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MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No.	2319	Press
33, 34		Mis.
Dated	3-10.	1872 .

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
3rd October 1872.*

No. 33. Read the following Proceedings of the Government of India in the Public Works Department (Railway), dated Simla, 3rd September 1872, No. 1261-82 S—R.—

Punjab Northern State Railway.—Station arrangements and Military requirements connected therewith at Lahore.

Read again—

Public Works Department Memorandum to Military Department, No. 1,253-R, dated the 15th July 1871, and a Memorandum therein enclosed by the Consulting Engineer to the Government of India for State Railways, dated the 10th idem.

Read also—

Extract from the Proceedings of the Government of India in the Military Department, No. 197, Transport—Railway, dated Fort William, the 3rd May 1872.

From the Quarter Master General, to the Secretary to the Government of India in the Military Department, dated Calcutta, 25th April 1872, No. 1,295-C.

In returning the accompaniments to Military Department docket, No. 578, of the 24th July last, I am directed by the Right Honourable the Commander-in-Chief to state that the ordinary requirements at the station of Lahore with regard to the Punjab Northern (P. N.) Railway should not demand a greater supply of carriage than would ensure the arrival and despatch daily of a complete British Regiment of Infantry.

2. Provided, therefore, that that be ensured, the "ordinary requirements" would not seem to demand any other special arrangements beyond rest-houses to allow of the troops halting there for 24 hours, and a special Military siding to admit of the loading, etc., of wagons, without interference in the general traffic. During 1871-72 the number of infantry that passed up and down amounted to 4,700 British and 3,200 Native, and supposing such to be the average, these numbers would pass annually between the 15th November and 1st March.

3. It is difficult to state what numbers should be provided for an emergency, but the annexed tables show the provision necessary to be made for each branch of the service, and for the requirements of a force of 5,000 men. At the same time, it must be remembered that where the distance is short, and a considerable force has to be conveyed, it will proceed more rapidly on foot than by railway, this is more especially the case when there is only a single line of rail, and that line on a narrow gauge.

4. Special provision for the conveyance of animals, even camels, should not be lost sight of, as their demand on an emergency may be even greater than that for more men.

5. With regard to the question of ordnance, I am directed to annex copy of a letter, No. 2,422, of 18th December 1871, from the Inspector-General of Ordnance, to the address of the Deputy Adjutant-General, Royal Artillery, showing that the heaviest piece of ordnance in the present siege trains can be carried, so far as actual weight is concerned, without being dismounted, as its total weight with carriage does not exceed 92 cwt or less than 5 tons.

6. At the same time, His Excellency considers that it is very desirable that at Lahore and all other terminal stations, the railway should maintain appliance for raising guns, etc., for although it is the case that the Ordnance Department could furnish them on demand, the emergency might very possibly present itself when it might not be convenient to wait for the receipt of such articles from distant arsenals, from which the carrying away of a bridge, or any other accident, is liable at any time in India to break off the communication.

*Proceedings of the Madras Government, Public Works Department,
3rd October 1872.*

From the Officiating Deputy Inspector-General of Ordnance and Magazines, to the Inspector-General of Ordnance, dated 7th December 1871, No 6,615.

ADVERTING to your No. 1,179H of the 10th August last, herewith returned, I have the honour to report as follows —

I.—The length of a 68-pounder gun is 10 feet, its weight is 95 cwt.

The length of its carriage, dwarf sliding is 6 feet 6 inches, its width 4 feet, height 3 feet 4 inches, and weight 16 cwt.

The length of traversing dwarf platform is 16 feet, width 4 feet, weight 34 cwt.

II.—Detail of each gun and 100 rounds of ammunition for the same, that forms a part of siege trains in this country with approximate weights, etc., is shown in Table A accompanying

III.—The space that each gun of siege train would occupy on railway truck, i. e., the length of each carriage from sole of tire to end of trail, and extreme track of wheels, are shown in Table B accompanying

IV.—It is not thought that the railway should maintain appliances for raising guns, etc. These can be furnished, when necessary, by the Ordnance Department.

V.—A certain number of powder vans are maintained on the East Indian Railway, and a proportion ought to be maintained on every line of State Railway; a powder van will carry 100 barrels of powder (100 lbs. each) or one lakh of small arm ammunition, or 6 tons weight of miscellaneous stores.

VI.—Railway wagons are built, I believe, usually to carry 6 tons; some few to carry 8 tons. They can, therefore (I speak of the East Indian Railway Line), easily carry any gun and carriage of our present siege trains. Eight inch howitzers and 24-pounders, with their carriages and equipment, etc., have often been forwarded by the East Indian Railway.

VII.—I need scarcely observe that, for the lighter articles of siege train stores, i. e., each article lighter *per se*, the wagons that are used for ordinary traffic on any railway line, would convey such stores without any difficulty.

VIII.—The siege trains at present maintained at arsenals are shown in Table C accompanying.

Documents returned.

- 1.—Letter No. 3,623, dated 8th August 1871, from Deputy Adjutant-General, Royal Artillery, to Officiating Inspector-General of Ordnance.
- 2.—Docket No 1,179H, dated 10th August 1871, from Inspector-General of Ordnance, to Deputy Inspector-General of Ordnance.
- 3.—Docket No 3,774, dated 18th August 1871, from Deputy Inspector-General of Ordnance, to Commissary of Ordnance, Fort William.
- 4.—Docket No 642A of 19th August 1871, from Commissary of Ordnance, Fort William, to Deputy Inspector-General of Ordnance
- 5.—Letter No 5,040 of 7th November 1871, from Deputy Adjutant-General, Royal Artillery, to Officiating Inspector-General of Ordnance
- 6.—Docket No 2,249H of 8th November 1871, from Officiating Inspector-General of Ordnance, to Deputy Inspector-General of Ordnance.

*Proceedings of the Madras Government, Public Works Department,
3rd October 1872*

TABLE A.

The ordnance that form our siege trains are 24-pounders, 18-pounder, 10-inch and 8-inch Howitzers, 10-inch and 8-inch and 5½-inch Mortars
The weight of each description of ordnance, with its carriage, etc., and 100 rounds of ammunition for the same are as follows —

	WEIGHT					Weight of 100 rounds of ammunition including cartridges	Weight of miscellaneous stores per piece.	Total weight per piece including carriage, ammunition, stores, etc., for 100 rounds.
	Of piece	CARRIAGE						
		Gun	Lumber	Bed	Total			
	CWT	CWT	CWT	CWT	CWT.	CWT	CWT.	CWT TONS.
24-Pounder gun	50	26	16	...	42	32	113	237 or 11 $\frac{1}{2}$
18 " "	42	26	16	...	42	24	111	219 or 10 $\frac{1}{2}$
10-inch Howitzers	42	33	16	...	49	88	113	292 or 14 $\frac{1}{2}$
8 " "	22	29	16	...	45	49	111	227 or 11 $\frac{1}{2}$
10 " Mortars	16 $\frac{1}{2}$	..	.	15 $\frac{1}{2}$	15 $\frac{1}{2}$	81	81	194 or 9 $\frac{1}{2}$
8 " "	8 $\frac{1}{2}$	..	..	7 $\frac{1}{2}$	7 $\frac{1}{2}$	42	81	139 or 6 $\frac{1}{2}$
5 $\frac{1}{2}$ " " ...	1 $\frac{1}{2}$	...	...	1 $\frac{1}{2}$	1 $\frac{1}{2}$	16	42	61 or 3 $\frac{1}{2}$

TABLE B

Statement showing the space that each Gun-carriage, etc., would occupy on a Railway Truck.

Statement showing details of										Track of wheels		Length from sole of tire to the end of trail.	
										FT	IN.	FT.	IN.
Carriages ...	Siege ..	Gun ..	{ Carriage		{	6	2	11	3				
			{ Lumber							{			
		Howitzer.	{ 10 inches .. { Carriage ..		{	6	2	11	3				
	{ Lumber ..		{										
	{ 8 ,, ... { Carriage ..			{						6	2	10	3
	{ Lumber ...		{										
	Sling wagon	...		{ Carriage		{	6	2	11	10½			
{ Lumber		{											
Transport, B P.	...		...	...	...	6		...					
Carts	...	...	{ Store ..		{	5	8	...	...				
			{ Platform ..							{	5	7½	

TABLE C.

Statement showing the Siege Trains at present maintained in the Bengal Presidency.

				ORDNANCE.							
				Guns		Howitzers		Mortars.			Total
				24-Pr	18-Pr	10-in	8-in	10-in	8-in.	5½-in.	
Fort William	...	..	...	10	12	4	6	4	10	10	56
Allahabad	..	..	...	12	8	4	6	4	20	10	64
Ferozepore	...	...	..	10	12	4	6	4	10	10	56
Agra	...	.	...	6	8	2	4	4	10	10	44
Pishawur	...	...	..	.	4	..	2	2	4	6	18

*Proceedings of the Madras Government, Public Works Department,
3rd October 1872.*

Memorandum from the Officiating Inspector-General of Ordnance, to the Deputy Adjutant-General,
Royal Artillery, in India, dated the 18th December 1871, No 2,422H

No 2,623, dated 8th August 1871
" 5,040, " 7th Nov "

FORWARDED to the Deputy Adjutant-
General, Royal Artillery, with reference to his
letters marginally noted.

*Approximate calculation of the number of Vehicles required for the conveyance of the
several Arms of the Service by Railway*

BATTERY OF ROYAL HORSE ARTILLERY.

Detail.

*On ordinary movements in relief accom-
panied by families, camp equipage, etc.,
but without the second line of wagons* | *On service complete with second line of
wagons, camp equipage, etc., but without
commissariat or reserve stores of ammunition*

	Num- ber	Number and description of Vehicles *		Num- ber	Number and description of Vehicles.
Officers	6	1-1st class		6	1-1st class
Medical Subordinates, Non - Commissioned Officers, and men ...	147	6-2nd "		147	5-2nd "
Women and children, about ...	48			0	
Followers ...	408	5-3rd "	\$ 42 Extra doolie-bear- ers	487	6-3rd "
Horses ...	193	32 Double horse or cattle vans	37 " bullock dri- vers.	193	32 Double horse or cattle vans
Ponies ...	89	9 Cattle vans		89	9 Cattle vans
Bullocks ...	3			77	8 " "
Camp Equipage ...	...	2 Covered wagons.			2 Covered wagons.
Hospital stores and doolies, etc. ...	...	1 " and 1 Break van			1 " and 1 Break van.
Harness and Battery stores ...	...	2 Covered wagons			2 Covered wagons.
Baggage, cooking pots, etc. ...	...	3 " and 1 Break van			3 " and 1 Break van
Guns and wagons, and store carts, etc. ...	...	12 Low - sided wagons			16 Low - sided wagons
Total ..	...	75 Vehicles	Total ..		87 Vehicles

BATTERY OF FIELD ARTILLERY

The same as for a Battery of Horse Artillery minus the following vehicles. —

- 12 Double horse vans for extra horses
- 3 Cattle vans for extra ponies
- 1 Covered wagon for extra saddles, harness, and baggage.

Giving a total of 59 Vehicles for movements in relief
and 71 " on service.

† Of these 120 Syces.
89 Grass cuts
3 Bheesties.

† Of these 120 Syces.
89 Grass cuts
3 Bheesties
37 Bullock drivers.

Total... 212 are provided for in horse and cattle vans

Total 249 are provided for in horse and cattle vans

NOTE — No provision is made in any of these returns for the families of Native Soldiers or followers

- 1st class average 12 seats
- 2nd " 33 "
- 3rd " 40 "

*Proceedings of the Madras Government, Public Works Department,
3rd October 1872.*

REGIMENT OF BRITISH CAVALRY

	Num- ber	Number and description of Vehicles *		Num- ber.	Number and description of Vehicles.
Officers and families .	28	3-1st class	Officers	28	2-1st class.
Medical Subordinates, Non - Commissioned Officers, and men .	459	19-2nd "		459	15-2nd "
Women and children, about ..	145		† Of these 151 Syces	0	17-3rd "
Followers ...	890	13-3rd "	230 Grass- cuts	1046	
Horses	522	87 Double horse or cattle vans		522	87 Double horse or cattle vans
Ponies ..	230	23 Cattle vans	Total 381 are	230	23 Cattle vans
Bullocks ...	12	1 Cattle van	provided for in horse	12	1 " van
Camp Equipage ..	..	6 Covered wagons.	and cattle vans		5 Covered vans
Hospital stores, doolies, etc ..	..	3 " and 1 Break van	156 extra doolie- bearers		4 " and 1 Break van.
Harness and Regiment- al stores ...	..	2 Covered wagons			2 Covered - wagons
Baggage, cooking pots, etc. ...	..	8 " and 1 Break van.			6 " and 1 Break van.
Ammunition ...	..	1 Powder van			1 Powder van.
Total ..	..	168 Vehicles	Total .		165 Vehicles.

REGIMENT OF BRITISH INFANTRY.

	Num- ber	Number and description of Vehicles.		Num- ber	Number and description of Vehicles
Officers and families	33	5-1st class	Officers ...	33	3-1st Class
Medical Subordinates, Non - Commissioned Officers, and men	889	36-2nd "		889	29-2nd "
Women and children, about ..	260		* 276 Extra doolie- bearers	995	25-3rd "
Followers ..	719	18-3rd "		6	1 Double horse or cattle van
Horses ...	6	1 Double horse or cattle van		16	2 Cattle vans.
Bullocks ..	16	2 Cattle vans			6 Covered wagons.
Camp Equipage ...	..	8 Covered wagons			
Hospital stores, doolies, etc ..	..	4 " and 1 Break van			5 " and 1 Break van.
Regimental stores ..	..	2 Covered wagons			...
Baggage, cooking pots, etc. ...	..	12 " and 1 Break van			9 Covered wagons and
Ammunition ..	..	2 Powder vans			1 Break van
Total ..	..	92 Vehicles	Total .		84 Vehicles

NOTE — No provision is made in any of these returns for the families of Native Soldiers or followers.

- * 1st class average 12 seats
- 2nd " 33 "
- 3rd " 40 "

*Proceedings of the Madras Government, Public Works Department,
3rd October 1872.*

REGIMENT OF NATIVE CAVALRY.

	Num-ber.	Number and description of Vehicles.		Num-ber.	Number and description of Vehicles
Officers and families ...	8	1-1st class	Officers ...	8	1-1st class
Medical Subordinates, Commissioned, Non-Commissioned Officers, and men ...	459	15-2nd "		459	15-2nd "
Followers ...	337*	3-3rd "		362*	3-3rd "
Horses ...	490	82 Double horse or cattle vans	* 245 Syces, etc., are provided for in horse and cattle vans ...	490	82 Double horse or cattle vans.
Ponies ...	236	24 Cattle vans		236	24 Cattle vans.
Camp Equipage ...	...	2 Covered wagons.			2 Covered wagons.
Hospital stores, doolies, etc. ...	...	1 " and 1 Break van.	† 25 Extra doolie-bearers ...	...	1 " and 1 Break van
Regimental stores and harness ...	...	1 Covered wagon.		...	3 Covered wagons and 1 Break van
Baggage, etc. ...	...	3 " and 1 Break van.			1 Powder van
Ammunition ...	...	1 Powder van			
Total ..		135 Vehicles.	Total ..	...	134 Vehicles

REGIMENT OF NATIVE INFANTRY

	Num-ber.	Number and description of Vehicles		Num-ber.	Number and description of Vehicles
Officers and families ...	8	1-1st class.	Officers ...	8	1-1st class
Medical Subordinates, Commissioned, Non-Commissioned Officers, and men ...	714	24-2nd "		714	24-2nd "
Followers ...	100†	3-3rd "			
Horses ...	8	1 Double horse van and 1 single van.	† 8 Syces are provided for in horse vans.	136*	3-3rd "
Camp Equipage ...	...	2 Covered wagons.		8	1 Double horse van and 1 single van.
Hospital stores, doolies, etc. ...	...	1 " and 1 Break van.	* 36 Extra doolie-bearers ...	...	2 Covered wagons
Regimental stores ...	...	1 Covered wagon and 1 Break van.		...	1 " and 1 Break van
Baggage, etc. ...	...	4 Covered wagons			4 Covered wagons.
Ammunition ...	...	2 Powder vans			2 Powder vans
Total ..		42 Vehicles.	Total ..	...	40 Vehicles

*Proceedings of the Madras Government, Public Works Department,
3rd October 1872.*

A force of about 5,000 men equipped for service (Artillery with extra line of wagons, and Infantry with 200 rounds per man, but without any reserve, Ordnance, or Commissariat stores), and composed of—

- 1 Battery of Royal Horse Artillery,
- 1 Wing of British Cavalry,
- 1 Regiment of Native Cavalry,
- 2 Batteries of Field Artillery,
- 2 Companies of Sappers and Miners,
- 2 Regiments of British Infantry,
- 4 Regiments of Native Infantry,

would require the following number of vehicles

	1st Class	2nd Class	3rd Class	HORSE VANS		Cattle Vans	Powder Vans	Break Vans	Covered Wagons	Low-sided Wagons	Total.
				Double	Single						
1 Battery of Royal Horse Artillery.	1	5	6	32	..	17	.	2	8	16	87
1 Wing of British Cavalry ...	1	7	8	44	..	12	1	1	9		83
1 Regiment of Native Cavalry	1	15	3	82	..	24	1	2	6		134
2 Batteries of Field Artillery	1	10	12	40	..	28		4	14	32	141
2 Companies of Sappers and Miners	1	5	1	..	..	..	1	1	1		10
2 Regiments of British Infantry	6	54	50	2	..	4	4	4	40		164
4 " of Native "	3	95	13	5	1	..	8	8	28		161
Total	14	191	93	205	1	85	15	22	106	48	780

QUARTER MASTER GENERAL'S OFFICE,
ARMY HEAD QUARTERS, SIMLA,
1st September 1870

(Signed) F ROBERTS, Lieut.-Colonel,
1st Assistant Quarter Master General
(Signed) P S LUMSDEN, Colonel,
Quarter Master General

ORDER—Ordered that the documents* above referred to be forwarded to the Public Works Department for information, with reference to the Memorandum from that Department, No 1,253-R, dated 15th July 1871, and with a remark that the Military Department concurs in the opinion of His Excellency the Commander-in-Chief

* Return requested

OBSERVATIONS—At the Lahore Terminus of the Scinde, Punjab, and Delhi Railway there will be a break of gauge, as the Punjab Northern (State) Railway is being constructed on the narrow or metre gauge, while the Guaranteed Railway is on the broad gauge, and the Government of India desired to ascertain what will be the probable requirements of the Military Department at that station, under ordinary circumstances as well as in case of emergency.

2. In the Proceedings of the Military Department now read, the Governor-General in Council concurs in the opinion expressed by His Excellency the Commander-in-Chief, that the ordinary requirements at the station of Lahore, with regard to the Punjab Northern (State) Railway, are not expected to demand a greater supply of rolling-stock than will ensure the arrival and despatch daily of

a complete regiment of British Infantry, and that, this being attained, no other special arrangements will be necessary beyond rest houses to allow of the troops halting there for twenty-four hours, and a special Military siding to admit of the loading, etc., of wagons without interfering with the ordinary traffic.

3 The arrangements connected with the construction of rest-houses for troops, on such sites in the vicinity of stations on the Punjab Northern (State) Railway as may be selected, will be considered separately by the Government of India in this Department in communication with the Military Department, and the decision on this subject will in great measure determine the position of the special narrow gauge sidings for Military purposes, which will be provided in the vicinity of Lahore. The Consulting Engineer to the Government of India for State Railways lately suggested the expediency of constructing a combined railway suitable for both broad and narrow gauge vehicles, by the addition of a third rail between Lahore junction and the Mean Mir stations on the Scinde, Punjab, and Delhi Railway Line. It is probable that the transport of troops will be facilitated and interference with the regular traffic prevented, if it can be arranged that all Military movements from the terminus of the Punjab Northern (State) Railway shall commence from the Mean Mir station east of the Punjab and Delhi Railway; and His Excellency in Council desires that this subject be considered by the Consulting Engineer to the Government of India for Guaranteed Railways, Lahore, in communication with the Agent, Scinde, Punjab, and Delhi Railway, and the Officiating Chief Engineer, Punjab Northern (State) Railway.

4 The extraordinary Military requirements with regard to the Punjab Northern (State) Railway require careful attention. His Excellency the Commander in Chief considers it difficult to state precisely what number of troops should be provided for upon an emergency; but a valuable table is furnished showing approximately in what way 730 vehicles of the broad gauge are occupied in the transport of a force of 5,000 men equipped for service (Artillery with extra line of wagons, and Infantry with 200 rounds per man, but without any reserve, Ordnance, or Commissariat stores).

5. In addition to the transport of the several arms of the service, special provision must be considered for the conveyance, in cases of emergency, of horses, bullocks, and even camels, and His Excellency in Council desires to be furnished with information showing what description of vehicle has been found suitable, and what space has been required, on such of the Guaranteed Railways as have been used for the transport of camels.

ORDER—Ordered that a copy of this Resolution be communicated to the Military Department for information, with reference to extract therefrom, No. 197, Transport—Railway, dated the 3rd May 1872.

Also that a copy of this Resolution, together with a copy of the papers read, be forwarded to the Governments of Madras and Bombay, and to the Consulting Engineers to the Government of India for Guaranteed Railways at Calcutta, Lahore, and Lucknow, for information, and for a reply to the inquiry made in paragraph 5.

Government of Bengal
" of North Western Provinces
" of Punjab
Chief Commissioner of Oudh
" of the Central Provinces
" of Mysore
" of British Burmah
Resident at Hyderabad
Agent to the Governor-General at Rajputana
" " " Central India.

The Officiating Chief Engineer, Punjab Northern (State) Railway
The Engineer-in-Chief, Indus Valley (State) Railway
The Superintending Engineers, Agra and Delhi Districts, Rajputana (State) Railway.
The Superintending Engineers, Holkar and Nimach (State) Railways.

Also that a copy of this Resolution, and of the papers read, be forwarded for information to the Governments, Administrations, and Engineers marginally noted.

(Signed) H. DRUMMOND, Colonel, R.E.,
Officiating Deputy Secretary.

No. 34.

ORDER THEREON, 3rd October 1872, No. 2,319.

RAILWAY, No. 3.

COMMUNICATED to the Consulting Engineer for Railways for report on the subject of paragraph 5,

(True Extract.)

Colonel, R.E.,
Secretary to Government.

To the Consulting Engineer for Railways
Military Department.

C/24537

Govt. of 1872 Madras.

PUBLIC WORKS.

To The Consulting Engrs.
for Railway

Dated

Recd.

Fuel /

3 Oct 1872 No 2319.

Nos. 33 & 34

ikes. (Railway) No. 1

Port of India regarding
furnished with information
ing what descriptive of
he has been found
ile for the conveyance
wells by rail, can?
ing into the water.

With order

Communicated to the Consulting
Engineer for Railways for report on the
subject Memorandum to

Amis

C. E. for Govt.
M. S. S. S.

Recd 24/10/72.