

Report on Physical Verification of Specified Tangible Fixed Assets of Katosan Road to Ranuj railway line of Ahmedabad Division, Western Railway in Gujarat

26 March 2019



**Ernst & Young Merchant Banking
Services LLP
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Goregaon (East),
Mumbai – 400 063,
Maharashtra, India**

Reliance Restricted

Attention: Mr. Z A Khan (IRAS)
Director (BD & Finance),
G-RIDE, GIDB Office,
8th Floor, Block No. 18, Udyog Bhavan, Sector 11,
Gandhinagar, Gujarat – 382017.

26 March 2019

Report on physical verification of Specified Tangible Fixed Assets between Katosan Road to Ranuj (Katosan–Becharaji–Chanasama–Ranuj) railway line of Ahmedabad Division, Western Railways in Gujarat

Dear Sir,

In accordance with your instructions, work was performed as per the agreed scope of work. We are pleased to present the following report (“Report”) to Gujarat Rail Infrastructure and Development Corporation Limited (“you” or “G-RIDE” or “Client” or “Company”) in connection with physical verification of Specified Tangible Fixed Assets related to the Katosan Road – Becharaji – Chanasama – Ranuj 65 km metre gauge railway line of Ahmedabad Division, Western Railways in the state of Gujarat (hereinafter referred to as “Specified Railway Line”) as at Effective Date.

It may be noted that for carrying out the physical verification, we have relied upon information provided by Management of G-RIDE (“Management”). We have been given to understand that the information provided is correct and accurate and that the Company was duly authorised to provide us the same.

Purpose of our report and restrictions on its use

We understand that the physical verification of assets would be as per the physical list provided to us by G-RIDE and was required only for the purpose of assisting G-RIDE in internal management analysis and decision making (“Purpose”).

This Report and its contents may not be quoted, referred to or shown to any other parties without prior information and our consent.

We accept no responsibility or liability to any person other than to the Client, or to such party to whom we have agreed in writing to accept a duty of care in respect of this Report, and accordingly if such other persons choose to rely upon any of the contents of this Report they do so at their own risk.

Whilst each part of the Report addresses different aspects of the work we have agreed to perform, the entire Report should be read for a full understanding of our findings and advice.



Reliance Restricted

Our work commenced on 7 September 2018 and was substantially completed on 18 March 2018. Our Report does not take account of events or circumstances arising after Effective Date and we have no responsibility to update the report for such events or circumstances. If you have any questions or require additional information, please do feel free to contact us.

Yours faithfully,

Executive Director

Report on physical verification of tangible fixed assets of Specified Railway Line of Western Railway

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1 Physical Verification Summary

Engagement background

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Engagement background

- ▶ G-RIDE, with 49% stake of Ministry of Railways and 51% stake of Government of Gujarat, is a joint venture company that was incorporated on 6 January 2017 with an objective to develop, finance and implement viable railway projects in Gujarat.
- ▶ We understand that the gauge conversion of the Specified Railway Line from Metre Gauge (MG) to Broad Gauge (BG) is one of the identified projects by G-RIDE to meet the needs of the upcoming plant of Maruti Suzuki India Limited (MSIL) at Becharaji.
- ▶ In connection with above, G-RIDE has approached EY for providing assistance in physical verification of Specified Tangible Fixed Assets located along the Specified Railway Line for the aforementioned purpose.

Scope of work

- ▶ The scope of physical verification includes the count of quantities of relevant items as per the physical list provided to us by Management:
 - ▶ Important bridges, major bridges, minor bridge/culverts, road over bridges, road under bridges, road under railway line, railway stations, railway yards, foot over bridges, transmission lines, underground power lines, signalling infrastructure, electrical infrastructure, sleepers, railing, rails, signals and station buildings
 - ▶ In addition to above, preparation of list of miscellaneous assets lying alongside the railway track including approximate count of the same
- ▶ Based on our discussions with the Management, above scope excludes the following sections / items as per the physical list provided to us:
 - ▶ Route Length, Right of Way (ROW), Description and heights of benchmarks.
 - ▶ The scope of physical verification would exclude any kind of measurement survey and any land related survey e.g. total stations, traverse or geodetic survey.
- ▶ Given the nature and volume of work involved and considering specific challenges, the work of physical verification was subcontracted to Sarvada Engineering and Project Management Pvt. Ltd (“SEPM” or “Subcontractor”).
- ▶ The assignment was carried out in consultation with G-RIDE and collaboration with Western Railway officials (“WR Representatives”).
- ▶ This Report is our deliverable for the above mentioned scope of work based on physical verification assistance and files provided by SEPM.

1 Physical Verification Summary

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Sources of Information

- ▶ The following information, as provided by G-RIDE/WR, have been inter-alia used for physical verification of Specified Tangible Fixed Assets:
- ▶ **Information pertaining to Specified Tangible Fixed Assets**
 - ▶ Physical list of various tangible fixed assets (file name: All Inventory 05-06-2018 new.pdf)
 - ▶ List of underground assets (case data_sorted.xlsx)
 - ▶ Inputs and assistance provided by WR representatives

1 Physical Verification Summary

Matters of emphasis

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Matters of emphasis – Specified Tangible Fixed Assets

The following limitations to the data provided pertaining to Specified Tangible Fixed Assets were observed:

- ▶ It was understood from G-RIDE that no FAR was readily available. Hence, in absence of the FAR, the fixed asset lists provided to us were considered as the base list for the physical verification exercise.
- ▶ Listing of major assets such as rails, sleepers have been maintained chainage wise (fixed distance intervals wise) in the asset lists.
- ▶ For rails, the asset list provided by G-RIDE mentions chainage wise physical count of the rails but rail specifications were not available in the asset list. In absence of the same, the specifications were determined based on discussions with WR Representatives.
- ▶ The physical asset list provided by G-RIDE mentions chainage wise and category wise physical count of the sleepers. However, segregation of steel sleepers into CST and ST sleepers was not available in the asset list provided to us by the Company. As understood from the WR Representatives, ST and CST sleepers were identified and verified separately.
- ▶ The starting chainage reference point for the physical asset list provided by G-RIDE is 0.000 at Katosan station, which we understand, from WR Representatives, corresponds to the chainage 37.000 used by WR and have relied upon without any independent verification. Further, '0' Chainage has been considered as per '0' chainage marked by GRIDE on Katosan station in Yellow colour on rails.
- ▶ The assets as per the physical list provided by G-RIDE could not be mapped / correlated with the list of assets provided by the WR Representatives due to inherent differences in chainage given in the asset list of G-RIDE and the same provided in the list of Western Railways. Further, the asset description provided in the list of WR was different from the same provided in the asset list of G-RIDE.
- ▶ Physical verification of Specified Tangible Fixed Assets has been conducted manually by SEPM on best efforts basis by walking tour of the 65 km long railway track in absence of the trolley at the site and adverse ground conditions.
- ▶ The length, breadth and pillar heights for bridges have been measured manually and on high level approximation basis by SEPM and have been provided for the purpose of indicative reference only since measurement survey was out the scope of this exercise.

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2 Statement of Limiting Conditions

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- ▶ EY findings of physical verification of Specified Tangible Fixed Assets of G-RIDE given in this report are based on the best efforts basis and only represent the observations based upon information furnished by the Western Railway officials, management of G-RIDE and SEPM and the said observations shall be considered advisory in nature.
- ▶ In the course of work, we were provided with written information, oral information, and/or data in electronic form, related to Specified Tangible Fixed Assets. We have relied upon this information in physical verification analysis and in the preparation of this Report and have not independently verified its accuracy or completeness. Also, we have been given to understand by G-RIDE that it has not omitted any relevant and material factors and that it has checked out relevance or materiality of any specific information to the present exercise with us in case of any doubt. Accordingly, we do not express any opinion or offer any form of assurance regarding its accuracy and completeness. Our conclusions are based on information given by / on behalf of the Management of G-RIDE and SEPM. Also, we assume no responsibility for technical information furnished by G-RIDE and believe it to be reliable.
- ▶ Provision of opinions and consideration of the issues described herein are areas of our regular practice. The services do not represent accounting, assurance, accounting / tax due diligence, consulting or tax related services that may otherwise be provided by us or our affiliates.
- ▶ The physical verification report was prepared for assisting the Client and is for the confidential internal use of the Client only. Its suitability and applicability of any other use has not been checked by us. Neither the physical verification report nor its contents may be disclosed to any third party or referred to or quoted in any registration statement, prospectus, offering memorandum, annual report, any public communication, loan agreement or other agreement or document given to third parties without our prior written consent. We retain the right to deny permission for the same.
- ▶ The Report assumes that G-RIDE comply fully with relevant laws and regulations applicable in all its areas of operations unless otherwise stated, and that it will be managed in a competent and responsible manner. Further, except as specifically stated to the contrary, this valuation report has given no consideration to the following matters -
 - Matters of a legal nature, including issues of legal title and compliance with local laws, and
 - Litigation and other contingent liabilities that are not recorded in the audited/unaudited balance sheet of G-RIDE
- ▶ It was represented to us by the Management of G-RIDE that the assets to be considered for physical verification are physically available at the site locations and are not in working condition unless otherwise mentioned specifically which we have relied for our work. While site visit was carried out and visual overview of the facilities and physical verification of major assets was conducted, we have not checked the working condition of each asset.
- ▶ EY does not assume any responsibility for identifying structural conditions of Specified Tangible Fixed Assets. No analysis was made of the subsurface or the hazardous waste conditions, if any. Our services did not take into consideration the possibility of the existence of toxic substances, hazardous or contaminated conditions, or underground storage tanks, nor the costs associated with remedying such substances or conditions. EY is not qualified to detect, and shall not be responsible for detecting, such substance or conditions.

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- ▶ The physical verification analysis and result are governed by concept of materiality.
- ▶ No enquiry into the Client's claim to title of assets or property has been made for the purpose of this physical verification. With regard to the Client's claim to title of assets and property, we have relied solely on representations, whether verbal or otherwise, made by G-RIDE to us for the purpose of this report. We have not verified such representations against any title documents or any agreements evidencing right or interest in or over such assets and property, and have assumed the Client's claim to such rights, title or interest as valid for the purpose of this report. No information has been given to us about liens or encumbrances against the Client, if any beyond the information provided to us by the G-RIDE. Accordingly, no due diligence into any right, title or interest in property or assets was undertaken and no responsibility is assumed in this respect or in relation to legal validity of any such claims.
- ▶ The fee for the Final Report is not contingent upon the results reported.
- ▶ We owe responsibility only to G-RIDE that has retained us and nobody else.
- ▶ EY does not accept any liability to any third party in relation to the issue of this physical verification report.

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- ▶ G-RIDE is registered in Ahmedabad (Gujarat) Registrar Office with its head office located at Block No. 6, 7th Floor, Udyog Bhavan, Sector-11, Gandhinagar, Gujarat, India.
- ▶ As mentioned earlier, the gauge conversion of the Specified Railway Line from MG to BG is one of the identified projects by G-RIDE to meet the needs of the upcoming plant of Maruti Suzuki India Limited (MSIL) at Becharaji. The categories of tangible fixed assets available at Specified Railway Line are given below :

Buildings & civil works

Important bridges, major bridges, minor bridge/culverts, road over bridges, road under bridges, road under railway line, railway stations, railway yards, foot over bridges and station buildings

Railway and electrical infrastructure

Transmission lines, underground power lines, signalling infrastructure, electrical infrastructure, sleepers, railing, rails, signals

- ▶ As informed by WR Representatives, Specified Tangible Fixed Assets have not been in operation for more than a year as at the Effective Date and the existing railway track along with the related infrastructure is abandoned and in poor condition. We understand from Management that Specified Tangible Fixed Assets would be transferred from Western Railway to the proposed SPV and G-RIDE would dismantle and scrap the same for the implementation of the proposed gauge conversion project.

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Work performed – Specified Tangible Fixed Assets

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- ▶ EY team visited the Specified Railway Line at Katosan Road station for sample physical verification of the Specified Tangible Fixed Assets and at Chanasma railway station for collection of data and discussions with WR representatives.
- ▶ EY subcontracted scope of physical verification exercise of Specified Railway Line to SEPM as mentioned earlier.
- ▶ SEPM team visited the Specified Railway Line with the objective of physical verification of Specified Tangible Fixed Assets in consultation with WR Representatives.
- ▶ The physical verification process consisted of a walking tour of the Specified Railway Line, starting from Katosan Road up to Ranuj of the Specified Railway Line and verification of accessible and verifiable fixed assets based on the physical asset list provided by Client.

Physical verification date	Western Railway Representatives	EY India and SEPM representatives
13 November, 2018	Suresh Prajapati, Prakash Patel, Mangaji Thakore	EY team - Vishvas Vaidya, Kapil Bhati, Aritra Sengupta (on sample basis)
07 February to 23 February, 2019	Suresh Prajapati, Prakash Patel	SEPM team - Saravanan Panneervel, Jaimin Patel, Hardik Sheth, Haresh Patel, Hardik Goswami, Vasant Patel

4 Assistance in physical verification

Physical verification of fixed assets

Physical verification of Specified Tangible Fixed Assets along the Specified Railway Line

- ▶ Physical verification of Specified Tangible Fixed Assets was conducted chainage wise taking the chainage reference point (0.000) as the starting chainage point from Katosan Road station as per the assets list provided by G-RIDE and completed at 65.4 km at Ranuj railway station.
- ▶ The chainages in the asset list were ascertained using marks painted on the railway track and / or 100 metre marks installed along the railway track. For each chainage intervals (a span of 100 metres), the length of various type of rails was recorded. Rails are generally measured in Metres and multiplied by 2 and additional or reduced length is accounted for in case of turnouts etc.
- ▶ WR representatives informed that one CST 9 sleeper assembly consists of 2 pots and a tie-bar. We have counted each pot and tie bar individually for the purpose of weight calculation.
- ▶ Physical count of major bridges and minor bridges were taken and shown separately in the two different annexures along with approximate dimension. We infer that the 'road over bridge' and 'road under bridge' have been covered under major and minor bridges.
- ▶ Details of level crossings (LC) have been provided in the Annexure 6 including details of cabin, crossing pillars, railing and railing pillars etc.
- ▶ There are total 14 railway stations falling on the Specified Railway line. Chainage wise details of the stations and yards including station buildings, staff quarters, FOBs and other civil works have been given in the Annexure 9.
- ▶ There are total seven number of signalling systems. Panel Interlock system is there in Katosan and Ranuj whereas signal system is operated by Lever at the remaining five locations. As shown in the Annexure 7A, there are a total of 21 colour light signals. In addition to the same, list of other signalling material such as Point machine, Track Circuit Equipment Set, Block Instrument, Relay groups, K50 Mini Group, DG set etc. existing in the Katosan-Ranuj section is given in the Annexure 7D.
- ▶ Details of transmission lines and U/G lines crossing have been given in the Annexure 10.
- ▶ As desired by the Client, the rails and sleepers lying scattered alongside the Specified Railway Line were also listed and broadly verified and details of the same prepared location and chainage-wise have been given in the Annexure 3.
- ▶ It must be noted that the measurements provided in the respective annexures are approximate and based on manual survey, provided for indicative reference only. Measurement survey was out of the scope of this exercise.

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- Physical verification findings as provided by SEPM for the Specified Railway Line can be found in the following annexures:

Annexure 1 : Sleepers

Annexure 2 : Rails

Annexure 3 : Extra Stock

Annexure 4 : Fittings

Annexure 5 : Engineering Indicators

Annexure 6 : Level Crossings

Annexure 7A : Colour Light Signals

Annexure 7B : Semaphore Signals

Annexure 7C : Other Signalling Infrastructure

Annexure 7D : Other Signalling Material

Annexure 8A : Major Bridges

Annexure 8B : Minor Bridges

Annexure 9 : Railway Yards

Annexure 10 : UG and OH Transmission Line

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Client or Company or G-RIDE	Gujarat Rail Infrastructure Development Corporation Limited
Management	References to 'Management' will include G-RIDE's Management unless otherwise specified
Effective Date	31 March 2018
EY	Ernst & Young Merchant Banking Services Private Limited
FAR	Fixed Asset Register
FOB	Foot over bridge
Mn	Million
WR	Western Railway
SEPM or Subcontractor	Sarvada Engineering and Project Management Pvt. Ltd.

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CHAINAGE NO.		CHANNEL	POINT SLEEPER	PRC	ST			CST - 9				WOODEN	
KM	M				90 R	60 R	50 R	90 R	75 R	60 R	50 R	NORMAL	BRIDGE TIMBER
NO.													
0	M.L-000-100						250					10	
	L.L-000-100						242					16	
	M.L-100-200						250					13	
	L.L-200-300						238					18	
	M.L-200-300						204					32	
	L.L-200-300						226					26	
	M.L-300-400		44				70					65	
	L.L-300-350						108					16	
	400-500						228					21	
	500-600						268					0	
	600-700						266					4	
	700-800						68					90	
	800-900				106		178					16	
	D.E.L-800-900						118						
	900-1000				35		42					24	
D.E.L-900-1000						116							
1	000-100				18		236					1	
	100-200			20	10		150					36	
	200-300			39	10		170					25	
	300-400			57	4		148					10	
	400-500						278					1	
	500-600						270					-	
	600-700			10			260					1	
	700-800				2		290					-	
	800-900				8		252					-	
	900-1000				14		240					-	
2	000-100				16		236						
	100-200				16		236						
	200-300				16		214				3		
	300-400				16		236						
	400-500				16		236						
	500-600				6		252						
	600-700						270						
	700-800						268						
	800-900						272						
	900-1000						268						
3	000-100						272						
	100-200						272						
	200-300						280						
	300-400						260				6		
	400-500						280						
	500-600						284						
	600-700						278						
	700-800						284						
	800-900						262						
	900-1000						270						
4	000-100				4		262					4	
	100-200				14		210						
	200-300				16		236						
	300-400				16		232						
	400-500				16		242						
	500-600						286						
	600-700						276						
	700-800						272						
	800-900						266						
	900-1000						264						
5	000-100						272						
	100-200				14		254						
	200-300				18		262						
	300-400				16		242						
	400-500				14		240						
	500-600				16		220				8		
	600-700						256						
	700-800						268						
	800-900						268						
	900-1000						268						
6	000-100						270						
	100-200						238				7		
	200-300	20				6	194				32		
	300-400						274						
	400-500						270						
	500-600						268						
	600-700						280						
	700-800						274						
	800-900						264						
900-1000						270							
	000-100						262						
	100-200						244				8		
	200-300						268						

CHAINAGE NO.		CHANNEL	POINT SLEEPER	PRC	ST			CST - 9				WOODEN	
KM	M				90 R	60 R	50 R	90 R	75 R	60 R	50 R	NORMAL	BRIDGE TIMBER
NO.													
7	300-400						270						
	400-500						272				1		
	500-600						274						
	600-700						274						
	700-800						268						
	800-900						248						
	900-1000						280						
8	000-100						266						
	100-200						262						
	200-300						32	18	192		18		
	300-400								238		24		
	400-500								248		28		
	500-600								236		29		
	600-700								236		45		
	700-800								234		33		
	800-900								236		22		
	900-1000								136		53		
9	000-100								120		89		
	100-200								222		19		
	200-300								236		18		
	300-400								236		20		
	400-500								234		27		
	500-600			2					232		28		
	600-700								224		46		
	700-800			1					234		43		
	800-900								236		22		
10	900-1000			1					236		18		
	000-100								236		20		
	100-200								224		25		
	200-300						160	14	82		10		
	300-400						266				0		
	400-500						248				6		
	500-600						268						
	600-700						286						
	700-800						284						
11	800-900						272						
	900-1000						284						
	000-100						268						
	100-200						272						
	200-300				25		220				1		
	300-400				151								
	400-500				146								
	500-600				157								
	600-700				159								
12	700-800				154								
	800-900				155								
	900-1000				149								
	000-100				148								
	100-200				151								
	200-300				144								
	300-400				151								
	400-500				152								
	500-600				150								
13	600-700				150								
	700-800				141								
	800-900				148								
	900-1000				144								
	000-100				154								
	100-200				157								
	200-300				159								
	300-400				150								
	400-500				150								
14	500-600				151								
	600-700				153								
	700-800				152								
	800-900				153								
	900-1000				154								
	000-100				154								
	100-200				157								
	200-300				158								
	300-400				158								
	400-500				150								
	500-600				158								
	600-700				158								
	700-800				158								
	800-900				157								
	900-1000				159								
	000-100				158								
	100-200				159								

CHAINAGE NO.		CHANNEL	POINT SLEEPER	PRC	ST			CST - 9				WOODEN	
KM	M				90 R	60 R	50 R	90 R	75 R	60 R	50 R	NORMAL	BRIDGE TIMBER
NO.													
15	200-300				159								
	300-400				157								
	400-500				158								
	500-600				158								
	600-700				150								
	700-800				157								
	800-900				159								
	900-1000				158								
16	000-100				161						1		
	100-200	10			143						13		
	200-300				158								
	300-400				156								
	400-500	12			138						24		
	500-600				159								
	600-700				158								
	700-800				157								
	800-900	8			148						6		
900-1000	2			153						5			
17	000-100				158								
	100-200	19			134						14		
	200-300				156								
	300-400	38			127								
	400-500				158								
	500-600				140						10		
	600-700				155								
	700-800	20			136						7		
	800-900	6			152						2		
	900-1000				159								
18	000-100				159								
	100-200				156								
	200-300				158								
	300-400				158								
	400-500				158								
	500-600				156								
	600-700				151								
	700-800				158								
	800-900				158								
900-1000				156									
19	000-100				155								
	100-200				157								
	200-300				158								
	300-400				157								
	400-500				158								
	500-600				157								
	600-700				161								
	700-800				159								
	800-900				147						1		
900-1000				157									
20	000-100				160								
	100-200	16			144						6		
	200-300				157								
	300-400				156								
	400-500				154								
	500-600				156								
	600-700				155								
	700-800				153								
	800-900				159								
900-1000				165									
21	000-100				159								
	100-200				162							4	
	200-300				157						2		
	300-400				164								
	400-500				164								
	500-600				163								
	600-700				153								
	700-800				156								
	800-900	10			136						13		
900-1000	14			129						22			
22	000-100				150								
	100-200				156								
	200-300				145						26	4	
	300-400				143								
	400-500				154								
	500-600				152								
	600-700				154								
	700-800				152								
	800-900				154								
900-1000				151									
000-100				151									

CHAINAGE NO.		CHANNEL	POINT SLEEPER	PRC	ST			CST - 9			WOODEN	
KM	M				90 R	60 R	50 R	90 R	75 R	60 R	50 R	NORMAL
NO.												
23	100-200				153							
	200-300				161							
	300-400	6			133						26	
	400-500				153							
	500-600				153							
	600-700				155							
	700-800				154							
	800-900	16			133						19	
24	900-1000				153							
	000-100				154							
	100-200	7			137						22	
	200-300				155							
	300-400				153							
	400-500				156							
	500-600				154							4
	600-700				137						18	
25	700-800				156							
	800-900				155							
	900-1000				116							
	000-100	33			124			14	12		15	
	100-200		37		57			14	66		11	
	D.E.L-100-200										10	
	L.L-100-200		4		23				46			
	200-300				154							
	D.E.L-200-300										24	
	L.L-200-300				83			14	42		49	
	300-400				154							
	L.L-300-400				155							
	400-500				153							
	L.L-400-500				156							
	500-600		11		157							
	L.L-500-600				108						1	
600-700				76			44	16		33		
L.L-600-700								98				
700-800				136						10		
800-900	10			140								
900-1000				163								
26	000-100				159							
	100-200				165							
	200-300				161							
	300-400				156							
	400-500				154							
	500-600				155							
	600-700				154							
	700-800				154							
	800-900				156							
	900-1000				152							
27	000-100				156							
	100-200				156							
	200-300				157							
	300-400				159							
	400-500				145							
	500-600	6			149						12	
	600-700				158							
	700-800				161							
	800-900				145							
900-1000				155								
28	000-100				154							
	100-200				153							
	200-300				154							
	300-400				154							
	400-500				155							
	500-600				155							
	600-700				155							
	700-800				153							
	800-900				155							
900-1000				154								
29	000-100	16			137						10	
	100-200				154							
	200-300				167							
	300-400				156							
	400-500				157							
	500-600				155							
	600-700				158							
	700-800				154							
	800-900				156							
900-1000				155								
000-100				157								
100-200				155								

CHAINAGE NO.		CHANNEL	POINT SLEEPER	PRC	ST			CST - 9				WOODEN	
KM	M				90 R	60 R	50 R	90 R	75 R	60 R	50 R	NORMAL	BRIDGE TIMBER
NO.													
30	200-300				154								
	300-400				155								
	400-500				155								
	500-600				154								
	600-700				158								
	700-800				154								
	800-900				154								
	900-1000				153								
31	000-100				154								
	100-200				152								
	200-300				153								
	300-400				152								
	400-500				154								
	500-600	211			15					9			
	600-700	221			7					3			
	700-800				152								
	800-900				151								
	900-1000				151								
32	000-100				153								
	100-200				153								
	200-300				153								
	300-400				153								
	400-500				177								
	500-600				163								
	600-700				156								
	700-800				155								
	800-900				153								
	900-1000				153								
33	000-100				157								
	100-200				154								
	200-300				158								
	300-400	10			140					3			
	400-500				155								
	500-600				155								
	600-700				158								
	700-800				155								
	800-900				155								
	900-1000				153								
34	000-100	10			146								
	100-200				160								
	200-300				156								
	300-400				156								
	400-500				165								
	500-600				159								
	600-700				159								
	700-800				149								
	800-900				156								
	900-1000				157								
35	000-100				157								
	100-200	10			147								
	200-300				155								
	300-400				155								
	400-500				156								
	500-600				154								
	600-700				159								
	700-800				159								
	800-900				150								
	900-1000				157								
36	000-100				64				128		4		
	100-200								272				
	200-300								274				
	300-400								272				
	400-500								274				
	500-600								272				
	600-700								276				
	700-800								272				
	800-900								272				
	900-1000								274				
37	000-100	64			3					272	2		
	100-200							30	154		6		
	200-300								264				
	300-400								272				
	400-500								274				
	500-600								272				
	600-700				13				272				
	700-800								272				
800-900				4				272					

CHAINAGE NO.		CHANNEL	POINT SLEEPER	PRC	ST			CST - 9				WOODEN	
KM	M				90 R	60 R	50 R	90 R	75 R	60 R	50 R	NORMAL	BRIDGE TIMBER
	900-1000									274			
38	000-100									262			
	100-200	15			6				30	216	5		
	200-300									272	3		
	300-400									272			
	400-500									274			
	500-600	15			4				22	218			
	600-700									272			
	700-800									280	1		
	800-900									260			
	900-1000			39							204	5	
	L.L-900-1000									92	1		
39	000-100									278			
	L.L-000-100									294	1		
	100-200									278			
	L.L-100-200									282			
	200-300									276			
	L.L-200-300									282			
	300-400									284			
	L.L-300-400				1					288			
	400-500		40							198	3		
	L.L-400-500									10			
	500-600									278			
	600-700									278			
	700-800	2							12	256	1		
800-900	13							8	246	2			
900-1000									276				
40	000-100									276			
	100-200									278			
	200-300									272			
	300-400									272			
	400-500									272			
	500-600									272			
	600-700									260	3		
	700-800									268			
	800-900									264			
900-1000									266				
41	000-100									266			
	100-200									264			
	200-300									264			
	300-400									266			
	400-500									258			
	500-600									266			
	600-700	20			18				42	168	14		
	700-800									266			
	800-900									270			
900-1000									266				
42	000-100									272			
	100-200	15							24	214	4		
	200-300									270			
	300-400									274			
	400-500									272			
	500-600									272			
	600-700									274			
	700-800									272			
	800-900									272			
900-1000									254	2			
43	000-100									272			
	100-200									272			
	200-300									272			
	300-400									260			
	400-500									272			
	500-600									268			
	600-700									268			
	700-800									272	9		
	800-900									272	12		
900-1000									272	2			
44	000-100									272	7		
	100-200									272			
	200-300									184	53		
	300-400									260	6		
	400-500									260	6		
	500-600									248	13		
	600-700									250	12		
	700-800									192	31		
	800-900									142	44		
900-1000									280	10			
	000-100									264	4		
	100-200									224	13		

CHAINAGE NO.		CHANNEL	POINT SLEEPER	PRC	ST			CST - 9				WOODEN	
KM	M				90 R	60 R	50 R	90 R	75 R	60 R	50 R	NORMAL	BRIDGE TIMBER
NO.													
45	200-300									244		14	
	300-400									254		10	
	400-500									244		14	
	500-600									258		8	
	600-700									272			
	700-800									272			
	800-900									254			
	900-1000									272			
46	000-100									272			
	100-200									274			
	200-300									274			
	300-400									274			
	400-500									274			
	500-600									270			
	600-700									258	2		
	700-800									274			
	800-900	11								274			
900-1000					12			22	230		6		
47	000-100									276			
	100-200									270			
	200-300									274		1	
	300-400	10				6			30	210		3	
	400-500									280			
	500-600									276			
	600-700									272			
	700-800									276			
	800-900									272			
900-1000									270				
48	000-100									272			
	100-200									270			
	200-300									272		6	
	300-400									274			
	400-500									250		1	
	500-600	24				16			20	214		4	
	600-700								16	250		1	
	700-800									274			
	800-900									272			
900-1000									272				
49	000-100									272			
	100-200									274			
	200-300									272			
	300-400									274			
	400-500									272			
	500-600					8			16	212		9	
	600-700									272			
	700-800									272			
	800-900	16				4			24	208		4	
900-1000									274				
50	000-100									272			
	100-200									272			
	200-300									272			
	300-400	16							30	214		2	
	400-500									272			
	500-600					2				256			
	600-700									272			
	700-800									272			
	800-900									272			
900-1000									268				
51	000-100									270			
	100-200									266			
	200-300									270			
	300-400									268			
	400-500									270			
	500-600									266			
	600-700									266			
	700-800									266			
	800-900						110			28	82		
900-1000						116				54			
52	000-100									141			
	100-200									140		2	
	200-300									140		2	
	300-400					30	59			116	6		
	400-500									268		5	
	500-600									238			
	600-700	64							90	170		1	
	700-800								10	242		4	
	800-900									252			
900-1000									272				
000-100									272				

CHAINAGE NO.		CHANNEL	POINT SLEEPER	PRC	ST			CST - 9				WOODEN	
KM	M				90 R	60 R	50 R	90 R	75 R	60 R	50 R	NORMAL	BRIDGE TIMBER
NO.													
53	100-200									240			
	200-300									278			
	300-400									274			
	400-500									260	4		
	500-600									274			
	600-700									274			
	700-800	10						10		238	1		
	800-900	38						11		166	7		
	900-1000									272			
54	000-100									276			
	100-200									272			
	200-300									274			
	300-400									274			
	400-500									274			
	500-600									270			
	600-700									274			
	700-800									272			
	800-900									274			
55	000-100									272			
	100-200									272	5		
	200-300	16						17		208			
	300-400									272			
	400-500									274			
	500-600									274			
	600-700									272			
	700-800									270			
	800-900									274			
56	000-100									272			
	100-200	16						30		182	6		
	200-300									272			
	300-400									272			
	400-500									272			
	500-600			5						230	18		
	600-700			2						234	16		
	700-800			1						238	17		
	800-900			3						238	14		
57	000-100									236	14		
	100-200									238	11		
	200-300	30			3	4				188	17		
	300-400				13	8				198	12		
	400-500				4	11				240	1		
	500-600				1	13				236	6		
	600-700				3	8				234	9		
	700-800	15				8				234	14		
	800-900				20	6				200	14		
58	000-100									236	1		
	100-200				1	16				236	1		
	200-300				3	8				222	7		
	300-400				5	12				220	15		
	400-500				2	13				254	3		
	500-600					12				236	6		
	600-700					14				238	4		
	700-800					14				236	4		
	800-900					12				238	6		
59	000-100				2	12				236	4		
	100-200				4	7				248	2		
	200-300				2	16				236	1		
	300-400				8	9				232	8		
	400-500					8				234	9		
	500-600					12				240	2		
	600-700					15				244	1		
	700-800					16				238	1		
	800-900					10				240	2		
60	000-100				13	12				236			
	100-200				7	12				218	4		
	200-300				8	8				236			
	300-400				12	6				236			
	400-500				6	12				234			
	500-600				10	8				236			
	600-700				4	14				236			
	700-800				6	8				242			
	800-900				13					244	1		
60	000-100				11	3				240	1		
	100-200				8	6				244			
	200-300				7	12				196	9		
	300-400				3	10				236	5		
	400-500				20	7				174	17		
	500-600				4	9				238	5		
	600-700												
	700-800												
	800-900												

CHAINAGE NO.		CHANNEL	POINT SLEEPER	PRC	ST			CST - 9				WOODEN	
KM	M				90 R	60 R	50 R	90 R	75 R	60 R	50 R	NORMAL	BRIDGE TIMBER
NO.													
61	000-100			2		8				232		7	
	100-200			6		6				226		7	
	200-300	10		20						186		14	
	300-400			5		2				238		10	
	400-500			5						208		14	
	500-600			7						238		11	
	600-700	10		7		3				232		8	
	700-800			4		4				238		10	
	800-900			3						236		13	
	900-1000			13		4				234		3	
62	000-100	10		25		4				160		19	
	100-200	16				4				244		10	
	200-300					2				244		12	
	300-400									240		16	
	400-500									238		18	
	500-600									234		18	
	600-700			16						168		32	
	700-800									238		32	
	800-900			4						240		15	
	900-1000			3						240		13	
63	000-100			6						244		9	
	100-200			12						186		32	
	200-300			2						230		15	
	300-400									244		14	
	400-500									248		12	
	500-600					1				258		7	
	600-700									242		15	
	700-800					1				252		9	
	800-900									240		19	
900-1000									244		14		
64	000-100									254		9	
	100-200	16		26						160		230	
	200-300									248		12	
	300-400			7						216		20	
	400-500			141								7	
	500-600			137									
	600-700			137									
	700-800		9	130									
	L.L-700-800												
	800-900		49	99									
	L.L-800-900			100									
900-1000			141								31		
L.L-900-1000			134										
65	000-100			139									
	L.L-000-100			139									
	100-200			143									
	L.L-100-200			155									
	200-300		49	96								4	
	L.L-200-300												
300-400			84										
TOTAL		1203	282	2338	38517	539	706	24142	612	76266	208	2986	12

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R		
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH	
(M)																
0	M.L-000-100		200													
	L.L-000-100		200													
	M.L-100-200		200													
	L.L-200-300		200													
	M.L-200-300		200													
	L.L-200-300		200													
	M.L-300-400		200													
	L.L-300-350		100													
	400-500		200													
	500-600		200													
	600-700		200													
	700-800		200													
	800-900		200													
D.E.L-800-900		120														
900-1000		200														
D.E.L-900-1000		120														
1	000-100		200													
	100-200		200													
	200-300		200													
	300-400		200													
	400-500		200													
	500-600		200													
	600-700		200													
	700-800		200													
	800-900		200													
900-1000		200														
2	000-100		200													
	100-200		200													
	200-300		200	14.1												
	300-400		200													
	400-500		200													
	500-600		200													
	600-700		200													
	700-800		200													
	800-900		200													
900-1000		200														
3	000-100		200													
	100-200		200													
	200-300		200													
	300-400		200	13.2												
	400-500		200													
	500-600		200													
	600-700		200													
	700-800		200													
	800-900		200													
900-1000		200														
	000-100		200													
	100-200		200	18.6												
	200-300		200													
	300-400		200													

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R	
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH
(M)															
4	400-500		200												
	500-600		200												
	600-700		200												
	700-800		200												
	800-900		200												
5	900-1000		200												
	000-100		200												
	100-200		200												
	200-300		200												
	300-400		200												
	400-500		200												
	500-600		200	20.8											
	600-700		200												
6	700-800		200												
	800-900		200												
	900-1000		200												
	000-100		200												
	100-200		200	12.4											
	200-300		200		42										
	300-400		200	7.6											
	400-500		200												
7	500-600		200												
	600-700		200												
	700-800		200												
	800-900		200												
	900-1000		200												
	000-100		200												
	100-200		200	15.6											
	200-300		200												
8	300-400		200							200					
	400-500		200							200					
	500-600		200							200					
	600-700		200							200					
	700-800		200							200					
	800-900		200							200					
	900-1000		200		86					200					
	000-100		200		91					200					
9	100-200		200							200					
	200-300		200							200					
	300-400		200							200					
	400-500		200							200					

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R	
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH
		(M)													
9	400-500							200							
	500-600							200							
	600-700		16.6					200							
	700-800							200							
	800-900							200							
	900-1000							200							
10	000-100							200							
	100-200							200							
	200-300	200													
	300-400	200													
	400-500	200	12.2												
	500-600	200													
	600-700	200													
	700-800	200													
	800-900	200													
11	000-100	200													
	100-200	200													
	200-300	200													
	300-400	200													
	400-500	200	14.8												
	500-600	200													
	600-700	200													
	700-800	200													
	800-900	200													
12	000-100	200													
	100-200	200													
	200-300	200													
	300-400	200													
	400-500	200													
	500-600	200													
	600-700	200													
	700-800	200	12.2												
	800-900	200													
13	000-100	200													
	100-200	200													
	200-300	200													
	300-400	200	12.2												
	400-500	200													
	500-600	200													
	600-700	200													
	700-800	200													
	800-900	200													
	000-100	200													
	100-200	200													
	200-300	200													
	300-400	200													

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R	
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH
(M)															
14	400-500		200	14											
	500-600		200												
	600-700		200												
	700-800		200												
	800-900		200												
15	900-1000		200												
	000-100		200												
	100-200		200												
	200-300		200												
	300-400		200	12											
	400-500		200												
	500-600		200												
	600-700		200												
	700-800		200												
16	800-900		200												
	900-1000		200												
	000-100		200												
	100-200		200					34							
	200-300		200												
	300-400		200												
	400-500		200	48											
	500-600		200												
	600-700		200												
17	700-800		200												
	800-900		200												
	900-1000		200												
	000-100		200												
	100-200		200												
	200-300		200												
	300-400		200												
	400-500		200												
	500-600		200	22.1											
18	600-700		200												
	700-800		200												
	800-900		200												
	900-1000		200												
	000-100		200												
	100-200		200												
	200-300		200												
	300-400		200												
	400-500		200												
19	500-600		200	12.2											
	600-700		200												
	700-800		200												
	800-900		200												
20	900-1000		200												
	000-100		200												
	100-200		200												
	200-300		200												

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R	
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH
			(M)												
19	400-500		200												
	500-600		200												
	600-700		200												
	700-800		200												
	800-900		200	11.6											
20	900-1000		200												
	000-100		200												
	100-200		200					38							
	200-300		200												
	300-400		200												
	400-500		200												
	500-600		200												
	600-700		200												
	700-800		200												
	800-900		200												
21	900-1000		200												
	000-100		200												
	100-200		200		30.4										
	200-300		200	12.2											
	300-400		200												
	400-500		200												
	500-600		200												
	600-700		200												
22	700-800		200												
	800-900		200												
	900-1000		200					32.8							
	000-100		200					45.4							
	100-200		200												
	200-300		200					25.6							
	300-400		200												
	400-500		200												
	500-600		200												
	600-700		200												
23	700-800		200												
	800-900		200												
	900-1000		200												
	000-100		200												
	100-200		200												
	200-300		200												
	300-400		200					42.6							
	400-500		200												
24	500-600		200												
	600-700		200												
	700-800		200												
	800-900		200						36.6						
	900-1000		200												
	000-100		200												
25	100-200		200						36						
	200-300		200												
	300-400		200												
	400-500		200												

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R	
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH
(M)															
24	400-500		200												
	500-600		200					30.2							
	600-700		200												
	700-800		200												
	800-900		200												
25	900-1000		200	54											
	000-100		200		50.8										
	100-200		200												
	D.E.L-100-200													88	
	L.L-100-200					132									
	200-300		200												
	D.E.L-200-300								138						
	L.L-200-300					200									
	300-400		200												
	L.L-300-400					200									
	400-500		200												
	L.L-400-500					200									
	500-600		200												
	L.L-500-600					200									
	600-700		200												
	L.L-600-700					120.5									
	26	700-800		200	17										
800-900			200					29.4							
900-1000			200												
000-100			200												
100-200			200												
200-300			200												
300-400			200												
400-500			200												
500-600			200												
600-700			200												
27	700-800		200												
	800-900		200	12.2											
	900-1000		200												
	000-100		200												
	100-200		200												
	200-300		200												
	300-400		200												
	400-500		200	12.2											
	500-600		200					31.8							
28	600-700		200												
	700-800		200												
	800-900		200	12.2											
	900-1000		200												
	000-100		200												
	100-200		200												

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R		
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH	
		(M)														
	600-700		200													
	700-800		200													
	800-900		200													
	900-1000		200													
29	000-100		200					35.4								
	100-200		200													
	200-300		200													
	300-400		200													
	400-500		200													
	500-600		200													
	600-700		200													
	700-800		200													
	800-900		200													
	900-1000		200													
	30	000-100		200												
100-200			200													
200-300			200													
300-400			200													
400-500			200													
500-600			200													
600-700			200													
700-800			200													
800-900			200													
900-1000			200													
31	000-100		200													
	100-200		200													
	200-300		200													
	300-400		200													
	400-500		200													
	500-600		200			188										
	600-700		200			198										
	700-800		200													
32	000-100		200													
	100-200		200													
	200-300		200													
	300-400		200													
	400-500		200													
	500-600		200													
	600-700		200													
	700-800		200													
	800-900		200													
	900-1000		200													
33	000-100		200													
	100-200		200													
	200-300		200													
	300-400		200			12.5					31					
	400-500		200													
	500-600		200													

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R	
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH
	600-700		200												
	700-800		200												
	800-900		200												
	900-1000		200												
34	000-100		200		32.5										
	100-200		200												
	200-300		200												
	300-400		200												
	400-500		200												
	500-600		200												
	600-700		200												
	700-800		200	12.3											
	800-900		200												
	900-1000		200												
	35	000-100		200											
100-200			200					29.4							
200-300			200												
300-400			200												
400-500			200												
500-600			200												
600-700			200												
700-800			200												
800-900			200	12.4											
36	000-100		200												
	100-200								200						
	200-300								200						
	300-400								200						
	400-500								200						
	500-600								200						
	600-700								200						
	700-800								200						
	800-900								200						
37	000-100		200						200						
	100-200							79	200						
	200-300								200	11.1					
	300-400								200						
	400-500								200						
	500-600								200						
	600-700								200						
	700-800								200						
	800-900								200						
	000-100								200	11.1					
	100-200							39.2	200						
	200-300								200						
	300-400								200						

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R	
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH
									(M)						
38	400-500								200						
	500-600								200						
	600-700								200						
	700-800								200						
	800-900								200	15					
	900-1000								200						
	L.L-900-1000								112						
39	000-100								200						
	L.L-000-100								200						
	100-200								200						
	L.L-100-200								200						
	200-300								200						
	L.L-200-300								200						
	300-400								200						
	L.L-300-400								200						
	400-500								200						
	L.L-400-500								58.6						
	500-600								200						
	600-700								200						
	700-800								200	9					
800-900								25.2	200						
900-1000								200							
40	000-100								200						
	100-200								200						
	200-300								200						
	300-400								200						
	400-500								200						
	500-600								200						
	600-700								200	11					
	700-800								200						
	800-900								200						
	900-1000								200						
41	000-100								200						
	100-200								200						
	200-300								200						
	300-400								200						
	400-500								200						
	500-600								200						
	600-700								40.4	200	11				
	700-800								200						
	800-900								200						
	900-1000								200						
42	000-100								200						
	100-200								40	200					
	200-300								200						
	300-400								200						
	400-500								200						
	500-600								200						
	600-700								200						
700-800								200							

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R		
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH	
									(M)							
	800-900								200							
	900-1000								200	11.1						
43	000-100								200							
	100-200								200							
	200-300								200							
	300-400								200	11						
	400-500								200							
	500-600								200							
	600-700								200							
	700-800								200							
	800-900								200							
	900-1000								200							
44	000-100								200							
	100-200								200							
	200-300								200							
	300-400								200							
	400-500								200							
	500-600								200							
	600-700								200							
	700-800								200							
	800-900								200							
900-1000								200								
45	000-100								200							
	100-200								200	15						
	200-300								200							
	300-400								200							
	400-500								200							
	500-600								200							
	600-700								200							
	700-800								200							
	800-900								200	11						
900-1000								200								
46	000-100								200							
	100-200								200							
	200-300								200							
	300-400								200							
	400-500								200							
	500-600								200							
	600-700								200	11						
	700-800								200							
	800-900							32.4	200							
900-1000								200								
47	000-100								200							
	100-200								200							
	200-300								200							
	300-400							32.4	200	11						
	400-500								200							
	500-600								200							
	600-700								200							
700-800								200								

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R	
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH
									(M)						
	800-900								200	11.1					
	900-1000								200						
53	000-100								200						
	100-200								200	22.1					
	200-300								200						
	300-400								200						
	400-500								200	11.1					
	500-600								200						
	600-700								200						
	700-800							11.5	200	9					
	800-900							24	200	18.4					
	900-1000								200						
54	000-100								200						
	100-200								200						
	200-300								200						
	300-400								200						
	400-500								200						
	500-600								200						
	600-700								200						
	700-800								200						
	800-900								200						
	900-1000								200						
55	000-100								200						
	100-200								200						
	200-300							36	200						
	300-400								200						
	400-500								200						
	500-600								200						
	600-700								200						
	700-800								200						
	800-900								200						
	900-1000								200						
56	000-100								200						
	100-200							36	200						
	200-300								200						
	300-400								200						
	400-500								200						
	500-600								200	11.1					
	600-700								200						
	700-800								200						
	800-900								200						
	900-1000								200						
57	000-100								200						
	100-200								200						
	200-300								200	11					
	300-400								200						
	400-500								200						
	500-600								200						
	600-700								200						
700-800								200							

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R		
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH	
								(M)								
	800-900							200								
	900-1000							200	11							
58	000-100							200								
	100-200							200								
	200-300							200								
	300-400							200								
	400-500							200								
	500-600							200								
	600-700							200								
	700-800							200								
	800-900							200								
	900-1000							200	12.2							
59	000-100							200								
	100-200							200								
	200-300							200								
	300-400							200								
	400-500							200								
	500-600							200								
	600-700							200	11							
	700-800							200								
	800-900							200								
	900-1000							200								
60	000-100							200								
	100-200							200								
	200-300							200								
	300-400							200								
	400-500							200								
	500-600							200								
	600-700							200	11							
	700-800							200								
	800-900							200								
	900-1000							200								
61	000-100							200								
	100-200							200								
	200-300							200								
	300-400							200								
	400-500							200	11.4							
	500-600							200								
	600-700							200	11							
	700-800							200								
	800-900							200								
	900-1000							200								
62	000-100							200	11							
	100-200							200								
	200-300							200	11.4							
	300-400							200								
	400-500							200								
	500-600							200								
	600-700							200								
700-800							200									

CHAINAGE NO.		52KG	90 R			75 R			60 R			60 LBS		50 R		
KM	M		NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	GUARD RAIL	NORMAL	CHECK RAIL	NORMAL	BRIDGE APPROACH	
									(M)							
	800-900								200							
	900-1000								200							
63	000-100								200							
	100-200								200							
	200-300								200							
	300-400								200							
	400-500								200							
	500-600								200							
	600-700								200							
	700-800								200							
	800-900								200							
	900-1000								200							
64	000-100								200							
	100-200								200	11						
	200-300								200							
	300-400								200							
	400-500	200														
	500-600	200														
	600-700	200														
	700-800	200														
	L.L-700-800	7														
	800-900	200														
65	L.L-800-900	200														
	900-1000	200								16						
	L.L-900-1000	200														
	000-100	200														
	L.L-000-100	200														
	100-200	200														
L.L-100-200	200															
200-300	110.4							64.6								
L.L-200-300	89.6															
300-400	127.6															
TOTAL	2734.6	69340	449	742.1	1052.5	11	1298.4	60774.2	407.1	54.9	0	0	887	0		

EXTRA STOCK

			RAIL				SLEEPER					
SR.NO	LOCATION	CHAINAGE NO.	90 R	75 R	60 R		60 LBS	ST		CST - 9		
			NORMAL	NORMAL	NORMAL	CHECK RAIL	NORMAL	90 R	60 R	90 R	75 R	60 R
			(MTR)				(NOS)					
1	RANTEJ	13/600-13/777	26.80				274.90					
2	DETHLI	19/200-19/380		25.24		300						
3	SHANKHLPUR	27/600-27/810						143	10			
4	KHAMBHEL	39/000-39/217						5	68		65	65
5	CHANSMA	51/800-46/023			156.10	45.68	277.3	155		176	415	
TOTAL			26.80	25.24	156.10	345.68	552.20	303.00	78.00	176.00	480.00	65.00
UNIT WEIGHT(KG)			44.61	37.13	29.76	29.76	29.76	51.95	33.01	34.5	24.5	25.07
TOTAL WEIGHT(KG)			1195.548	937.1612	4645.536	10287.4368	16433.472	15740.85	2574.78	6072	11760	1629.55

CHAINAGE NO.	FISH PLATE	JUNCTION			ERC	KEYS		LOOSAW		TIBAR				COTTER PIN	CHAIR PLATE	DOG SPIKE	BEARING PLATE		ACB Plate	ROUND PIN	SCREW PIN	Hook Bolt	INNER	OUTER	GUARD RAIL BOLT	DISTANCE BLOCK	GATE POST	KM/TP post	LINER	RUBBER PAD		FISH BOLT				
		52KG	90 R	75 R		60 R	60 LBS	50 R	90 R - 75 R	75 R - 60 R	60 R - 50 R	90 R	60 R				Noraml	Modifly												90 R	75 R	60 R	50R	90 R	60 R	50R
17	800-900	40	4				515	71	71	515					26							16	16	16	32							79	4			
	900-1000	36	4				539	70	70	539					22							4	4	4								72	4			
	000-100	40					545	80	80	545																							79			
	100-200	36	8				476	58	58	476					84							38	38	38	52							72	8			
	200-300	32					560	63	63	560																							64			
	300-400	36	16				444	50	50	444					18							76	76	76	150							72	24			
	400-500	36					560	60	60	560																							72			
	500-600	32					496	62	62	496					82													4					74			
	600-700	36					549	65	65	549																								64		
	700-800	36	16				484	50	51	484					44								40	40	40	24			2				70	80		
	800-900	36					555	62	63	555					9							12	12	12	24								68			
	900-1000	36					562	67	68	562																							72			
18	000-100	36					564	68	69	564																	1						72			
	100-200	36					552	70	71	552																							72			
	200-300	36					555	67	69	555																							71			
	300-400	36					556	69	70	556																							70			
	400-500	36					552	75	76	552																							72			
	500-600	36					552	62	63	552																							72			
	600-700	36					532	68	69	532																		4					72			
	700-800	36					564	67	68	564																								71		
	800-900	36					560	69	70	560																								72		
	900-1000	36					552	60	61	552																								72		
	000-100	36					548	68	69	548																								72		
	19	100-200	36					552	69	71	552																								72	
200-300		36					552	67	69	552																								72		
300-400		32					564	61	62	564																								64		
400-500		32					560	67	68	560																								63		
500-600		36					556	69	71	556																								72		
600-700		36					560	68	69	560																								72		
700-800		36					560	67	69	560																								71		
800-900		32					516	61	62	516					4													4						62		
900-1000		36					556	66	69	556																									72	
000-100		36					560	75	76	560																									72	
20		100-200	36	8				508	61	62	508				42								32	32	32	64								71	8	
		200-300	36					552	67	69	552																								71	
	300-400	32					548	66	69	548																								63		
	400-500	32					540	69	71	540																								63		
	500-600	32					552	67	69	552																								64		
	600-700	36					548	67	68	548																								72		
	700-800	32					552	63	64	552																								64		
	800-900	36					555	75	76	555																								70		
	900-1000	40					576	76	77	576																								80		
	000-100	36					564	69	70	564																								72		
	21	100-200	40					604	75	76	604				46	8							8											76		
		200-300	32					556	68	69	556				12														4					63		
300-400		40					576	76	78	576																							80			
400-500		36					584	65	68	584																								72		
500-600		40					575	78	79	575																								80		
600-700		36					536	68	69	536																								72		
700-800		40					544	77	78	544																								80		
800-900		40					468	60	61	468					98																			77		
900-1000		36	4				491	69	70	491					220								20	20	20	40							72	3		
000-100		32					538	62	63	538																									64	
100-200		40					543	76	77	543																									80	
200-300		40	4				629	64	65	629																									80	7
22	300-400	36					502	70	71	502												7												72		
	400-500	36					542	68	69	542																								72		
	500-600	32					532	67	68	532																								63		
	600-700	32					552	60	63	552																								64		
	700-800	36					538	67	68	538																									72	
	800-900	32					542	62	63	542																		4						64		
	900-1000	32					539	61	62	539																								63		
	000-100	36					532	68	70	532																									71	
	100-200	36					540	69	70	540																									71	
	200-300	36					606	68	69	606																									72	
	300-400	40	4				476	59	60	476																									80	4
	400-500	36					540	68	69	540																									72	
23	500-600	32					54																													

KM	CHAINAGE NO.		W/L Board	S/R Board	T/P Board	C.I Bord Board	STOP Board	SPEED Breaker	Road Shine Board		LC No. Board	HALT Board	Bridge No. Board	Signal Board	Curve Board	Gang Boat Board	SIGNAL POLE		ENGINE STOP Board	SIGNAL	SIGNAL BOX	P & C SET	LC SET	BALLAST STACK	EXTRA ITEMS		
	M								SINGLE	DOUBLE							HOME	OUTER									
0	M.L-000-100																										
0	L.L-000-100																										
0	M.L-100-200																										
0	L.L-200-300																										
0	M.L-200-300																										1-HAND LEAVER SET, 2-SIGNAL 1SET WHEEL COUNTER, 1-HALF POINT SET,1-FM
0	L.L-200-300																										
0	M.L-300-400	1		1																	4	1					
0	L.L-300-350																										
0	400-500																				1						
0	500-600																					4					
0	600-700	1																									
0	700-800					1								1								1					CROSSING LEVEL 28/C-01, 01-SET WHEEL COUNTING SET, 01-SET HALF POINT
0	800-900														1							1					01-SET DIAMOND CROSSING, 01-SET 60R POINT
0	D.E.L-800-900																										
0	900-1000																										
0	D.E.L-900-1000																										
1	000-100												1		1							1					
1	100-200																										
1	200-300															1						2					
1	300-400	2												1	1												
1	400-500																										
1	500-600																										
1	600-700					1																			1		
1	700-800																										
1	800-900													1													
1	900-1000	1																									
2	000-100																										
2	100-200			1	1																						
2	200-300			1				2	2	2	2								1			1					UNMANED-39/C
2	300-400				1																						
2	400-500	1													1												
2	500-600					1																					
2	600-700																										
2	700-800	1												1													
2	800-900			1																							
2	900-1000	1																									
3	000-100	1																									
3	100-200																										
3	200-300																										
3	300-400						2	2	2	2																	1-GATE HUT
3	400-500																										
3	500-600																										
3	600-700																										
3	700-800	1																									
3	800-900																										
3	900-1000	1																									
4	000-100														1												
4	100-200																							1			
4	200-300																										
4	300-400																										
4	400-500																										
4	500-600																										
4	600-700																										
4	700-800																										
4	800-900	1																									
4	900-1000	1																									
5	000-100																										
5	100-200																										
5	200-300																										
5	300-400																										
5	400-500																										
5	500-600						2	2	2	2																	GATE SET
5	600-700													1													
5	700-800	1																									
5	800-900	1																									
5	900-1000	1																									
6	000-100																										
6	100-200						2	2	2			1															12-FISH PLATE, 4.5*4-18MTR RAIL 50R IN APPROCH, 9.40*2-18.80 ANGLE, 90 MTR.LONG FOOT WAY PLATE,2- GIRDER STEEL
6	200-300												57														04-FISH PLATE SET, 8-BOLT
6	300-400	1																									
6	400-500																										
6	500-600																				1						
6	600-700																										
6	700-800	1																			1						

CHAINAGE NO.	W/L Board	S/R Board	T/P Board	C.I Bord Board	STOP Board	SPEED Breaker	Road Shine Board		LC No. Board	HALT Board	Bridge No. Board	Signal Board	Curve Board	Gang Boat Board	SIGNAL POLE		ENGINE STOP Board	SIGNAL	SIGNAL BOX	P & C SET	LC SET	BALLAST STACK	EXTRA ITEMS
							SINGLE	DOUBLE							HOME	OUTER							
KM	M																						
14	200-300																						
	300-400										1												
	400-500				2	2	2	2					1										
	500-600																						
	600-700	1															1						
	700-800																						
	800-900																						
	900-1000	2																					
	000-100																						
	100-200																						
15	200-300																						
	300-400	1			2	2	2	2				1											
	400-500																						
	500-600																						
	600-700																						
	700-800	1																					
	800-900	1																					
	900-1000																						
	000-100																						
	100-200																						
16	200-300	1																					BR N-84.FOOTWAY PLATE-5.10, ANGLE-5.0°2, GIRDER-1 RAIL-50R-4.50°4-18MTR.
	300-400																						
	400-500																						RAIL-50R-8°4.50 FOOT WAY PLATE-3.7°2, ANGLE 3.30°4
	500-600																						
	600-700																						
	700-800	1																					
	800-900																						ANGLE-5°2 MTR, GIRDER-1.
	900-1000																						
	000-100																						
	100-200	1																					ANGLE-9°2 MTR, FOOT WAY PLATE-17.20
17	200-300	1																					
	300-400																						
	400-500											1											ANGLE-17.20°2=34.40, FOOT WAY PLAT-17.20, GIRDER-4 (STEEL).
	500-600				2	2	2	2															
	600-700																						
	700-800																						GIRDER-02 RAIL-4.5°4, ANGLE-4.8°4. FOOTWAY PLATE-4.8°2
	800-900																						FOOT WAY PLATE-3 ANGLE-3°2, RAIL-4.5°4
	900-1000																						
	000-100	1																					
	100-200	1																					
18	200-300																						
	300-400	1																					
	400-500																						
	500-600																						
	600-700				2	2	2	2			1												
	700-800																						
	800-900																						
	900-1000	1																					
	000-100																						
	100-200	1																					
19	200-300																1						
	300-400																						
	400-500	1															1						
	500-600																						
	600-700	1																					
	700-800																						
	800-900				2	2	2	2															
	900-1000																						
	000-100											1											
	100-200	1																					
20	200-300	1																					
	300-400																						
	400-500																						
	500-600																						
	600-700																						
	700-800																						
	800-900	1																					
	900-1000																						
	000-100	1																					
	100-200																						
21	200-300				2	2	2	2															
	300-400																						
	400-500																						
	500-600	1																					
	000-100																						
	100-200																						BR NO-95 GIRDER RAIL CLUSTER-1, RAIL-04X4.5

CHAINAGE NO.	W/L Board	S/R Board	T/P Board	C.J Bord Board	STOP Board	SPEED Breaker	Road Shine Board		LC No. Board	HALT Board	Bridge No. Board	Signal Board	Curve Board	Gang Boat Board	SIGNAL POLE		ENGINE STOP Board	SIGNAL	SIGNAL BOX	P & C SET	LC SET	BALLAST STACK	EXTRA ITEMS
							SINGLE	DOUBLE							HOME	OUTER							
KM	M																						
	600-700	1																					
	700-800																						
	800-900																						
	900-1000																						BR NO-96, RAIL-4.5'4MTR, FOOTWAY PLATE-5, ANGLE-5.0°2, GIRDER-01, BR NO-97, FOOTWAY PLATE-7.3, ANGLE-6.50°2,RAIL-4.5'4
	000-100																						
	100-200																						
	200-300																						
	300-400																						
	400-500																						
	500-600																						
	600-700																						
	700-800																						
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	700-800																						
	800-900																						
	900-1000																						
	000-100																						
	100-200																						

CHAINAGE NO.	W/L Board	S/R Board	T/P Board	C.I Bord Board	STOP Board	SPEED Breaker	Road Shine Board		LC No. Board	HALT Board	Bridge No. Board	Signal Board	Curve Board	Gang Boat Board	SIGNAL POLE		ENGINE STOP Board	SIGNAL	SIGNAL BOX	P & C SET	LC SET	BALLAST STACK	EXTRA ITEMS
							SINGLE	DOUBLE							HOME	OUTER							
KM	M																						
28	200-300												1										
	300-400																						RUB NO-107 A/73, CHANNEL STAND-02
	400-500	1																					
	500-600																						
	600-700											1											
	700-800																						
	800-900																						
29	900-1000																						
	000-100																						
	100-200																						
	200-300																						
	300-400																						
	400-500																						
	500-600																						
	600-700																						
	700-800																						
	800-900																						
30	900-1000																						
	000-100																						
	100-200																						
	200-300																						
	300-400																						
	400-500																						
	500-600																						
	600-700																						
	700-800																						
	800-900																						
31	900-1000																						
	000-100																						
	100-200																						
	200-300																						
	300-400																						
	400-500																						
	500-600																						
	600-700																						
	700-800																						
	800-900																						
32	900-1000																						
	000-100																						
	100-200																						
	200-300																						
	300-400																						
	400-500																						
	500-600																						
	600-700																						
	700-800	1																					
	800-900																						
33	900-1000																						
	000-100																						
	100-200	1																					
	200-300																						
	300-400																						
	400-500																						
	500-600	1																					
	600-700																						
	700-800																						
	800-900																						
34	900-1000	1																					
	000-100																						
	100-200	1																					
	200-300																						
	300-400																						
	400-500	1																					
	500-600																						
	600-700																						
	700-800																						
	800-900																						
35	900-1000	1																					
	000-100																						
	100-200	1																					
	200-300																						
	300-400	1																					
	400-500																						

CHAINAGE NO.		W/L Board	S/R Board	T/P Board	C.I Board	STOP Board	SPEED Breaker	Road Shine Board		LC No. Board	HALT Board	Bridge No. Board	Signal Board	Curve Board	Gang Boat Board	SIGNAL POLE		ENGINE STOP Board	SIGNAL	SIGNAL BOX	P & C SET	LC SET	BALLAST STACK	EXTRA ITEMS			
KM	M							SINGLE	DOUBLE							HOME	OUTER										
42	300-400	1																						1(R)			
	400-500																								1(R)		
	500-600																								1(R)		
	600-700																								1(R)		
	700-800	1																							2(R)		
	800-900																										
	900-1000		1				2	2	2	2									1								LC NO-84/C
000-100																											
100-200																											
200-300				1	1													1									
300-400						2	2	2	2	2															1(L)	LC NO-85/C	
400-500									1																2(L)		
500-600	1																								1(L)		
600-700					1																						
700-800											1																
800-900				1																							
900-1000	1																										
000-100																											
100-200		1																									
200-300																											
300-400																											
400-500																										BRG NO-122	
500-600	1																										
600-700			1																								
700-800			1																							MAINCANAL NARMADA BOARD-1, BRG NO-122/A	
800-900																										MAINCANAL NARMADA BOARD-1, BRG NO-122/A	
900-1000																											
000-100																											
100-200			1			2	2	2	2																	LC NO-88/C	
200-300	1			1																							
300-400																											
400-500																											
500-600																											
600-700																									1(L)		
700-800	1																								1(L)		
800-900						2	2	2	2																1(L)	LC NO-89/C	
900-1000																									1(L)		
000-100	1				1																						
100-200																											
200-300																									1(L)		
300-400																									1(L)		
400-500	1																								1(L)		
500-600																											
600-700						2	2	2	2																	1(R)	LC NO-90/C
700-800	1																								1(R)		
800-900																										ANGLE 4.5°2, RAIL-4.5°4, FOOTWAY PLAT-5M, 60R TO 75R-975.6, 75R TO 60R-993.5, GIRDER-1, BRG NO-125	
900-1000																											
000-100																											
100-200																											
200-300	1																								1(R)		
300-400						2	2	2	2																	GIRDER-1, FOOTWAY PLAT-5, ANGLE-4.45°2, 60R TO 75R-47/332.2, 75R TO 60R-47/345.2, RAIL--4.5°4, LC NO-91/C, BRG NO-126	
400-500																									1(L)		
500-600																									1(L)		
600-700																											
700-800																									1(L)		
800-900	1																								1(L)		
900-1000	1																								1(L)		
000-100																											
100-200																											
200-300																											
300-400																											
400-500						2	2	2	2						1	1									1(L)		
500-600																									1(R)	RAIL-4.5°4, FOOTWAY PLAT-11.5, ANGLE-10.7, GIRDER-4, 60R TO 75R-48/577.9, BRG NO-127	
600-700																										75R TO 60R-48/607.20	
700-800																									1(R)		
800-900																									1(R)		
900-1000	1																								1(R)		
000-100	1																								1(R)		
100-200																											
200-300																											
300-400																											
400-500																											
500-600						2	2	2	2																1(R)	ANGLE-4.5°2, FOOTWAY PLAT-5.2, GIRDER-1, RAIL-4.5°4, 60R TO 75R-553, 75R TO 60R-565, LC NO-93/C, BRG NO-128	
600-700																									1(R)		

CHAINAGE NO.	W/L Board	S/R Board	T/P Board	C.J Bord Board	STOP Board	SPEED Breaker	Road Shine Board		LC No. Board	HALT Board	Bridge No. Board	Signal Board	Curve Board	Gang Boat Board	SIGNAL POLE		ENGINE STOP Board	SIGNAL	SIGNAL BOX	P & C SET	LC SET	BALLAST STACK	EXTRA ITEMS
							SINGLE	DOUBLE							HOME	OUTER							
KM	M																						
57	100-200																						GIRDER-3, FOOTWAY PLAT-13, ANGLE-13°2, 60R TO 75R-75/180, RAIL IN HEIGHT LEVEL-6M, RAIL-4.5°2, BRG NO-136
	200-300				2	2	2	2															
	300-400																						
	400-500																						
	500-600	1																					
	600-700	1																					
	700-800																						
800-900																							
58	900-1000				2	2	2	2															LC NO-104/C
	000-100																						
	100-200																						
	200-300																						
	300-400	1																					
	400-500																						
	500-600																						
600-700	1																						
700-800																							
800-900																							
900-1000					2	2	2	2															
000-100																							
100-200																							LC NO-106
200-300																							
300-400	2																						
400-500																							
500-600																							
600-700					2	2	2	2															
700-800																							
800-900																							
900-1000	1																						
000-100																							
100-200	1																						
200-300																							
300-400																							75R TO 60R-61/195.9 RAIL-4.5°4, GIRDER-1, ANGLE-4.7°2, FOOTWAY PLAT-5, 60R TO 75R-61/218.65, BRG NO-139
400-500																							
500-600	1																						
600-700	1				2	2	2	2															
700-800																							
800-900	1																						
900-1000	1																						
61	000-100																						LC NO-100/C, STATION BOARD-1
	100-200																						
	200-300																						
	300-400																						
	400-500																						
	500-600	1																					
	600-700	1																					
700-800																							
800-900	1																						
900-1000	1																						
000-100																							
100-200																							
200-300	1																						
62	300-400																						LC NO-109/C, FOOTWAY PLAT-5.1, ANGLE-4.75°2, GIRDER-1, RAIL-4.5°4, 60R TO 75R-62/41.8, 75R TO 60R-62/19.7, BRG NO-140 GIRDER-1, FOOTWAY PLAT-7-4, ANGLE-7.15°2, RAIL-4.5°2, 60R TO 75R-139, 75R TO 60R-115.45, BRG NO-142 LC NO-111/C
	400-500	1																					
	500-600	2																					
	600-700																						
	700-800																						
	800-900																						
	900-1000																						
63	000-100																						LC NO-112, RAIL-4.5°4, GIRDER-1, FOOTWAY PLAT-7.5, RAIL IN HEIGHT LEVEL-6M, 60R TO 75R-64/163.25, 75R TO 60R-64/138-R, 64/140.75-L, BRG NO-143
	100-200																						
	200-300																						
	300-400																						
	400-500																						
	500-600																						
	600-700																						
64	700-800																						75R TO 60R-64/391.5, 2 PAIR 52KG-90R, 90R TO 75R-52KG, 64/405.35, 90R TO 75R-64/400, COLLING ON SIGNAL BOARD-1
	800-900																						
	900-1000																						
	000-100												1										

CHAINAGE NO.		W/L Board	S/R Board	T/P Board	C.I Bord Board	STOP Board	SPEED Breaker	Road Shine Board		LC No. Board	HALT Board	Bridge No. Board	Signal Board	Curve Board	Gang Boat Board	SIGNAL POLE		ENGINE STOP Board	SIGNAL	SIGNAL BOX	P & C SET	LC SET	BALLAST STACK	EXTRA ITEMS				
KM	M																											
		SINGLE		DOUBLE		HOME		OUTER																				
64	500-600			1																					1 PAIR JOGALAD,			
	600-700			1										1					1	2					2 GLAED JOINT			
	700-800	1																		3					1 SHUNTING SIGNAL, 796.5 - 52KG 90R			
	LL-700-800																											
	800-900																											
	LL-800-900																											
	900-1000																											
	LL-900-1000														2											2 GUTE POST, 4 GRADE JOINT		
65	000-100																								6 GRADE JOINT,			
	LL-000-100																											
	100-200																		2		2				6 GRADE JOINT, 2 SHUNTING JOINT			
	LL-100-200																											
	200-300																											
	LL-200-300																											
	300-400																											
	LL-300-400																											
TOTAL	142	21	43	15	104	108	108	105	24	17	59	12	17	8	14	8	19	2	25	3	7	98						

LC INVENTORY DETAIL

Sr. No.	LC No.	Name of Village		District	RAIL	ROAD	PROPERTY						CROSSING PILLAR		Railing (Mtr)	Railing Pillar	CABIN			
							Cabin			Shed			Cement	Steel			DOOR		WINDOW	
		LHS	RHS		Distance	Distance	QTY	L	B	QTY	L	B			Wooden	Steel	Wooden	Steel		
1	37	Katosan Road	Rajpura	Ahmedabad	7.40	8.60	1	3.00	3.50	1	2.50	3.00	0	0	0.00	0	1	0	2	0
2	39	Sunvala	Sujpura	Mehsana	6.10	6.40	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
3	41	Amarpura	Sujpura	Mehsana	8.00	7.20	0	0.00	0.00	1	2.00	2.50	0	4	0.00	0	0	1	0	0
4	42	Amarpura	Sujpura	Mehsana	8.00	6.50	1	3.00	3.50	1	2.50	2.50	0	0	31.50	16	1	0	2	0
5	43	Sunvala	Katosan	Mehsana	18.20	9.00	1	2.50	4.00	1	2.50	2.50	0	0	50.70	22	1	0	2	0
6	44	Amarpura	Katosan	Mehsana	8.70	4.80	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
7	47	Virroda	Katosan	Mehsana	5.70	4.60	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
8	49	Virroda	Tejpura	Mehsana	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0	0	0	0	0
9	51	Virroda	Tejpura	Mehsana	5.30	4.30	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
10	52	Virroda	Amarpur/Kanpur	Mehsana	5.50	4.60	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
11	53	Virroda	Rampura	Mehsana	7.00	6.00	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
12	54	Dabhsar	Rantej	Mehsana	5.80	4.50	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
13	55	Dabhsar	Rantej	Mehsana	5.60	4.80	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
14	56	Akba	Rantej	Mehsana	5.50	5.00	0	0.00	0.00	0	0.00	0.00	0	3	0.00	0	0	0	0	0
15	57	Akba	Rantej	Mehsana	5.20	4.20	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
16	60	Dethali	Indrap	Mehsana	9.20	5.00	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
17	62	Dethali	Devgadh	Mehsana	6.00	4.80	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
18	63	Dethali/Pratapgad	Devgadh	Mehsana	6.00	4.20	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
19	64	Pratapgad	Devgadh	Mehsana	6.10	4.90	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
20	65	Dedhana	Kalri	Mehsana	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0	0	0	0	0
21	68	Bechraji	Kalri	Mehsana	6.80	24.80	1	2.50	4.00	0	0.00	0.00	0	0	122.70	50	1	0	2	0
22	69	Bechraji	Shankhalpur	Mehsana	5.50	5.40	1	2.50	4.00	1	1.00	1.00	0	0	116.10	47	1	0	2	0
23	71	Bechraji	Shankhalpur	Mehsana	5.50	4.20	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
24	72	Finchdi	Shankhalpur	Mehsana	5.40	4.30	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
25	75	Sanpavada	Venpura	Mehsana	5.60	5.80	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
26	76	Surpura	Venpura	Mehsana	5.70	4.80	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
27	77	Surpura	Venpura	Mehsana	6.00	3.90	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
28	78	Ambala	Khambhel	Mehsana	6.00	3.80	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
29	79	Ambala	Khambhel	Mehsana	5.90	3.90	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
30	80	ambala	Khambhel	Mehsana	7.00	5.80	1	2.50	4.00	0	0.00	0.00	0	0	118.20	47	1	0	2	0
31	82	Itoda	Khambhel	Patan	5.80	3.10	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
32	88	Khorsam	Brahmanvada	Patan	5.90	3.50	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
33	89	Khorsam	Brahmanvada	Patan	5.50	5.20	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
34	90	Khorsam	Brahmanvada	Patan	5.20	4.00	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0
35	91	Dharmoda	Brahmanvada	Patan	5.50	3.80	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
36	92	Dharmoda	Mandlop	Patan	5.40	3.90	0	0.00	0.00	0	0.00	0.00	0	4	0.00	0	0	0	0	0

Sr. No.	LC No.	Name of Village		District	RAIL Distance	ROAD Distance	PROPERTY						CROSSING PILLAR		Railing (Mtr)	Railing Pillar	CABIN			
							Cabin			Shed			Cement	Steel			DOOR		WINDOW	
		LHS	RHS														Wooden	Steel	Wooden	Steel
37	93	Dharmoda	Mandlop	Patan	5.00	3.80	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
38	94	Dharmoda	Mandlop	Patan	5.00	4.10	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
39	95	Chanasma	Mandlop	Patan	7.00	5.80	1	2.50	4.00	0	0.00	0.00	0	0	47.50	30	1	0	2	0
40	96	Chanasma	Mandlop	Patan	5.50	4.20	0	0.00	0.00	0	0.00	0.00	0	3	0.00	0	0	0	0	0
41	97	Chanasma	Jasalpur	Patan	7.00	7.30	1	2.50	4.00	1	2.50	2.50	0	0	73.30	40	1	0	2	0
42	98	Chanasma	Jasalpur	Patan	5.30	4.00	0	0.00	0.00	0	0.00	0.00	0	2	0.00	0	0	0	0	0
43	99	Chanasma	Jasalpur	Patan	7.00	7.35	1	2.50	4.00	0	0.00	0.00	0	0	112.20	55	1	0	2	0
44	101	Jitoda	Dhanodharda	Patan	5.40	4.10	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
45	102	Jitoda	Ganget	Patan	5.00	4.80	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
46	103	Jitoda	Ganget	Patan	5.25	3.70	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
47	104	Jakhana	Ganget	Patan	4.20	3.80	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
48	105	Jakhana	Ganget	Patan	5.30	3.60	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
49	106	Vasojintra	Ganget	Patan	5.25	3.80	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
50	107	Vasojintra	Ganget	Patan	5.20	4.85	1	2.50	4.00	0	0.00	0.00	0	0	40.80	22	1	0	2	0
51	108	Vasojintra	Vasai	Patan	5.20	4.10	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
52	109	Islampura	Vasai	Patan	5.40	4.10	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
53	110	Islampura	Vasai	Patan	5.60	3.70	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
54	111	Islampura	Vasai	Patan	5.70	3.70	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
55	112	Ranuj	Aminpura	Patan	5.50	4.10	0	0.00	0.00	0	0.00	0.00	4	0	0.00	0	0	0	0	0
		TOTAL					10			6			64	104	713	329	10	1	20	0

Sr. No	Station	Type	Colour Light Signals				Qty	3A Signal without offset	Qty	Shunt Signals	Qty
			2Aspect	Qty	3A with route & offset Bracket and Calling on	Qty					
1	KTRD	MG	S\4	1	S\3	1	D.B DISTANT	1	sh.9	1	
			S\20	1	S\48	1	S\22	1	sh.42	1	
			S\31	1			S\33	1			
			S\47	1			U.B. DISTANT	1			
			4				4				
		MG	S\33	1	S\48	1	S\35	1	sh 42	1	
	S\47		1			UB DISTANT	1	Sh 16	1		
								sh 18	1		
				2		5	Total	2	Total	4	
			6		5		6		4		

Semaphore Arm Signals of Katosan - Ranuj Section with Lattice Post			
Sr. No	Station	Km	No of Semaphore Arm Signals
1	Rantej		1
			1
			1
			1
2	Becharaji		1
			1
			1
			1
3	Khambhel		1
			1
			1
			1
4	Chansama		1
			1
			1
			1
5	LC 99		1
			1
Note :	All Signals have lattice post except two Signals one at Rantej & Chansama have RCC Post		

Signalling Infrastructure Katosan Road - Ranuj Section

Sr. No	Station	Standard of Interlocking	Existing Signaling System RRI, PI, TBM Rly etc.	Types of Signal distant /Doubled Distant /color Light	Remarks
1	Katosan Road	B class Std(II)R	Panel Interlocking metal to metal Relay (Siemens).	Single distant Multiaspect colour light signal	Absolute Block System
2	Rantej	B class MNI	Signal operated from ground lever frame commissioned on 1958	Lower quadrant semaphore arm signal outer & home with Lattice post	Absolute Block System
3	Becharaji	B Class MNI	Signal Operated from ground lever frame, hand operated point with HPL type Lock.	Lower quadrant semaphore arm signal outer & home with Lattice post	Absolute Block System
4	Khambhel	B Class MNI	Signal Operated from ground lever frame, Hand operated Point with HPL type Lock .	Lower quadrant semaphore arm signal outer & home with Lattice post	Absolute Block System
5	Chansama	B class MNI	Signal Operated from ground lever frame, Hand operated point with HPL type lock .	Lower quadrant Semaphore arm signal both side gate signal Lattice Post	Absolute Block System
6	LC 99 Mechanical Lifting barrier	B class	Signal operated FROM LC gate Lever.	Lower quadrant Semaphore arm signal both side gate signal Lattice post	
7	Ranuj	B class Std(II)R	Panel Interlocking metal to metal Relay (ABB) .	Single distant Multiaspect color light Signal	Absolute Block System

Other Existing Material List in Katosan - Ranuj Section (Signalling)

Sr. No	Station	FPL	Point Machine	Track Circuit Equipment Set	LC gate	Block Instrument	Axle Counter	Relay groups	K50 Mini Group	Q series	ECR	Timer	HKT	KLCR	Mercury Thermo falsher Relay	Relay Rack & CT rack	Location box Full Location Box- H	Passenger Warning Board	Solar Panel Set	DG set (7-SKVA)	Jumper wire in KG (Approx.)	Control cum Indication on Panel
1	Katosan Road	4	8	27	2	IRS -2 TT7-2	1	27	444	24	58	12	8	6	1	8	Full -14 Half-15	4	1	2	40	1
2	Rantej(Mechanical)					TT7-1 NBT-1												4				
3	Becharaji	4				NBT-2												4				
4	Khambhel	4				NBT-2												4				
5	Chansama					TT7-1 NBT-1												4				
6	LC 99				2													2				
7	Ranuj		8	24	2	IRS-2 TT7-1		26	452	24	15	14	4	6	1	15	Full -16 Half-15	4	1	2	40	1

MAJOR BRIDGE						
SR. NO	BRIDGE NO.	CHAINAGE	LENGTH	WIDTH	HEIGHT	REMARKS
1	64A	8/900-9/100	90.00	0.00	0.00	PSC GIRDER (4 SPAN) (NARMADA MAIN CANAL)
2	110	31/600-3/700	181.10	5.13	8.00	STEEL GIRDER
3	114	37/100-37/200	29.10	4.40	4.60	STEEL GIRDER
4	122A	44/700-44/800	80.70	5.60	5.10	PSC GIRDER
5	132	52/600-52/700	29.15	4.50	3.55	STEEL GIRDER
6	133	53/700-53/900	21.75	4.50	3.50	STEEL GIRDER

MINOR BRIDGE/CULVERTS						
SR. NO.	BRIDGE NO.	CHAINAGE (KM)	LENGTH (MTR)	WIDTH (MTR)	HEIGHT (MTR)	TYPE OF STRUCTURE
1	47	0/700-0/800	9.3	5	3	SLAB CULVERT
2	48	1/400-1/500	9.2	5	3.8	SLAB CULVERT
3	49	2/100-2/200	4	4.5	1.4	SLAB CULVERT
4	50	2/600-2/700	10	5.1	5.4	ARCH
5	51	3/100-3/200	4.6	4.6	1	SLAB CULVERT
6	52	3/300-3/400	3.4	4.6	1	SLAB CULVERT
7	53	4/000-4/100	4.6	4.6	1.5	SLAB CULVERT
8	54	4/700-4/800	3.6	4.4	1.5	SLAB CULVERT
9	55	5/300-5/400	5.4	4.5	2.8	SLAB CULVERT
10	56	6/000-6/100	6.6	4.5	1.3	SLAB CULVERT
11	57	6/200-6/300	9.4	4.5	3	STEEL GIRDER
12	58	6/800-6/900	8.2	3.9	0.5	BOX CULVERT
13	59	7/000-7/100	3.7	4.4	1.1	BOX CULVERT
14	60	7/100-7/200	6.7	4.5	1	BOX CULVERT
15	61	7/300-7/400	5.4	4.5	0.9	BOX CULVERT
16	62	7/700-7/800	4.5	5	1.5	BOX CULVERT
17	63	8/300-8/400	11	7.1	3.5	STEEL GIRDER
18	64	8/700	4.5	7	1.5	BOX CULVERT
19	64A1(RUB)	8/800-8/900	5.5	7	6.5	BOX CULVERT
20	64A2	8/800-8/900	5.5	7	6.5	BOX CULVERT
21	64 (RUB)	9/000-9/100	6	7	6.5	SLAB CULVERT
22	65	9/000-9/100	3.5	9	2	BOX CULVERT
23	66	9/000-9/100	5.5	9	3	RCC PIPE
24	67	9/500-9/600	3.3	9	2.5	BOX CULVERT
25	68	9/700-9/800	2.3	4.6	2	SLAB CULVERT
26	69	10/100-10/200	4	4.6	1	SLAB CULVERT
27	70	10/300-10/400	3.9	4.5	1	SLAB CULVERT
28	71	10/700-10/800	3.5	4.2	1	SLAB CULVERT
29	71A	10/700-10/800	UNDER GROUND CANAL			
30	72	11/300-11/400	7.1	4.5	1	SLAB CULVERT
31	73	11/600-11/700	18.4	4.6	2	BOX CULVERT
32	74	11/600-11/700	10.8	4.5	1.9	BOX CULVERT
33	75	12/000-12/100	1.5	4.6	1	BOX CULVERT
34	75A1	12/100-12/200	1.5	-	-	UNDER GROUND CANAL
35	75A	12/200-12/300	13.6	7	-	RCC SLAB
36	75A2	12/200-12/300	1.5	-	-	UNDER GROUND CANAL
37	76	12/200-12/300	3.8	4.6	1.2	SLAB CULVERT
38	77	12/800-12/900	3.8	4.6	1.7	BOX CULVERT
39	78	13/200-13/300	14.8	4.6	2.5	ARCH
40	79	13/800-13/900	3.5	9	1.5	SLAB CULVERT
41	80	14/500-14/600	3.5	4.6	1.5	SLAB CULVERT
42	81	15/100-15/200	3	4.5	1.3	BOX CULVERT
43	82	15/500-15/600	4.9	4.6	1.1	BOX CULVERT
44	83	15/800-15/900	7.5	4.4	1.3	SLAB CULVERT

45	84	16/100-16/200	5	4.6	1.8	STEEL GIRDER
46	85	16/400-16/500	7.2	4.6	1.9	STEEL GIRDER
47	86	16/800-16/900	5	4.6	1.5	STEEL GIRDER
48	87	16/900-17/000	3.6	4.6	1.5	BOX CULVERT
49	88	17/100-17/200	9	4.6	1.8	STEEL GIRDER
50	89	17/300-17/400	17.2	4.6	2.5	STEEL GIRDER
51	90	17/700-17/800	9	4.5	1.6	STEEL GIRDER
52	91	17/800-17/900	3	4.5	1.2	STEEL GIRDER
53	92	18/200-18/300	3.8	4.5	1.6	BOX CULVERT
54	93	18/600-18/800	7.4	4.5	1.5	BOX CULVERT
55	94	20/000-20/100	7.6	4.6	2.3	STEEL GIRDER
56	95	21/126	1.9	4.5	0.7	STEEL GIRDER
57	96	21/846	5	4.7	2.8	STEEL GIRDER
58	97	21/964	6.5	4.7	2.9	STEEL GIRDER
59	98	22/295	2	4.5	1.2	STEEL GIRDER
60	98A	22/307	2	4.5	1.5	PIPE CULVERT
61	99	22/300	3	4.5	1.5	BOX CULVERT
62	99A	22/471	2	4.5	1.2	STEEL GIRDER
63	100	23/319	3.2	4.5	2	STEEL GIRDER
64	101	23/815	7.2	4.5	3.3	STEEL GIRDER
65	102	24/142	3	4.5	2	STEEL GIRDER
66	103	24/660	1.6	4.5	0.5	STEEL GIRDER
67	104	25/088	14.7	4.8	2.8	STEEL GIRDER
68	105	25/809	4.7	4.5	1.8	STEEL GIRDER
69	106	26/808	3.2	4.6	1	BOX CULVERT
70	107	27/575	3	4.5	1.5	STEEL GIRDER
71	107A	28/306	6.5	14.4	5	STEEL GIRDER
72	108	29/080	7.4	4.5	5.3	BOX CULVERT
73	109	30/300-30/400	2.8	4.5	2.6	BOX CULVERT
74	109A	30/400-30/500	6.5	14.35	5	BOX CULVERT
75	111	33/357	4.5	4.5	2.1	STEEL GIRDER
76	112	34/005	4.6	4.5	2.4	STEEL GIRDER
77	113	35/113	4.6	4.5	2	STEEL GIRDER
78	115	38/120	8.1	4.5	1.8	STEEL GIRDER
79	116	38/563	8.05	4.5	3	STEEL GIRDER
80	117	39/802	8.05	4.5	1.2	STEEL GIRDER
81	118	40/662	8.8	4.5	2	BOX CULVERT
82	119	41/638	9.25	4.5	2.3	STEEL GIRDER
83	120	42/186	8.3	4.5	1.5	STEEL GIRDER
84	121	42/983	8.4	4.5	3	BOX CULVERT
85	122	44/218	21.3	8.25	4.5	SLAB CULVERT
86	122B	44/800	6.2	4.8	5	BOX CULVERT
87	122C	44/895	6.1	8	6	BOX CULVERT
88	123	45/390	4.5	4.5	2	BOX CULVERT
89	124	46/275	8	4.5	2	BOX CULVERT
90	125	46/984	5	4.5	1.3	STEEL GIRDER
91	126	47/340	4.6	4.5	2	BOX CULVERT
92	127	48/590	9.8	4.5	1.8	STEEL GIRDER

93	128	49/559	4.65	4.5	2.5	STEEL GIRDER
94	129	49/827	7.3	4.5	3	STEEL GIRDER
95	130	50/347	7.35	4.5	3	STEEL GIRDER
96	131	51/400	6.2	3.2	1.6	STEEL GIRDER
97	133A	54/800-54/900	12.2	5.3	3	SLAB CULVERT
98	134	55/200-55/300	7.3	4.5	2.4	STEEL GIRDER
99	135	56/100-56/200	7.3	4.5	1.9	STEEL GIRDER
100	136	57/100-57/300	13.8	4.5	2.5	STEEL GIRDER
101	137	57/700-57/800	8.1	4.5	1.5	STEEL GIRDER
102	138	60/874	9.7	4.5	2.5	STEEL GIRDER
103	139	61/213	4.8	4.5	1.7	STEEL GIRDER
104	140	62/027	4.6	4.5	2	STEEL GIRDER
105	141	62/631	4.7	4.5	3	STEEL GIRDER
106	142	63/128	7.35	4.5	1.2	STEEL GIRDER
107	143	64/153	7.4	4.5	2.8	STEEL GIRDER

Railway Stations & Yards

The Details of Stations & yards is provided below

SR. NO.	NAME OF STATIONS & YARDS	START CHAINAGE (KM)	END CHAINAGE (KM)
1	Katosan Road Railway Station	0.000	0.230
2	Dhanpura Railway Station	6.500	6.675
3	Rantej Railway Station	13.600	13.777
4	Dethli Railway Station	19.200	19.380
5	Bahucharaji Railway Station	25.300	25.610
6	Shankhalpur Railway Station	27.600	27.810
7	Venpura Railway Station	34.800	35.720
8	Khambhel Railway Station	39.000	39.217
9	Bhatsar Railway Station	43.000	43.215
10	Brahmanwada Railway Station	45.800	46.023
11	Chanasma Railway Station	51.800	52.045
12	Jitoda Railway Station	56.800	53.920
13	Vansojitra Railway Station	61.000	61.181
14	Ranuj Railway Station	64.700	64.910

DETAILS OF TRANSMISSION LINES AND UNDERGROUND LINES CROSSING			
SR NO.	CHAINAGE	TYPE OF LINE	KV
Katosan Station CH 0.000 KM			
1	2064	ELECTRIC LINE (UNDER GROUND)	U/G
2	11156	ELECTRIC LINE	11
3	12575	ELECTRIC LINE	11
4	19725	HIGH TENSION LINE	220
5	24268	ELECTRIC LINE	66
6	24502	ELECTRIC LINE	11
7	24769	ELECTRIC LINE	11
8	24800	ELECTRIC LINE	11
BECHARAJI STATION CH. 25.500 KM			
9	26436	ELECTRIC LINE	11
10	26493	ELECTRIC LINE	11
11	27630	ELECTRIC LINE	11
12	27835	ELECTRIC LINE (UNDER GROUND)	U/G
13	28350	HIGH TENSION LINE	66
14	36030	ELECTRIC LINE	11
15	44975	ELECTRIC LINE (UNDER GROUND)	U/G
16	47110	HIGH TENSION LINE	220
17	50150	HIGH TENSION LINE	66
CHANSMA STATION CH. 52.100 KM			
18	52691	ELECTRIC LINE	11
19	53860	ELECTRIC LINE	11
20	54225	ELECTRIC LINE	11
21	54364	ELECTRIC LINE	11
22	57350	ELECTRIC LINE	11
23	59570	HIGH TENSION LINE	220
24	61575	HIGH TENSION LINE	66
25	64500	ELECTRIC LINE (UNDER GROUND)	U/G
RANUJ STATION CH. 64.900 KM			