, a great part of which is a source of anxiety in famine years. But the north and south line, which is supported by local opinion and by the Madras Chamber of Commerce, offers the great advantage of shortening by 37 miles the distance between Madras and districts south of Trichinopoly.

The line from Trichinopoly to Tirukkoyilur will be 96·75 miles long and is estimated to cost Rs. 74,43,000 on the metre gauge.

The Railway Commission, which assembled in Madras in February 1903 to report on the best means of effecting a through 5' 6" gauge connection between India and Ceylon, has recommended the construction of this line on the standard (5' 6") gauge as part of the proposed through route, but the Government of India have considered it unnecessary to come to any definite decision at present on the recommendations of the Commission. Meanwhile the District Board of Trichinopoly have been permitted to invest the proceeds of their special three-pie cess in Government Securities to form a railway guarantee fund for the purpose of railway construction in the district.

VAIGAI VALLEY RAILWAY.

The proposed railway will be about 78 miles in length and, on the 2' 6" gauge, is estimated to cost Rs. 29,377 per mile. The lines comprised under it are:—

- (1) Ammayanayakkanur on the South Indian railway to Kotagudi, about 55 miles ;
- (2) Periyakulam, mile 27, to Krishnama Naik's tope, about 5 miles ;
- (3) Near Theni, mile 39, to Uttamapalayam, about 18 miles ; with power to extend from Uttamapalayam to Kuruvanuth, to the foot of the Periyar waterfall, and to the Madura District frontier in the Periyar neighbourhood, about 15 miles.

The concession for the construction of the line was in 1901 granted to a syndicate who, in 1905, renounced it owing to their inability to promote the formation of a company and to raise the necessary capital.

A large portion of this project, is covered by the Dindigul-Uttamapalayam line projected by the District Board of Madura (see page 45).

UDAIPUR-CHITOR RAILWAY.

MAULI-NATHDWARA BRANCH.

This project for a branch line, on the metre gauge, from Mauli station on the Udaipur-Chitor railway to Nathdwara, the pilgrim traffic to which is considerable, was proposed by the Mewar Durbar in 1900.

The length of the proposed line is 14.75 miles and the estimated cost Rs. 4,72,898. This estimate, the railway administration considers, could be reduced to Rs. 4,00,000 including the cost of rolling-stock.

The construction of the branch is postponed until the Durbar is in a position to undertake the work.

No. 514 R. C. of 1896.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY CONSTRUCTION.

Simla, the 17th April 1896.

Terms on which the Government of India are prepared to consider offers for the construction by the agency of private companies of branch lines forming feeders either to State lines worked by the State or to railways worked by companies.

Read—

Public Works Department resolution No. 924 R.C., dated 15th September 1893.

Public Works Department resolution, dated 29th March 1895.

OBSERVATIONS.—Many of the applications made under the above resolutions show that the terms for the construction of branch or feeder lines of railway have not been fully understood.

The Government of India have accordingly resolved to cancel the previous resolutions above quoted upon this subject, and to issue a fresh resolution embodying a summary of the concessions which (the previous assent of any railway company concerned having been first obtained) they are now prepared to give for the construction of branch or feeder railways, such concessions being usually confined to lines not exceeding 100 miles in length.

2. It should be clearly understood that these concessions are not applicable to the larger or more important railways or to mountain branches, for which separate negotiations are in all cases necessary.

RESOLUTION.—Branch lines forming feeders, whether to State lines worked by the State or to railways worked by companies, will ordinarily be made by the main line administrations who shall have a prior right to construct them.

The Government of India will, from time to time, publish a list of branch lines for the construction of which they are prepared to receive tenders.

They will consider and dispose of any application for the inclusion in the said list of any other line which can properly be described as a branch or feeder line, and which does not, except in special circumstances, exceed 100 miles in length.

2. Proposals for the construction of branch lines under this resolution must conform to the following terms and conditions :—

- (i) Applicants must satisfy the Government that they are in a position to command substantial financial support.
- (ii) The gauge to be adopted must be approved by the Government in each case.
- (iii) The proposed railway shall be subject to the provisions of all Acts of the Legislature applicable to Indian railways.
- (iv) The proposed railway shall be built in accordance with the fixed and moving dimensions for the time being prescribed by the Governor General in Council, and on plans and estimates that have been approved by that authority. The route of the line, the situation of stations, and other similar details shall be subject to approval by the Government.

(2)

(v) The line, while under construction, shall be inspected when and so often as an inspecting officer appointed for that purpose by the Government may consider desirable with a view to ensure the construction of the line up to the standard agreed upon.

(vi) Inasmuch as these railways are chiefly required for the development of country hitherto deficient in means of communication, and the anticipated profits may not therefore at once be fully realised the Government of India are prepared to give financial assistance as set forth below. Proposals for financial concessions may be made in one or other of the following alternative forms :

(a) It may be stipulated that, after the opening of the railway for traffic, the Government shall guarantee out of the revenues of India a fixed yearly minimum dividend in rupees on the actual expenditure charged in the capital account of the branch railway company as entered in rupees in the company's books in India, with such share of the surplus net profits as may be agreed upon. The minimum dividend to be guaranteed in each particular case will depend upon consideration of the circumstances, but for the present no offer will be entertained that requires a guarantee exceeding 3 per cent. ; or

Under (a) the company will receive an absolute guarantee of interest at a rate not exceeding 3 per cent. and a higher return if the net earnings of the branch are sufficient to pay more than the guaranteed dividend.

(b) It may be provided that a payment be made to the branch company by the main line to the extent necessary, together with the branch company's share of branch earnings [see section (6) of paragraph

Under (b) the company will receive a dividend of 3½ per cent. provided that the amount of the net earnings from local and interchanged traffic be sufficient, and a higher return if the net earnings of the branch from its own traffic be sufficient to pay a higher dividend.

3] to give the branch company a dividend of 3½ per cent. per annum on the actual expenditure charged in the capital account of the branch railway company as entered in rupees in the company's books in India, provided always that the payment so made to the branch company shall in no case exceed the net earnings of the main line from traffic interchanged with the branch. This rebate will be granted from the first earnings of revenue by the branch, such payment being calculated at the close of the year, payments on account, however, subject to adjustment, being permissible at the close of the first half of each year. The net earnings of the main line from traffic interchanged with the branch are assumed to bear the same proportion to the gross earnings of the main line from such traffic as the net earnings of the whole system including the branch bear to the gross earnings thereof. If the net earnings of the branch line equal or exceed 3½ per cent. on the actual expenditure as above, the whole of such earnings will go to the branch company.

In either of the above cases, (a) or (b), if the capital is raised in sterling the capital to be entered in rupees in the company's books in India shall be the actual amount realised in rupees from time to time by the several remittances of funds to provide for expenditure in India, together with the sterling outlay from time to time in England converted into rupees at the average rate of exchange obtained by the Secretary of State for his remittances during the half-year preceding that in which the outlay shall have been incurred, and the capital expenditure in rupees on which the interest is from time to time to be calculated for the purposes of the guarantee or rebate, as the case may be, shall be the total outlay whether in India or England up to any such time as thereto charged.

(vii) The general character of the supervision and control that will be exercised by the Government over the branch railway, apart from the provisions of the railways Acts and the preceding provisions of this resolution, shall be as follows :

(a) No capital expenditure by the branch railway company will be allowed as between the Secretary of State and the company

unless the prior sanction of the Secretary of State shall have been obtained. The company shall have no power to increase its share or stock capital without the sanction of the Secretary of State or to borrow money except within a fixed limit and on specified conditions.

- (b) The branch railway company, if required, shall keep capital accounts and statistics in forms approved by the Secretary of State; and shall render, free of cost, all accounts and statistics required by the Government. The accounts and books will be subject to audit on behalf of Government.
- (viii) Funds for the execution of new works, properly chargeable to capital, found necessary after the branch railway has been opened to public traffic shall be provided by the branch railway company. Such works and their cost shall be agreed upon between the branch railway company and the main line administration before they are put in hand. In the event of any difference of opinion arising between the branch railway company and the main line administration as to the necessity for and the cost of any new work, the matter shall be referred to the Director of Railway Construction as arbitrator, and his decision shall be final.
- (ix) The rates and arrangements in force on State railways in the matter of services rendered to all departments of the State shall apply.

3. The following are the principal additional concessions admissible for branch or feeder railways for the construction of which tenders may be invited :—

- (1) The Secretary of State for India in Council, or the Government of India, respectively, will permit the charge of interest, at a rate to be agreed upon in each case, during construction to the capital account of the railway under the terms of the Indian Railways Act of 1894 (57 and 58 Vict., chapter 12), or the Indian Railway Companies Act, X of 1895.
- (2) The land required for the construction of the branch railway will be provided free of cost. Such grant shall not include land required for quarrying, ballast, brickfields and kindred purposes.
- (3) Electric telegraphs and telegraphic appliances will be supplied and maintained by the Government of India at the usual charges for such works.
- (4) The results of existing surveys will be made available free of charge. When desired, fresh surveys will be made by the Public Works Department* of the Government of India of any branch railway on the applicants depositing the estimated cost thereof in a Government Treasury, on the understanding that no preferential claim to a concession is thereby established. If permission be eventually given for the construction of the line the actual cost of all such surveys, as well as of those made at the cost of Government, may be included in the capital cost of the railway. No responsibility will be accepted by Government for the accuracy of any survey, plan, estimate, or other information supplied.
- (5) The branch railway may be constructed by the main line administration, and will be maintained and worked by that administration, during the full currency of the contract to be entered into for the purpose, at a fixed ratio of expenses to earnings in each half-year. The ratio will, when the branch railway is of the same gauge as that of the working railway, usually be that obtaining on the whole system as from time to time existing, including the branch railways, but will not exceed 50 per cent. of the gross earnings of the branch from all sources, and will be inclusive of charges for the use of the main line rolling-stock.

* These will now be made by the Railway Board.

(4)

(6) Such expenses on account of the Board of Direction of the branch line railway company as may be incurred with the sanction of the Secretary of State may be charged—

(a) during construction to the capital account of the branch line company ;

(b) after opening, and until the minimum dividend under paragraph 2 (vi) (a) or (b) is received by the branch line company, as part of the working expenses to be met out of the stipulated percentage of the earnings of the branch taken by the working railway ; and

(c) thereafter out of the general receipts of the branch line company.

(7) Railway materials for the branch railway will be carried over State lines at the special rates prescribed for such materials belonging to State railways.

4. The Government of India reserve the right to purchase all such branch railways at the expiry of 21 years or at subsequent intervals of 10 years on 12 months' notice, the purchase price being 25 times the yearly average net earnings, not including rebate payments, of the three years preceding the purchase, with a maximum price of 120 and a minimum of 100 per cent. of cost price on a rupee basis.

5. The Government also reserve—

(i) the right to fix and vary from time to time the classification of goods, and maximum and minimum rates for each class of goods, as well as of passengers ; and

(ii) a general control in respect to the number and timing of trains.

6. Applications for concessions to construct branch railways under the terms of this resolution should be submitted in the form prescribed by memorandum A hereto attached, to the address of the Secretary to the Government of India, Public Works Department*.

7. Applications for fresh surveys to be carried out on the terms detailed in condition 3 (4) above should be submitted in the manner prescribed by Memorandum B hereto attached, to the address of the Secretary to the Government of India, Public Works Department*.

The Governments of Madras, Bombay, Bengal, the North-Western Provinces and Oudh and the Punjab.

The Chief Commissioners of the Central Provinces, Burma and Assam.

The Resident at Hyderabad.

The Resident in Mysore.

The Agents to the Governor General in Central India, Rajputana, and Baluchistan.

The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow and Assam.

The Accountant General, Public Works Department.

ORDER.—Ordered that this resolution be forwarded for information to the Local Governments and Administrations and to the Officers marginally noted.

Also that it be published for general information in the *Gazette of India*.

W. S. S. BISSET, Col., R.E.,

Secretary to the Government of India.

Documents accompanying.

Enclosure No. 1.—Memorandum A for the guidance of persons or syndicates desirous of submitting proposals for the construction of branch or feeder railways, with form A and Appendices A, B and C.

Enclosure No. 2.—Memorandum B for the guidance of persons or syndicates desirous of having surveys made for branch or feeder lines of railway at their expense by the Public Works Department.

* Such applications should now be addressed to the Railway Board.

Enclosure No. 1 (with Form A and Appendices A, B and C) to Government of India resolution No. 514 R. C. of 1896.

MEMORANDUM A.

For the guidance of persons or syndicates desirous of submitting proposals for the construction of branch railways in India forming feeders either to State lines worked by the State or to railways worked by companies.

1. All applications for leave to construct a branch or feeder railway in any part of British India are to be addressed to the Secretary to the Government of India, Public Works Department.*

2. All such applications shall be printed, and shall be drawn up, as far as may be, in form A attached hereto, and shall specify—

(a) the company, person, or syndicate by whom the application is preferred; the proposed amount of capital, the number of shares, and the amount of each share;

(b) all the termini, together with the names of all the principal towns from, through, into, or near which the railway is intended to be constructed, as well as the names of each civil division and district to be traversed by the proposed alignment;

(c) the length, so far as known, of the proposed railway;

(d) the gauge, the weight of rails, etc.;

(e) the motive power to be employed;

(f) the maximum tolls, rates, and fares proposed to be charged on the projected railway;

(g) the proposals for working the railway when constructed; and if any agreement is under contemplation, or has been provisionally arranged with any existing railway administration under which the proposed line, when constructed, is to be leased out for working by such railway administration, the exact nature and terms of such agreement;

(h) any further information that may be required to enable Government to thoroughly understand the scope of the proposals.

3. Every such application shall be accompanied by a map to a scale of one mile to one inch, with the line of the proposed railway delineated thereon, so as to show its general course and direction, and also by an estimate as correct as may be of the works proposed to be authorised.

4. When the applicants draw up their own detailed plans and estimates, these documents are invariably to be prepared in strict accordance with the rules for the preparation of railway projects issued under the authority of the Government of India, of which copies may be obtained on payment from the Superintendent of Government Printing, Calcutta.

5. Lists will be published from time to time of the branch railways forming feeders, whether to State lines worked by the State or to railways worked by companies, for the construction of which the Government of India are prepared to receive tenders. Copies of such lists can be obtained on application addressed to the Secretary to the Government of India, Public Works Department.*

6. Upon written application to the Director of Railway Construction permission will also be accorded to inspect, at all reasonable hours, the detailed plans, sections and estimates at the disposal of Government in regard to any particular route already surveyed, provided that they relate to branch railways, the construction of which the Government is prepared to entrust to companies; and copies of such plans, sections, and estimates will be furnished on payment of the cost of copying.

7. But in regard to all such information, statistics, plans, sections, or estimates, which may be furnished, it is to be recognised that the information thus offered to any person interested in the matter is simply the best information of the kind at the disposal of Government, and that Government cannot accept any responsibility whatever in regard to the accuracy of any of the documents.

* Such applications should now be addressed to the Railway Board.

(6)

Form A.

To accompany all applications for leave to construct a branch or feeder railway in any part of British India.

Nature of particulars to be specified.	Particulars.
1 The name of the company, person, or persons by whom the application is preferred; the proposed amount of capital, the number of shares, and the amount of each share.	
2 The termini, together with the names of all the principal towns from, in, through, or into, or near which the railway is intended to be constructed.	<i>Reference to an appendix (vide appendix A) may be here given, if necessary.</i>
3 The length, as far as known, of the proposed railway.	
4 The gauge proposed and weight of rails, etc.	
5 The motive power to be employed.	
6 The maximum tolls, rates, and fares, intended to be charged on the proposed railway.	<i>Reference to an appendix (vide appendix B) may be here given, if necessary.</i>
7 Details of any agreement which may have been provisionally arranged, or which it is desired to enter into, under which the proposed line, when constructed, is to be leased out for working to any existing railway administration.	<i>Reference to an appendix (vide appendix C) may be here given, if necessary.</i>
8 Any further information that may be required to enable the Government of India to thoroughly understand the scope of the proposals.	

Appendix B.

Schedule of maximum and minimum rates and fares intended to be charged on the proposed branch railway.

	Maximum. Pies per mile.	Minimum. Pies per mile.
<i>Passenger fares—</i>		
1st class
2nd class
Intermediate class
3rd or lowest class
	Maximum. Pies per maund per mile.	Minimum. Pies per maund. per mile.
<i>Luggage</i>
	Maximum. Pies per mile.	Minimum. Pies per mile.
<i>Carriages—</i>		
Single carriage
	Maximum. Pies per track.	Minimum. Pies per truck.
Two or more carriages on one truck
	Maximum. Pies per mile.	Minimum. Pies per mile.
<i>Horses—</i>		
Single horse
	Maximum. Pies per 50 miles or portion thereof.	Minimum. Pies per 50 miles or portion thereof.
<i>Dogs—</i>		
Each
	First 100 miles, Annas.	Every additional 100 miles, Annas.
<i>Parcels—</i>		
Not exceeding 5 seers or 1 cubic foot
" " 10 " 2 cubic feet
" " 20 " 4 "
" " 30 " 6 "
" " 40 " 8 "
For every additional 10 seers or 2 cubic feet or portion of 10 seers or 2 cubic feet.
	Maximum. Pies per maund per mile.	Minimum. Pies per maund per mile.
<i>Goods rates—</i>		
5th class
4th "
3rd "
2nd "
1st "
Coal, edible grain, and other low-priced staples to be carried at special rates

Appendix C.

(9)

Working of proposed branch railway.

No agreement has yet been arranged with any existing railway administration under which the projected branch railway is to be worked; but when completed, it is proposed to offer the working to the _____ Railway Company on the following terms:—

(i) _____

(ii) _____

(iii), etc., _____

(10)

Or

It has been provisionally arranged with the _____ Railway Company to work the projected branch railway, when completed, on the following terms:—

(i) _____

(ii) _____

(iii), etc., _____

Enclosure No. 2 to Government of India resolution No. 514 R. C. of 1896.

MEMORANDUM B.

For the guidance of persons or syndicates desirous of having surveys for branch or feeder lines of railway in India carried out at their expense by the Public Works Department.*

1. All applications for the survey of proposed branch or feeder railway routes in any part of British India are to be addressed to the Secretary to the Government of India, Public Works Department.†

2. All such applications shall specify—

- (a) the company, persons, or syndicate by whom the application is preferred ;
- (b) all the termini, together with the names of all the principal towns from, through, into, or near which the survey is intended to be carried, as well as the names of each civil division and district to be traversed by the proposed alignment ;
- (c) the length, so far as known, of the proposed railway ;
- (d) the gauge and the motive power to be employed ;
- (e) the intentions of the applicants as to the construction and working of the railway. If it is intended that the working shall be leased to any existing railway administration, the nature of the contemplated agreement shall be specified.

3. Every such application shall be accompanied by a map to a scale of one mile to one inch, with the line of the proposed survey delineated thereon, so as to show its general course and direction.

4. If the detailed plans and estimates are submitted to Government, these documents are invariably to be prepared in strict accordance with the rules for the preparation of railway projects issued under the authority of the Government of India, of which copies may be obtained on payment from the Superintendent of Government Printing, Calcutta.

5. Upon written application to the Director of Railway Construction permission will also be accorded to inspect at all reasonable hours the detailed plans, sections, and estimates, at the disposal of Government in regard to any particular route already surveyed, provided that they relate to branch or feeder railways the construction of which the Government is prepared to entrust to companies ; and copies of such plans, sections and estimates will be furnished on payment of the cost of copying.

6. But in regard to all such information, statistics, plans, sections, or estimates, which may be furnished, it is to be recognised that the information thus offered to any person interested in the matter is simply the best information of the kind at the disposal of Government, and that Government cannot accept any responsibility whatever in regard to the accuracy of any of the documents.

* These will now be carried out by the Railway Board.

† Such applications should now be addressed to the Railway Board.