

भारतीय
खाद्य
निगम



FOOD
CORPORATION
OF INDIA

Regional Office, Kesavadasapuram, Thiruvananthapuram

ISO 9001: 2008 CERTIFIED

ENGG. PTN/SD/6/2009-10

Dt.27-01-2010

NOTICE INVITING TENDER

Sealed percentage/item rate tenders are invited on behalf of the Food Corporation of India under two bid system in the prescribed form for the following works from the appropriate class of approved building contractors of Central/State PWDs, MES, Railways, P&T and Public Sector undertakings of the Central/State Governments. The intending tenderers should have satisfactorily completed during the past five years at least three works of each Rs.1 lakh for the works under sl no 1 to 4 in any of the organizations listed in the NIT for registration and should have PAN No.for IT. Regarding works at sl no 5 to 7, the intending tenderers should have satisfactorily completed 3 works of Rs. 1 Lakh each similar nature of work during the past five years. Successful tenderer has to pay 5% of tendered amount as performance guarantee in the form of DD before obtaining work award letter.. Tender documents both Technical bid/Price bid can be down loaded from the following web site @ www.fcisz.tn.nic in and [http//tenders.gov.in](http://tenders.gov.in).

Sl. No	Name of work	Estimate Cost (Rs)	EMD (Rs)	Tender cost (Rs)	Time of completion
1	2	3	4	5	6
1	Special repairs to FCI depot Angamaly for the year,2009-10-Resurfacing and widening of service road of MG.VIII.	Rs.2,60,409.00	5250.00	563.00	2 months
2	Resurfacing of service road on southern and eastern side of MG.I at FSD, Chingavanam	Rs.2,53,724.00	5100.00	563.00	1 month
3	ARMO to FCI depot Alappuzha for the year,2009-10- Urgent repairs.	Rs.1,62,807	3300.00	563.	2 month
4	ARMO to FCI depot, at Kochi Site-A for the year,2009-10	Rs.1,68,272	3400.00	563.	2 month
5	Systematic maintenance of Railway siding at FSD, Angamaly for the year,2010-11	Rs.1,72,704	3500	563	12 months
6	Special repairs to Railway siding at FSD, Angamaly for the year,2009-10- Deep	Rs.3,13,463	6300	563	2 month

	screening the ballast of Road-I				
7	Special repairs to Railway siding at FSD, Kazhakuttam for the year,2009-10-Deep screening the ballast	Rs.3,72,050	7450	563	2 month
8	Providing cement concrete Kerb wall to weigh bridge approach road and passage to canteen at FSD Kollam (Re-Tender-Single bid)	.Rs. 1,08,064/-	2200/-	563/-	1 month

Tender documents(non-transferable) may also be obtained from the above office on any working days between 11.00 AM and 4.00 PM up to 9-02-2010 by written application and payment of cost of tender document in cash. Earnest Money in the form of DD of a scheduled bank drawn in favour of Food Corporation of India, Thiruvananthapuram must (in sealed cover/envelope of technical bid) accompany each tender. Tender not accompanied by Earnest Money in the prescribed form shall be summarily rejected. The tenders under two bid systems should be placed in separate sealed covers/envelopes. The tenderers down loading the tender document may have to remit the cost of the tender document in the form of DD in a separate cover under Technical bid.

Completed tenders containing two sealed covers of. Technical bid & Price bid placed in bigger envelope duly sealed and super scribed with the name of work will be received by the Asst. General Manager (CE) at the above address up to 3.00 PM on 15-02-2010 and the technical bid will be opened on the same day at 3.30PM in the presence of the tenderers or their authorized representative who may wish to be present. The price bid of only such tenderers whose technical bid are found technically eligible by the committee will be opened subsequently on the date & time fixed by FCI and the same will be intimated separately.

Assistant General Manager (CE)
For and on behalf of FCI.

FOOD CORPORATION OF INDIA

VOLUME - I

NOTICE INVITING TENDER

**NAME OF WORK: SYSTEMATIC MAINTENANCE
OF RAILWAY SIDING FOR THE YEAR**

FOOD CORPORATION OF INDIA

(NOTICE INVITING TENDER)

Ref. No.....

Date:.....

TO

.....
.....
.....
.....

Subject:

(To be filled by FCI)

Direct Tender and all.

Communication to:-

.....
.....
.....
.....

1. Enquiry No.....
2. Issue date
3. Bid closing date.....
at3:00 PM.....Hrs
4. Bid opening date
- at3: 30 PM..... Hrs
5. Earnest Money Deposit required
Rs only in separate cover
superscribed with "Earnest Money Deposit".
6. Cost of documents (Tender Rsees five hundred and

forty six only)

Item Rate Sealed Tenders are invited for the Systematic Maintenance of Railway siding. The tenders are requested to note the following:-

1. The above Enquiry No. and subject must appear on all correspondence and documents.
2. The tender shall be submitted in original.
3. Tender shall be submitted along with the attachments shown below which are by this reference made a part of this NIT.

LIST OF TENDER DOCUMENTS:-

- I Instructions to Bidders
- II Conditions of contract
- III Submission of Tender
- IV Technical specifications Scope of work, Man Power Requirement and Drawings etc. for the work.

- 4. FCI reserves its right to reject any or all tenders received without assigning any reasons what so ever.
- 5. Tenders received not accompanied with Earnest Money in the prescribed form will be summarily rejected.
- 6. Tender documents may be obtained from the undersigned on payment of Rs..... in cash (non refundable) from Deputy Manager (Engg) Engineering Division, at Palakkad.

Yours faithfully,

(DESIGNATION)

Encl: as above

INSTRUCTIONS TO BIDDERS

1.0 DEFINITION OF TERMS

- 1.1 “Owner” shall mean “Food Corporation of India. Regional Office, Thiruvananthapuram”.
- 1.2 “Tenderer” shall mean the person or persons, firm or company who submit their tender for being considered by the owner for award of work.
- 1.3 “Contractor” shall mean the Tenderer whose tender will be accepted by the Owner for the award of the works and shall include such successful tenderer’s legal representatives, successors and permitted assigns.
- 1.4 “Engineer-in-charge” shall mean the Deputy Manager (Engineering) to act as Engineer from time to time for the purpose of the contract.

2.0 GENERAL

- 2.1 Tender documents shall remain the property of Owner and obtained by one intending tenderer, shall not be utilised by another.
- 2.2 The tender shall be completely filled in all respects and shall be tendered together with requisite information and Annexures. Any tender incomplete in any respect shall be liable to rejection.
- 2.3 Tender must be submitted in original, and as per details given in other clauses.
- 2.4 Addenda/Corrigenda to this tender documents, if issued must be taken into account and the tenders having reference to that will be submitted accordingly.
- 2.5 The tender shall be submitted in sealed envelope as described below:-
 - a) The tender shall be submitted in two parts, each part to be put in separate sealed envelope.

- b) Part-I shall comprise to Earnest Money Deposit and credentials. The sealed envelope containing the E.M.D. shall be superscribed with following details:-

E.M.D. for Rs.....
Form of E.M.D. (DD with date and No.)
Name of the Bank
Name of work:-

NIT reference
Name of the Party
(If the above superscription of EMD is not indicated on the sealed envelope of EMD the tender shall be liable to rejection)

- c) Part-II shall be the tender proper and the sealed envelope containing the tender proper shall be superscribed with the following details :-

NIT reference No.
Name of Work:-

Tender opening date
Name of the tenderer with address
Telephone Telex & Fax No.

- d) The above two sealed envelopes shall be put in a third envelope and sealed property and superscribed as below :-

NIT Reference :

Bid opening date :

Name of Work :

Name and address of Tenderer
Telephone Telex & Fax No.

- 2.6 If the tender is made by an individual in his personal capacity, the tender shall be signed with his full name and full address. If it is made by a partnership firm, it shall be signed by the Managing Partner of the firm and name and address of the partners shall be given.

If it is made by a Private or Public Limited Company, or two firms (individual or partnership firms) in association tender shall be signed by a person authorised to do so. In such case the authority of the person signing on behalf of tenderer shall be furnished in the form of Power of Attorney or other Documentary evidence.

- 2.7 The sealed tender must reach the above address on or before the time limit specified in the Notice Inviting tender.

Tenders submitted thereafter will not be accepted.

- 2.8 The tender shall be opened on the date and time specified in the Notice Inviting Tender, in the presence of tenderers or their authorised representatives, who wish to be present at the time and date of opening. Tenders received with incomplete information/details, shall not be considered/liable to rejection.

- 2.9 Tenders shall set their rate in firm figures & words without qualifications or variations or additions in the terms of the tender documents. Tenders containing qualifying expressions or incorporating terms and conditions at variance with the terms and conditions incorporated in the tender documents shall be liable to rejection.

- 2.10 All the tender documents should be filled by either typing or in clear and legible handwriting

- 2.11 The tenderers shall submit the full set of tender documents issued to him/his company/ firm. Non submission of F.C.I's tender documents or short submission, submission of tender in any other form may be liable to rejection.

- 3.0 Tenderer are advised to inspect and study the site, site conditions and its surrounding and satisfy themselves before submitting their tenders as to the nature of the site, of access to the site, and in general shall themselves obtain all necessary information as to risk, contingencies and other circumstances which may influence or effect their tender and actual execution of work, if awarded. Tenderer shall be deemed to have full knowledge of the site, whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed.

- 4.0 Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware, of the scope and specifications of work to be done and terms and conditions and at which stores materials to be issued to him by the Owner, and local conditions and other factors, having bearing on the execution of the works.
- 5.0 A tender shall tender his rates both in figures as well as in words clearly. The amount for each section, item wise should be worked out and the requisite totals given. In case of any deviation between the amount given in figures and words, the amount written in words shall be taken as final for all purposes. Tenderer should therefore take special care before submission of the tender to make the rate sheet anomaly free.
- 6.0 On acceptance of the tender, the EMD will be converted into initial security deposit and shall be treated as part of the total security deposit.
- 7.0 EMD of unsuccessful tenders will be returned to them on finalisation of the tender. No interest will be payable on the EMD.
- 8.0 A tenderer shall take special care before submitting the tender, that his tender satisfied each and every conditions laid down in this notice and other tender documents, failing which his tender will be liable to rejection.
- 9.0 Any sales tax, or other taxes on materials in respect of this contract will be payable by the contractor and the owner will not entertain any claim whatsoever in this respect.
- 10.0 The FCI reserves to themselves the right to accepting the whole or any part of the tender (including splitting of the works among the participant tenderers) as convenient and the tender shall be bound to the same at his quoted rate.
- 11.0 The tender submitted by tenderers shall remain valid for acceptance for a period of 45 days (fourty five) from the date of opening of tenders. However the corporation shall have the option to extend the validity for a further period of forty five days. The tenderer shall not be entitled during the said period of 90 days (Ninety days) without the consent in writing of the owner to revoke, cancel his tender or cancel his tender or vary the tender given or any item thereof. In case of tenderer revoking or varying any items in regard there of and without the written consent of the owner, the owner shall have the right to forfeit the Earnest Money Deposit paid along with the tender.

- 12.0 Delayed tender (i.e. tenders received after the closing time out before the opening of the tenders) and /or late tenders (i.e. tender received after the opening of the tenders) will not be entertained.
- 13.0 The FCI will not accept any reasons for delay in receiving the tenders received through post due to postal delay.
- 14.0 The Tenderer should be prepared to furnish detailed breakup in support of the tendered rate when called upon to do so, without any reservations.
- 15.0 The schedule of items and quantities is (are) to be read in conjunction with the form of tender, technical specifications, conditions of contract and drawings. These documents are jointly complementary to each other and are explanatory and descriptive of the works involved in the contract.
- 16.0 The tenders are advised to go through the tender provisions carefully and tender their rates/item rates as the case may be, taking into account all the provisions and factors incidental thereupon. No claim shall be entertained at a later date on any assumption(s) made by the tenderer which are contrary to the provisions of these documents and/or which are not specifically brought out by the tenderer at the time of submission of tender.
- 17.0 The tender papers as submitted shall consist of the following:-

Envelope - 1

- a) Earnest Money Deposit in the prescribed form in a sealed cover as indicated in clause 2.5 (b) of this notice.
- b) Company's credentials.

Envelope-2

- a) Complete set of tender documents duly filled in and signed by the tenderer as prescribed in different clauses of the tender documents.
 - b) Power of Attorney or other proof of authority for the person signing the tender.
 - c) Latest Income Tax Clearance certificate in original or true copies duly attested by Gazetted Officer. (Deleted)
 - d) Any other documents required in terms of this notice.
- 18.0 Correction and Alternations:- No erasing or over writing is permissible. All corrections and alternations in the entries of the tender papers shall be written fresh after scoring out old entry with one straight line. All such corrections and alternations shall be signed in full by the tenderer with date.
- 19.0 All pages to be initiated: All pages of all sections of the tender documents shall be initiated at the lower right hand corner and dated by the tenderer or by a person holding the Power of Attorney to sign.
- 20.0 Past Experience:- The tenderer shall fill in schedule 2 and enclose the same with tender documents to show the works of similar nature and magnitude (as mentioned in the Notice Inviting Tender) satisfactorily completed during the last five years.
- 21.0 Addenda/Corrigenda
- 21.1 Addendum/Corrigendum to the tender documents may be issued prior to the date of the tenders to clarify documents or to reflect modification in the contract terms.
- 21.2 Each addendum/corrigendum issued by the owner will be distributed in triplicate to each person or organisation to whom a set of tender documents have been issued. Each recipient will retain two copies of each addendum/corrigendum for submission along with his tender and return one signed copy to the Owner as acknowledgement of receipt of the same.

All the addenda/corrigenda issued by the Owner shall be become part of tender documents.

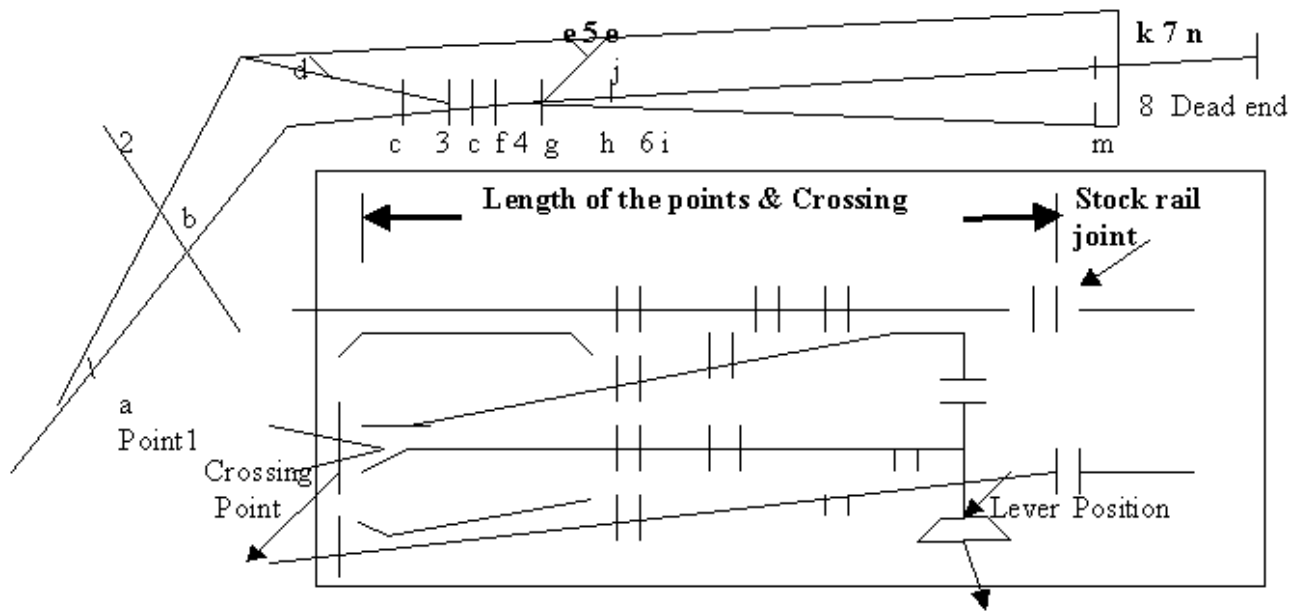
- .0 Witness:
Names, Occupation and Addresses of the witnesses shall be stated below their signatures. witnesses shall be person of status.
- 23.0 Canvassing
Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the tenderers who resort to canvassing shall be liable to rejection.
- 24.0 The Owner reserves the right to reject, accept or prefer any tender without assigning any reason whatsoever. The work may be split up between two or more tenderers or the tender accepted in part only.
- 25.0 Tools, Tackles, and Equipments:- The tenderer shall complete schedule 3, giving details of various tools and tackles proposed to be used for the maintenance of Private siding of the Owner.
- 26.0 Details of Manpower:- The tenderer shall indicate in schedule 4 the details of manpower he proposes to deploy for the Systematic maintenance of Railway Siding for the year 2004 - 05 at FSD Mulangunnathkavu.
- 27.0 Deviations: Deviations if any should be indicated in schedule 6.
- 28.0 List of Enclosures: The tenderer should give details of various annexures enclosed with the tender schedule 7 of the Bid proposal.
- 29.0 Where in the tenderer finds difficulty in understanding the implication of any of the provisions in the tender documents, he shall get the clarification (s) required by him from the authority issuing the tender documents, before submitting his tender. No claims shall be entertained at a later date for any assumptions / presumptions made by him.

EQUIVATED TRACK KILOMETRE CALCULATION (ETKM)

Wherever the siding contains Points & Crossing, TEN sets of Points & Crossings will be taken equivalent to 1 KM.

In calculating one set Points & Crossings; the following formula should be followed:-

Turn out	.....	.....	One set
Diamond	.....	.....	One set
Diamond Crossing with single slip	.....	.....	1 $\frac{1}{2}$ Set
Diamond Crossing with double slips	.....	.....	Two sets
Cross overs	.....	.....	Two sets
Trap Point	.....	.....	$\frac{1}{5}$ th Set



ETKM CALCULATIONS

Measure
on ordinary
Track outside
Of points
& x-ings

- a to b
- a to c
- d to e
- c to f
- g to h
- e to k
- f to l
- l to m
- n to o

all measurements are to be done between the stock joint & one Points & x-ings to the next points & x-ings to the next points & x-ing either stock joint or back of xing.

Add up & correct to KM

+ 8x0.1 KM (points & x-ings)

Total = ETKM

Note: For Diamond x-ing with single slips, 1 set = 0.15 KM
 Diamond x-ing with Double slips 1 Set = 0.20 KM
 Cross overs..... 1 Set = 0.20 KM

SCHEDULE - 2

**DETAILS OF WORKS OF SIMILAR NATURE AND MAGNITUDE CARRIED
OUT DURING THE LAST FIVE YEARS**

Sl.No	Name of the work done with Name & Address of Owner	Estimated Cost	When Started	When Completed	Date of Completion as per Contract	Remarks
-------	--	----------------	--------------	----------------	------------------------------------	---------

*Note: 1. Please enclose the true copy of the certificates issued by the authorities, if any.
2. Additional sheets of like size & format may be used, if required.*

signature of Tenderer

DETAILS OF TOOLS AND TACKLES

Tenderer shall submit herein details of tools and plants and equipments etc. that are proposed to be used by him for carrying out the job stipulated in the Bid Documents.

Sl.No	Description of Tools and Plants and Equipments	By the Tenderer	Number proposed to be used	Remarks
-------	---	-----------------	----------------------------	---------

Note: Sheets of like size and format may be used if required.

DETAILS OF MINIMUM MANPOWER PROPOSED TO BE DEPLOYED FOR THE WORK PER ETKM PER DAY

Sl.No	Category	Number	Remarks
1.	PWI	0.083	
2.	Trolley Man	0.33	
3.	Mate	0.20	
4.	Keyman	0.20	
5.	Gangman	1.20	

- NOTE:
1. Minimum manpower deployment shall be based broadly as above & will be modified as mutually agreed to suit the detailed maintenance programme jointly worked out, further if any additional manpower is required for completion of work in time, the same shall be provided by you as directed by Engineer-in Charge without any extra cost.
 2. Additional sheets of like size & format may be used, if required

Signature of Tenderer

LIST OF DEVIATION

Sl.No	Clause Ref./Volume No.	Deviation	Remarks
-------	------------------------	-----------	---------

Note: Additional sheets like size and format may be used, if required.

signature of Tenderer

LIST OF ENCLOSURES

Sl.No	Description	Annexure No.	Remarks
-------	-------------	--------------	---------

Note: Additional sheets like size and format may be attached, if required.

Signature of Tenderer

FOOD CORPORATION OF INDIA

VOLUME - III

TECHNICAL SPECIFICATION

**NAME OF WORK: SYSTEMATIC MAINTENANCE
OF RAILWAY SIDING FOR THE YEAR**

TECHNICAL SPECIFICATION

1.0 GENERAL

- 1.1 The works to be carried out shall conform to the detailed specifications given below. The scope of work shall be as described in the following paras and further details as per the schedule of quantities and instructions of Engineer - in - charge. If there is any dispute about the scope of work, the decision of the Engineer-in-Charge shall be final and binding on the contractor.
- 1.2 The quantities given in “Schedule of Quantities” are indicative and approximate only and may vary according to actual requirement.

2.0 SCOPE OF WORKS

- 2.1 The scope of work shall include maintenance of FCI sidings at Mulangunnathkavu (Location) comprising of 2.933 ETKM including.....sets of 1 in 8-1/2 points & crossing &.....sets of 1 in 12 points & crossings, indicated in the Bid Documents and broadly cover the followings:

2.1.1 SYSTEMATIC TRACK MAINTENANCE

It shall be carried out round the year as per the practice followed on the Indian Railways and as per the specifications given in clause 3.0 hereunder and instructions of the Engineer-in-charge. The track fittings except Rails, sleepers, fish plates, fish bolts and points & crossings as per actual requirements is to be supplied by the Contractor free of charge, for replacement or recouplement and is included in the rate for item No.1 of the schedule of quantity.

2.1.2 EMERGENCY WORKS:

Attending to emergency work such as Accidents, washouts and rectification of damaged track, derailment of wagons etc. as and when needed.

2.1.3 SPECIAL WORKS

If required by the Engineer-in-charge, the contractor shall carry out the following works also:

- Deep screening of track ballast:
- Rehabilitation of track,

- Sleeper renewal;
- Rail Renewals
- Earth work in formation;
- Repairs to banks and cuttings
- Ballasting
- Renewal of Points & Crossings

2.1.4. SUPPLY OF P. WAY MATERIALS

If required by the engineer-in-charge, the contractor shall arrange supply of following P.way material (other than rail) as per IRS specifications and at locations to be directed by the Engineer-in-charge:

- Sleepers and fittings;
- Fish plates;
- Fish bolts;
- Stone ballast etc.
- Any other items specified by the Engineer-in-charge.

2.1.5 SUPPLY OF EXTRA MANPOWER

If required for specified needs connected with the works of the railway siding in case of emergency or otherwise as directed by the Engineer-in-Charge of the contract.

2.2 Food corporation of India shall provide all permanent way materials like rails, sleepers, Points and Crossings with their fittings required for the works involved as per para 2.1.2. and 2.1.3. of the Scope of work free of cost from their store, which will be nominated by them. The Contractor will make his own arrangements for drawal of materials from the stores of FCI, transporting to the Contractors store and to site for renewals and transporting back the released materials to FCI stores to be handed over with due accountal.

3.0 TECHNICAL SPECIFICATIONS:

3.1 SYSTEMATIC MAINTENANCE OF THE TRACK ON THE RAILWAY SIDING ON ANNUAL PROGRAMME BASIS

The systematic maintenance of track shall be followed as per the following program and items shown in the chart hereunder;

SYSTEMATIC MAINTENANCE PROGRAMME
ANNUAL GANG ROUTINE PROGRAMME FOR TRACK MAINTENANCE

Sl. No	Item of Maint. and frequency.	Oct	Nov.	Dec.	Jan.	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1.	Through Packing of track (min: one Round over entire track length in a year)	:	:	:	:	:	(.....)	:	:	:	:	:	:
2.	Picking up slacks (Round the years any no. of times as required)	(.....)	:	:	:	:	:	:	:	:	:	:	:
3.	Lubrication & Oiling of fish plates and bolts (entire section once in a year)	:	:	:	:	:	(.....)	:	:	:	:	:	:
4.	Creep adjustment by pulling back Rails (As & when required)	:	(.....):	:	:	:	:	:	:	:	:	:	:
5.	Overhauling of track (shallow screening 1/3 of the entire track length in a year)	:	(.....)	:	:	:	:	:	:	:	:	:	:
6.	O.H. of level crossings	:	:	:	:	(.....)	:	:	:	:	:	:	:
7.	O.H. of points & crossings	:	(.....)	:	:	:	:	:	:	:	:	:	:
8.	Repairs to cess and cleaning of side drains and catch water drains	:	:	:	:	:	:	:	:	:	:	(.....):	:

3.12. The gang routine program show in the chart above pertains to the activity of the maintenance gang. These gangs shall not be disturbed for special works mentioned in the scope of work.

3.2 THROUGH PACKING OF TRACK

3.2.1. Through packing shall consist of the following operations in sequence, not more of the track on any day being opened out than can be efficiently repacked before closing of the work (for this purpose, the yard stick to be followed), is 12 sleepers per man per day. Accordingly the total number of sleepers tackled will be dependant upon the number of gangman present on the day.)

- Opening of roads
- Examination of rails, sleepers and fastening
- Squaring of sleepers;
- Slewing of track to correct alignment;
- Gauging
- Packing of sleepers
- Repacking of joint sleepers and other inadequately packed sleepers.
- Boxing of ballast section and tidying

Through packing will be done from one end of a gang length towards the other continuously.

3.2.2 OPENING OF THE ROAD

a) Specification: Ballast should be opened out on either side of the rail seat in the inter space of two adjacent sleeper to 450mm on the inside of the track and to the end of the sleeper on the outside, and to a depth of 50mm below the packing surface (bottom of the sleeper) without disturbing the cores/packing under the sleepers.

B) METHOD:

The ballast should be drawn by shovels or phowrahs outwards and inwards ie., that portions of the ballast on the inside of the track shall be drawn towards the centre of the track, and that outside the rail should be drawn towards the end of the sleepers. Care, however, shall be taken that the ridge of ballast formed between the rails at the centre of the track, does not project more than 50mm above the rail level.

3.2.3. EXAMINATION OF RAILS, SLEEPERS, AND FASTENINGS:

- a) Rail should be examined for the following:
- Underside of corrosion
 - Rail joints for wear on the fishing planes and tightness of fish bolts;
 - Rail ends for possible cracks, kinks

- b) Sleepers should be inspected for their conditions and soundness particularly at rail seats. In case of steel sleepers more than 20years old, the rail seats should be examined for cracks. In case of C.I. pot or plate sleepers, the conditions and firmness of the gibbs cotters, keys and tiebars should be examined. The tiebars should also be examined for corrosion at the location of cotter fixing slots. In case of wooden sleepers, the spikes should be examined for firmness, spike killing, end split and decay.
- c) Cracked or fractured rail if found should be replaced. In case of cracked fish plates, the same should be replaced. Broken cottors in C.I. sleepers and broken tiebars too should be replaced. Spiks killed wooden sleepers, if otherwise sound without the presence of split and decay, should be treated by plugging the spike holes with wooden plugs and spikes refixed with gauging and fresh augering.

3.2.4. SQUARING OF SLEEPERS:

- a) The spacing of sleepers on the sighting rail should first be checked and correctly chalk marked on the rail. Corresponding marks acquire to the above chalk marks will be made on the other rail by using 'T' square.

b) METHOD FOR SQUARING OF SLEEPERS:

The sleepers which are out of the square should first be identified with reference to the above spacing and square marketings. The core of the indentified sleepers are to be pricked with the pick-ends of the beaters, the fastening loosened and the sleepers shifted to marked position with squaring. The sleepers are to be leveled and replaced in the correct position. The sleepers under no circumstances are to be hammered from squaring. The sleepers operation shall be done by planting a pair of crow bars against the sleeper at one end on either side of the rail seat, and pushed with a lever action with the ground as the fulcrum. After squaring is achieved the fitting should be immediately tightened. Sleepers that are squared/repacked should be immediately regauged, fastening retightened and packed fully.

3.2.5 SLEWING OF TRACK TO CORRECT ALIGNMENT

- a) Slewing of track shall be directed by the mate, who on straights should sight the rail from a distance of 50 to 60 metres(4 rails to 6 rails lengths). In curves he should sight the outer rail. The slewing should be done in the morning hours only because of better sighting condition and as also this operation needs to be done before packing the sleepers.

- b) On curves the realignment if required should be undertaken only after taking into consideration the versine readings on 29M chord. Local adjustment of versines where ever required is to be done at the time of through packing.
- c) Method of Carrying out Slewing:-

Loosen the core the end of the sleepers and create space by drawing out ballast from the ends of the sleepers. 4 to 5 pairs of crow bar shall then be planted deep in to the ballast at an angle not exceeding 30 degrees to 35 degrees from the vertical near the foot of the rail. Care should be taken to see that all the crow bars are placed approximately at the same angle for getting better impetus. The angle of 30 degrees to 35 degrees should not be exceeded to avoid the track being lifted and distorted Push the rails with the crow bars to correct the alignment.

3.2.6 GAUGING OF TRACK

- a) Gauge of the Railway track is the perpendicular distance between the two rails at the inner flange, measured at a depth of 3mm below the top surface of the rail head, and at location of mid sleeper width.
- b) Gauging should only be done after ensuring that the sleepers are truly square.
- c) Standard keying hammers should be used in case of rail road with metal sleepers and spiking hammer or Rail screw Box spanner depending upon the fitting being spikes or Rail Screws, in case of wooden sleeper.
- d) The 'Track Gauge' should be held firm with one lug against the base rail, and the other end swevelled over the opposite rail. The gauge should not be forced inside which will result in considerable wear on the lug of the guage.

MAINTENANCE TOLERANCE FOR GUAGE.

- On straight : 3mm tight to 6mm slack (1673mm guage to 1679mm guage)
- on Curve : (1) On curves of 400 meters Radius or more exact to 3mm slack
(2) On Curves of Radius less than 400mm upto maximum 20mm slack.

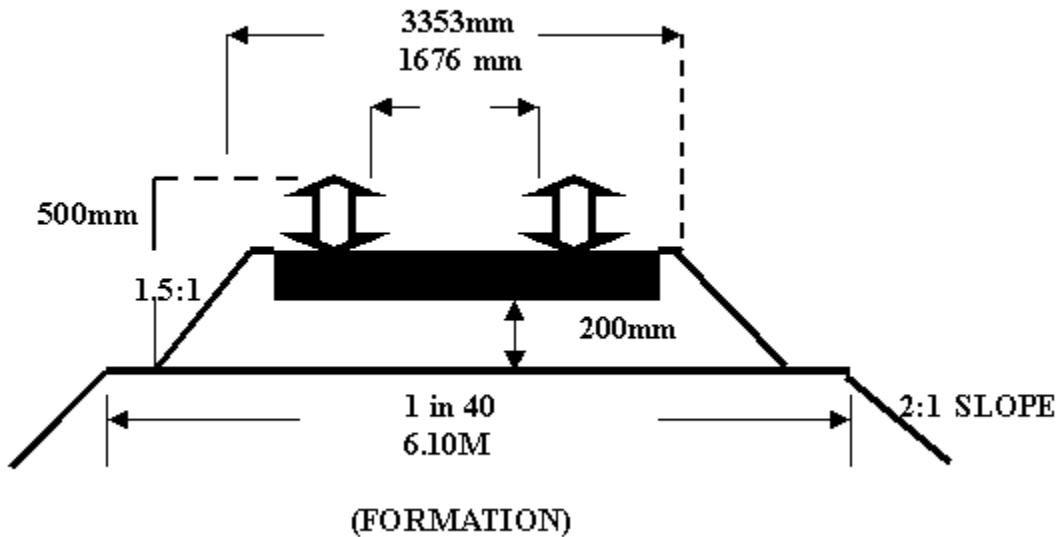
3.2.7 PACKING OF SLEEPERS

- i) The base rail shall be sighted by the mate with the eye along the edge of the rail, at rail level, and any dip or low joints correctly. The adjacent sleepers should then be packed and the top of the rail again checked., After two rail lengths have been attended to the rails on the other side should be brought upto correct level using the straight edge and cross checked again after at every rail joints and at every fourth sleeper. The next two rail lengths should then be taken up and the process continued.
- ii) No joint or dip should be lifted more than the proper level in expectation that it will settle to the correct level, instead it will settle more under traffic as a result of being high and cause rough running.
- iii) Having aligned the track and adjusted the “rail top” the gangman should be distributed to pack all the sleepers in a systematic manner commencing from one end of the work spot. Four men in the group should simultaneously deal with every sleeper successively, two at each rail seat. The ballast under the rail set should be packed by two men standing back-to-back and working their beaters diagonally under the rail seat at the same time to ensure firm packing.
- iv) It is important that the men should thoroughly “prick” the cores with the pick end then use the head-ends of the beaters as otherwise uniform packing will not be achieved and the desired elasticity of the road-bed affected. After packing under the rail seat the men should pack on each side of the rail seat, from end to 450mm inside of the track on B.G. During the packing the beaters should not be lifted above the head, but rather all men should aim to work the beater from the same height (up to chest level) so that the impact is uniform thereby the sleepers are uniformly packed. Higher or lower lifting of the beater result in uneven compactness and the packing does not last long.
- v) In the case of steel trough and wooden sleepers, the packing under the rail seats causes the ballest to work towards the centre of sleeper, resulting in centre binding of the sleepers. “Centre bound” sleepers tend to rock and set up rolling motion” to the passing trains. There fore before final dressing is done, it should be ensured that no sleepers is “Centre bound”, by working the pick -ends of the beaters over the central area, say for 150mm each on either side of the centre of the sleepers.

- vi) In case of CI plate sleeper, it should be ensured that the plates are not tilted in the process of packing.
- vii) The packing on the inside and outside the track at every rail seat on every sleeper should be checked by the Mate by tapping with the “Canne boule”. A hollow sound would indicate defective packing, which should be attended to again.
- vii) As soon as the packing is systematically completed, the alignment and the top level of the rail should be carefully checked by the Mate and minor adjustments carried out. The sleepers disturbed for this purpose being finally re-packed.

3.2.8. REPACKING OF JOINT SLEEPERS

- i) After completing the preceding of operations in sequence, clear ballast should be worked in with “Ballast Rakes” and completely filled between the sleepers along the rail seats.



- ii) The ballast section should be dressed to specified dimensions, shown in fig.1. Annexed Where ballast is deficient of the full section, the deficiency should be shown along the centre of the track and not under the rails or in the shoulders.

- iii) After the boxing is done, the cess should be tidied up. Where earth ridge is existing at the end of the Bank or at the toe of the ballast section, this should be removed. Cess should be maintained to the correct depth below rail level according to the ballast-section drawings (Fig.1)

3.3 PICKING UP SLACKS

- i) As opposed to through packing, picking-up-slacks should be done where the alignment or top level is bad and the track has to be restored to normal condition quickly. The length of track attended by the gang during the day will depend on the extent of the slacks. In all cases, sighting is done, the defects assessed and accordingly identifying marks are made on sleepers to be dealt with, in chalk. The marked sleepers should then be opened out and dealt with as in the case of through-packing.
- ii) It is imperative when joints are picked up, minimum three sleepers in addition to the two joint sleepers on either side of the joint should be packed.
- iii) While picking up slacks, in on case should one side rail and sleepers is tracked, but it should be ensured that those sleepers being tackled, should cover the whole sleepers involving both the rails at any spot.

3.4 LUBRICATION OF RAIL JOINTS

- i) The purpose of lubricating rails joints is not only to facilitate expansion of rails but also to retard the inherent feature of wear on the fishing planes of the rail and fish plates. Reduced wear on fishing planes is one of the preventives for low joints.
- ii) A stiff paste of plumbago (graphite) and cheap kerosene oil made up in the proportion of 3kg of plumbago to 2kg of Kerosene oil may be used. Black oil or reclaimed oil for oiling fish bolts and nuts may be used. The following quantities to the specification mentioned should suffice for 100 nos single joints:-

Plumbago	-	5 Kg
Kerosene Oil	-	3.5 Kg
Black or reclaimed oil	-	2.75Kg

- iii) All the rail should normally be lubricated once a year on a programme basis during the cold weather months.

- iv) The lubrication of joints should be carried out under the direct supervision of the PWI and proper track protection with Engineering signals.
- v) The lubrication of rail joints and reversing of fish bolts should be carried out as follows:
 - a) Unscrew the nuts and remove the fish plate on the nut side leaving the other fish plate and bolts in position.
 - b) Clean the fishing surface of the fish plate and the rails with a wire brush; lubricate and replace the fish plate.
 - c) Take out fish bolts, one at a time, and put each back, after oiling in the reverse position.
 - d) Treat the other fish plate and fishing surface of the rail similarly.
 - e) Replace nuts and tighten to the extent possible with a standard fish bolt spanner without overstraining the bolts.
 - f) Two joints opposite each other shall not be opened out at the same time.
 - g) In case of any approaching train, both the fish, plates should be fixed and at least one fish bolt and nut on either side of each joint should be tightened. This should be ensured before removing the banner flag and allowing the train to pass.
 - h) Lubrication of rail joints shall not be done in extremes of temperature. Where creep is heavy, pulling back of rails shall be done before work of lubrication of joints is undertaken.
 - i) For all works of relaying, rail renewals and renewal of points and crossings, rail joints should be lubricated.

3.5 CREEP ADJUSTMENT

- a) Rails have a tendency to gradually move in the direction of dominant traffic., Among the troubles caused by creep are:
 - Sleepers getting out of square
 - Distortion of gauge
 - Loosening of joints
 - Shearing and breaking of spikes, bolts and fish plates and in extreme cases bulking of track takes place.

- b) Creep reading should be maintained in a register for each Km in a register and the reading being recorded once in 3 month.
- c) Creep in excess of 150mm is not permitted. Adjustment should be carried out as necessitated by pulling back rails.
- d) Consecutive jammed joints noticed at intervals at a kilometreage should be considered as an indication for taking up work of creep adjustment.
- e) The work of creep adjustment should be carried out under the protection of engineering signals and under the personal supervision of the PWI.
- f) Joint-gap survey shall be conducted by the PWI to plan the work and for the determination of the starting point for pulling back. Normally pulling back is to be started from some fixed structure, such as level crossings, points and crossings etc.
- g) The gap survey will dictate the length of track to be undertaken for pulling back in one operation. The total of the amount of gaps in the length should be equal to the total of the proposed gaps length.
- h) Correct expansion liners shall be used for the purpose of maintaining the expansion gap at the time of pulling back.
- i) Cutting of Rails or using shorter/longer length Rail/Cut Rail for creating gap to adjust the creep is strictly prohibited.
- j) It is to be ensured that all the fittings are fixed and tightened properly at the close of the pulling backwork.

3.5 OVERHAULING OF TRACK

- a) For good drainage, periodical screening of stone ballast and making up of ballast section is essential.
- b) Overhauling of track broadly consist of shallow screening of ballast, and covers 1/4th of the section each year, starting from one end in the first year and finishing at the other end on the 4th year.

- c) The material in ballast shoulders to full depth and between sleepers to depth of 100mm below the level of bottom of the sleepers should be removed, screened/ cleaned and put back. Care should be taken that the packing under sleepers is not disturbed and the muck removed is not allowed to raise the cess above the correct level.
- d) Two contiguous spaces between sleepers should not be worked at the same time.
- e) Screening should be progressed in alternate panels of one rail length. In no circumstance should several rail lengths of track be stripped of ballast at the same time.
- f) Where drains across the track exist: these should be cleaned and filled with boulders or ballast to prevent sleeper packing working out and forming slacks.
- g) After the screening all items of through packing will be done, Normally the sequence to be followed shall be two day for screening of ballast followed by 1 day of through packing for the length of track thus screened.

3.7 OVERHAULING OF LEVEL CROSSING

- a) Each level crossing must be opened out at least once in a year and conditions of Rails and Fastenings sleepers and fittings to be inspected.
- b) Any sleepers or fittings found bad will be replaced.
- c) Rails, fastenings and the exposed surface of the wooden sleepers should be properly cleaned and a coat of coal tar applied.
- d) Check Rail blocks and bolts are to be checked and the bolts tightned after providing proper clearance between the check Rail and the running rail. This clearance should not be less than 51mm or more than 57mm. Required depth of space for wheel flange from the rail top to the blocks is 38mm.
- e) The ballast will be shallow screened as in the case of overhauling to track, and shortage if any, in the ballast section, will be made up with fresh clean ballast.
- f) The road width shall be filled with earth, watered and rammed with and hand rammer for consolidating the road surface.

- g) The road outside the track upto the gate posts and 6M beyond is to be repaired if necessary, watered and rammed and kept level. Gradient of the road is to be checked beyond the above 6M of the gate posts and should be maintained to not steeper than 1 in 20.
- h) The gate posts are to be painted white and the date of overhauling should be painted on its surface near the top.
- i) The warning board for the road users are to be repainted with proper legends and signs.
- j) A square whistle board/indicator at both approach of the level crossing along the track is to be fixed. The distance from the edge of the level crossing to the whistle boards shall be 600M. The size of the board shall be 600M square board painted "canary yellow" and a legend "W/L" painted with black paint. Its height shall be 2M from the rail level to the underside of the board. The posts fixed shall be painted with 300mm bands of alternative black & white. The nearest edge of the board from the centre line of the track shall be 2.21 M and should face away from the level crossing.

3.8 OVERHAULING OF POINTS & CROSSINGS

- a) As in the case of overhauling of track at para 3.6, the ballast in a points and crossing should be similarly shallow screened.
- b) All the sleepers examined for their conditions and any sleepers found to be bad shall be replaced.
- c) Spacing marks on the straight shall be made with chalk as per the designed spacing given in RDSO Drg.No. TA 20104 & TA 20804 for 1 in 8-1/2 points & crossings and TA 5268 (M) & TA 2080 for 1 in 12 points & crossings. Corresponding squaring marks given on the opposite rail after checking with "T.Square", except for the two sleepers which bears spacing at both ends to cater for designed skew to the sleepers following it. Here all the sleepers are to be spacing marked on both rails duly measuring off the spacing indicated in the above drawing.
- d) All the materials and fittings should be checked for their conditions and tightness respectively and unserviceable once will be replaced. Were on the nose & wing rails to be checked. If the vertical wear is more than 10mm the crossing is to be replaced. More than 6mm out below 10mm vertical were, reconditioning by Electric Arc Welding is to be resorted to. Bulking on the stock rail to be chipped. Clearnace on the heal block (136mm for 1 in 8-1/2/ and 133 mm for 1 in 12 points & crossings). Crossing nose, and the check rail shall be checked and rectified and maintained as prescribed in the schedule of Standard dimensions for B.G. which is 44mm minimum and 48 mm maximum.

- e) The radius of the led curvature should be checked and rectified. Station markings with paints shall be done at distance of 2.5M starting from the centre of heel block to the crossing joint in the lead position. The versines are to be measured on a 5M chord. The gauge shall be attended to. Then packing shall be done and properly dressed & boxed.

3.9. REPAIRS TO CESS AND CLEANING OF SIDE/CATCH WATER DRAINS

- a) The depth of cess from the rail level and its width is of prime importance to rein the ballast in profile and thereby the packing of the sleeper. Any erosion of dam age to cess should be promptly repaired with earth and consolidated by watering and ramming . Care should be exercised to see that in the process it does not become high.
- b) Side and catch water drains shall be cleaned on a programme basis before the onset of the monsoon. The profile dimensions of these drains shall be as prescribed in the schedule of Standard dimensions.
- c) Drains in the yard where ever existing shall also be cleaned regularly. Where drains does not exist, before the monsoons passage for rain water shall be created to avoid water logging.

4.0. DEEP SCREENING.

Deep screening of ballast is done to ensure that a clean ballast cushion of required depth is available below the bottom of the sleepers, which is very necessary for proper drainage and giving elasticity to the track. In the absence of a clean ballast cushion of desired depth, the track geometry gets disturbed. Deep screening is necessary when the entire ballast cushion is contaminated with mud etc, and have caked up to hard lumps frequency of deep screenings normally necessary one in about 10 to 12 years.

- a) Before the deep screening is taken up ballast shortage is assessed by representative sampling/survey of the section. Sufficient quantity of ballast is first arranged in advance.
- b) Labour, tools, equipment and wooden blocks should be also arranged before taking up the work.
- c) Deep screening shall not be carried out during the rainy season.
- d) Deep screening involves digging right down to the top of the information including the packing under the sleepers, reprofiling/repairing the profile of the formation, screening the contaminated ballast and putting back the cleaned ballast, recouping the shortage of ballast from the fresh supply of ballast already arranged in

advance, giving three successive round of through packing to consolidate the track for normal movement.

- e) Care shall be take that the packing under the sleepers are not disturbed in successive sleeper at a time. The ideal move is to mark off 4 sleepers with 4 interspaces in each group then digging and screening under one sleeper and the two interspace on its either side, putting back the screened ballast plus the recoument if any and packing the same before going on to the next sleeper to repeat the process. By tackling the different groups of sleepers marked from the same end for each and every group, it is automatically ensured that only one in every 4 sleeper is disturbed keeping a cluster of 3 sleepers undisturbed for safety. Also when one sleeper is divested of its packing, the wooden block one under each rail seat is inserted for the duration when the ballast is taken out, screened and finally put back, and the sleeper packed.
- f) Deep screening shall be done under the personal supervision of the PWI with proper with speed restriction and track protection using temporary engineering signals and caution order to train drivers.

5.0. BALLASTING OF TRACK

Ballasting of track is normally done at the time of construction of the track. But in some cases, where the ballasting has not been done and the track is commissioned for traffic, then the ballasting is done under traffic with caution order and proper track protection with temporary engineering signals.

The ballasting to the full depth of cushion is done in stages. The ballast is progressively put around the sleepers along the track for the targeted progress for the day, the track lifted by not more than 75 mm in one stage, when the ballast surrounding the sleepers are drawn in and the sleepers packed for the targeted length of track. Once this is achieved the process is repeated in cycles till the requisite dept of cushion is provided.

After the ballasting is done for a particular portion, while the ballasing gang moves forward to the next portion, a packing gang follows by giving through packing to the newly ballasted track.

When trains are to be passed during the working hours, the banner flags are not to be removed before proper sloped is given between the lifted portion and the unlifted portion. Similarly before closing the days work the junction of lifted and unlifted portion shall be given proper slope and packing given.

6.0. RECOUPMENT OF BALLAST

In case the ballast section is found to be deficient due to shortage of ballast, then the shortage is to be made good by spreading the fresh ballast and the deficiency made good. When depth of cushion is inadequate then, as in the case of fresh ballasting similar action is to be taken to make good the deficiency and proper packing given for consolidation.

7.0. EARTH WORK FOR REPAIRS TO BANKS AND CUTTINGS:

Repairs to embankments and cuttings become necessary when the formation width shrinks due to erosion, or deep rain cuts are formed down the slopes posing safety hazards to the rail traffic and in the case of cuttings, slips due to rains occur.

- a) Formation width: The formation width for Board Gauge on single line is 6100 mm at the top.
- b) Side slopes: The side slopes shall be 2:1. Special care is to be taken to maintain the toe of the bank as otherwise slips are initiated on account of damaged toe. As such while repairing banks, the area around the toe of the bank should not have any element of doubt as to its soundness of compaction.
- c) For repairing of banks, the most convenient process, of land width is sufficient, to take the earth from borrow pits. Otherwise earth will be required to be transported from outside and the repairs undertaken.
- d) Certain rules are to be followed if borrow pits are excavated on land along the track.

These are as follows:

-No excavation for borrow pits shall be made within 2 M of the limits of the acquired land. Borrow pits shall not be dug close to level crossings, bridges or culverts, the telegraph poles or close to inhabited areas, unless they can be properly drained to prevent water stagnating.

-During excavation, the contractor shall take particular care to avoid damage to drains water mains, cables, or other underground work. Should any damage be caused, the Engineer-in-Charge shall be notified immediately and the damage be made good at the contractor's expenses.

Borrow- pits shall be excavated with in the Corporation land as per the direction of the Engineer-in-Charge. The pits must be rectangular. The sides of the pits next to the toe of the bank are to be sloped at 2:1, and elsewhere at a slope of 1:1. Any pits wrongly excavated shall be refilled by the contractor at his own cost and in such a manner as the Engineer-in-Charge directs.

8.0 TRACK STANDARDS

8.1 SLEEPER SPACING:

Density	Type of Sleeper	No.of Sleeper Per Km.	Sleeper Spacing in Cms. C/C			
			a	b	c	d
M + 4	Wooden	1310	15	61	70	84
M + 4	Metal	1310	19	61	72	83

Note:- a = Spacing of joint sleeper from rail end.

b,c,d, = Spacing of Ist, 2nd and intermediate sleepers

Correct size of augers with hard wood sleepers:-

<u>Type of fittings</u>	<u>Size of Auger</u>
-------------------------	----------------------

Dog Spikes	16mmdia
Rail screws	20mm dia

a) On private railway sidings, only two spikes/Rail screws on each rail seat are to be used, a special attention is needed to ensure that out spikes on each sleeper should inline on one side and the inner spikes in line on the other side the centre line of the sleeper.

b) The spikes and Rail screws are to be dipped in coal tar before use.

8.2. RECOMMENDED EXPENSION GAPS FOR VARIOUS RAIL TEMPERATURES

Range of Rail Temperatures (Degree centigrade)	Recommended range of expansion gap (mm)	Ideal Expansion gap (mm)
0 to 10	12 to 8	10
11 to 25	10 to 6	8
26 to 40	8 to 4	6
41 to 70	4 to 2	2

8.3. TRACK TOLERANCE

Item No.	Track Parameters	Service tolerance	At isolated Places
1.	Guage	a) Straight b) Curves	-3mm to + 6mm :Radius more than 400M -3mm to + 15mm Radius less than 400M -upto + 20mm
2.	Unevenness On 3.5 M base	a) Long term basis	:6mm 10mm
3.	Cross levels	Max 3mm at any place	6mm
4.	Twist on 3.5 m base	a) Straight 2mm/mtr. b) Transition 1mm/mtr.	3.5/mm/mtr. 2mm/mtr.
5.	Alignment	a) Curve 5mm b) Straight ± 5 mm	± 7 mm <u> </u> ± 10 mm

Note: Total change of versine chord to chord should not exceed 10mm

8.4. RAIL CLOSURES:

The following instruction regarding use of rail closures shall be observed:

- a) Permanent closures in running lines shall not be less than 6.5 meters in length.
- b) The use of closures should be limited & reduced as far as possible.
- c) Closures should not be located near to each other in the same portion of track nor in the proximity to
 - i) Junction of different types of rails and/or sleepers
 - ii) Bridges, level crossings, ash pits, points & crossings

8.5 LOCATIONS AT WHICH JOINTS SHALL BE AVOIDED

- i) In a level crossing
- ii) On the approach within 5 metres of a bridge abutment.
- iii) On short spans of any type.

8.6 CURVED TRACK

- i) No superelevation will be provided in a curved track where the speed of trains are permanently restricted to 15 kmph.
- ii) Railway yards inside the premises of the FCI will similarly not be given super elevation on its curves.
- iii) From out side the depot gate to the railway station serving the depot, if the distance warrant for speed of 30 kmph and above, then super elevation will be provided to the extent as directed by the Engineer-in-charge.
- iv) Running out super elevation : At either end of the curves where super elevation is to be provided, the 'run up' or run out of cant, shall be on the transition portion of the curve and not on the straight or circular portion of the curve.

The cant gradient shall not be steeper than 1 in 720 in case where permissible speed is 75kmph or more and 1 in 360 in other cases.

In the case of reverse curves, with or without transitions, there shall be one bogie-coach length of straight between with no super elevation.

v) There should be no change of cant between points 20 metres outside the toe of switch and nose of crossing respectively.

vi) For smooth, satisfactory and safe running on curves,

-There should be no abrupt alteration of curvature or super elevation.

-Super elevation should be appropriate to the curvature at each point.

-At all curves, "Curve station markings" must be made from the beginning of the curve at 10 metre intervals & the value of versine & super elevation written in paint on the rail flange.

8.7. WORKING OF MATERIAL TROLLEY

No material trolley is to be put on the track by the contractor without the permission of the Engineer-in-Charge. When using the same proper protection with Flags, etc. as prescribed is to be strictly observed and it shall be done under the personal supervision of the PWI having valid competency certificate issued by the "Authorised Railway Officer"

8.8. PUSH TROLLEY

Where the length of the private railway siding is more than 2Kms. push trolley shall be provided by the Contractor under the custody of the PWI. The following precautions shall be observed by the PWI for using the Push trolley:-

-Push trolley shall not be put on the track without a minimum of 4 trolley men in attendance

-Red hand signal flag shall be fixed on top of the umbrella stand/flag staff before putting the trolley on track, and the flag shall be removed whenever the trolley is taken off the track, but care shall be taken that this flag is not removed before all obstruction to the track is cleared.

-Push trolley shall under no circumstances be tied behind a moving train. The following items of equipment shall always be carried in the trolley whenever it is in use;

-12 Detonators in a case.

-2 red & 2green hand signal flags,

-1 chain & pad lock;

-2 tri-colour hand signal lamps:

-1 lamp “ad lake”

PWI shall obtain competency certificate issued by the “Authorised Railway Officer” before using the push trolley, and periodically renewed during the currency of the contract.

3.9. PERMANENT WAY WORKS IN OVER HEAD ELECTRIFIED AREA

a) Each Engineer and Supervisor charged with the maintenance of track in an area equipped for over head electric traction, must have in his possession a copy of “Electric traction manual’ which contains the special rules for operation of the traction power distribution system and precautions or works in its vicinity these rules should be thoroughly read and they will be responsible for their strict compliance.

b) No fish plates and/or rails are to be taken out without first using jumpers on either side of the proposed dismantling to avoid receiving electric shock by the workers.

c) Permit-to-work: For work adjacent to over head electric equipment, the Engineer-in-charge will apply to the proper authority of the Indian Railways traction department sufficiently in advance for sanctioning of power block required. Traction Power Controller will arrange to isolate and earth the section concerned on the date and time specified. He shall then issued a “permit-to-work’ to the Engineer-in-charge. On completion of the work the “permit-to-work” should be cancelled and the traction power controller advised who will arrange to restore the power supply.

d) No cranes shall be worked except on the authorised ‘permit-to-work’. In every case of working of a crane, arrangements should be made for the presence of authorised over head equipment staff to ensure that all safety precautions are taken.

e) For slewing of alteration to track, sufficient advance notice shall be given to the Traction Officer so that he may arrange for the overhead equipment to be adjusted to conform to the revised conditions if necessary.

f) The supervisor/PWI of the contractor shall ensure that no tampering/disturbance to the rail-bonds, cross-bonds, connections to impedance-bonds, structure bonds and traction sub-station negative feeders is made and in case of any deficiency/ defect noticed, should be reported to the Engineer-in-Charge, who will inform the traction power controller.

9.0 BALLAST FOR TRACK

9.1 General:

The stone ballast shall be hard, durable, resistant to impact and free from adherent coatings. This shall not contain more than 10% of dust, quarry rubbish, soft and friable pieces, (which can pass through a 10mm sieve), clay lumps or dust. Materials likely to dis-integrate, decompose or chemically reactive shall not be accepted. No deduction shall be made in the accepted rate for quarry rubbish or dust upto the percentage limit laid down above, Tenders should always be accompanied by samples and the supply should be affected as per accepted samples. Aggregates shall consist of crushed stone a product resulting from crushing of rocks boulders and as per accepted samples. It should be manufactured out of stone not weighing less than 10Kg. or 150mm in dia. on the least face. Faces of ballast should have resulted from crushing operation, and only one smooth face may be allowed.

9.2 Standard Size of Ballast:

Stone ballast for track will be of the standard size of 50mm gauge.

9.3 Testing of stone ballast for sizes (sampling):

Sieve analysis of representative samples of ballast selected at random from different parts of the stack, e.g. slopes, top and inside will be done. For 50mm gauge stone ballast, 90 to 100% of the sample shall pass through a 50mm square mesh and 100% shall pass through a 60mm square mesh.

At least 1 cum of ballast shall be analysed by sieve for every 2000 Cum of ballast taken or at least one sample of the above quantity from each stack shall be analysed if the quantity in the stacks are less than 2000 Cum.

9.4 Over-sized ballast:

Ballast shall be considered oversized if, more than 10% is retained on a screen with square mesh of 50mm, in the case of 50mm gauge stone ballast.

9.5. Reduction on rate of oversized ballast:

When over sized ballast is accepted, the ballast with 70 to 100% by volume passing a screen with standard square mesh of their standard size ballast shall be accepted provided it otherwise conforms to specifications and that 100% quantity passes a screen with square mesh of 60mm size in respect of 50mm gauge stone ballast. However, reduction in rate will apply as per norms as follows:-

- a) When more than 10% and upto 20% quantity is retained on the square mesh of standard size 50mm. Payment be made at 90% of the accepted rate for standard size ballast.
- b) When more than 20% upto 30% is retained, payment be made at 75% of the accepted rate for standard size ballast.
- c) When more than 30% is retained, the stack should be rejected.

The quantity for which the reduced rate will apply in a stack would be that quantity which is in proportion to the percentage retained on the square mesh of standard size and not the whole quantity. Thus in a stack of say 100 Cum of ballast 25% is retained on the square mesh of standard ballast gauge sieve, the reduced rate of 75% of the accepted rate will be applicable to 25 Cum, and the balance quantity of 75 Cum, will be paid for at the accepted rate for standard size ballast. If any ballast is retained on 60mm sieve the stack shall be rejected.

9.6 Sieve Analysis:

The sieve for testing ballast shall be provided by the Contractor and shall be of square mesh, it shall not be less than 1000mm in length, 700 mm in breadth in a frame 100mm in height on the sides.

The contractor will provide labour for sieve analysis. For this purpose the screen shall be held horizontally by the workmen and shaken vigorously. Sieving is not to be done with inclined screen.

The percentage passing through the sieve shall be determined by volume and not by weight.

Similarly for the dust etc. the square mesh should be 10mm the rest of the dimensions of the screen will remain same as for the oversize sieve.

9.7. Shrinkage Allowance:

The quantity calculated after measurement of the stacks, shall be subject to deduction of shrinkage allowance which shall be 8% from the measured. Thus 92% of the quantity of ballast in the stack will be the accepted quantity after providing for the shrinkage.

9.8. Laboratory tests:

a) Impact test:

A cylindrical sample of stone 2.5 cm dia and 2.5 cm in height is placed on an anvil and a plunger; hemispherical in shape and weighing 1 Kg. is placed above the sample. A test hammer weighing 2Kg. is dropped vertically on the plunger from different height starting from 1 cm upwards.

Classification of toughness of ballast is specified depending upon the height at which the sample breaks is as given below:

Sl.No.	Classification	Height at which sample breaks
1.	Low toughness	13cm or less
2.	Moderate toughness	Greater than 13cm but less than 19cm
3.	High toughness	Greater than 19cms.

b) Absorption test:

A cubical sample weighing about 50 to 100 gms is wiped with a dry cloth and weighed to know the exact weight. This is then immersed in a trough full of water for a period of 72 hours. The sample is taken out, wiped with a dry cloth and again weighed. If the increase of weight is greater than 0.6% , the sample should be rejected.

c) Crushing test:

This test may be conducted on a small cubical sample which is subjected to an axial compression steadily till it gets pulverised. Good quality stone should not get pulverised under a compression of 7Kg/Sq. mm or 10,000 lbs/sq. inch.

- h) He shall permit no work affecting the safety of the track except under his personal supervision.

10.2. Routine Track Inspection.

The PWI shall inspect the entire section at least 3 days a week by push trolley or more often as necessary and shall.

- i) Take note of the Kilometrages requiring immediate attention and direct and instruct the Mate for doing the work.
- ii) Check the gangs work done on the previous day in details and take remedial actions or any short comings.
- iii) Ensure systematic work to the 'Round the Year' Schedule/ Programme for track maintenance.
- iv) Instruct and upgrade men at methods of work;
- v) Mark and initial musters of gang, Gateman if any and artisan staff.
- vi) Check the correctness of the gauge and spirit levels with gangs once a months.
- vii) Arrange for replacing of all unserviceable tools and plants and defective or perished equipment for protection of track. Will not allow the gangmen to take the tools to their residence and will ensure that these are deposited in the nominated tool box/room. He will take special precaution of the safe keeping of the fish bolt spanners and crow bars.
- viii) Ensure that Mates, Keymen, Gangmen, Gatemen, Artisans and helpers patrolmen and watchmen have a knowledge of rules, in which they should regularly counselled and periodically examined.
- ix) Check the imprest tools, safety equipment and materials with gangs once a month.
- x) He shall maintain the progress of the maintenance work in a "Gang Chart" which should be up dated every time he makes a round of inspection.
- xi) Measure and maintain the "Creep" of rails once in 3 month in creep Register.

- xii) Conduct detailed inspection of points and crossings and record and findings in appropriate points and crossings register. The points and crossings inspection shall be done once in 3 months for each points and crossings.
- xiii) Take versine and super elevation and gauge readings of all curves in the section and record the findings in the “Curve Inspection Register” where in each curve should be thus checked once in 3 months on cyclic order.
- xiv) He shall especially be vigilant and check for and maintaining the relevant track parameters as per “Indian Railways Schedule of Standard Dimensions for Railway” Any infringement should be promptly removed.
- xv) PWI shall prepare monthly progress report in Annexure ‘A’ of the work under his control and submit the same to the Engineer-in-Charge of the contract by 2nd of each month.
- xvi) The PWI shall keep liaison with the sectional PWI of the Indian Railways and accompany periodical obligatory inspection by the Indian Railway officials and obtain the ‘Fitness certificate’ for the private Railway Siding. Charges if any payable to the Railways for inspection and issue of fitness certificate shall be borne by FCI.
- xvii) The PWI should also act as an extension to the Contractor to ensure that the rules laid down in Acts and Regulations, and as modified from time to time, are strictly complied with.
- xviii) The PWI should maintain a “Daily Material Transaction Register” which should show details of all materials received from FCI and used for the maintenance of the track.
- xix) The contractor's PWI will prepare and maintain a “Section Register” to record important details of the track/Section.

ANNEXURE 'A'

SYSTEMATIC MAINTENANCE OF RAILWAY SIDING AT...mulangunnahtukavu in Kerala region

MONTHLY PROGRESS REPORT FOR THE MONTH OF.....

Sl.No.	Description of job	Location/ Chainage	Date	Quantum of work Done	Labour Present	Remarks
--------	--------------------	--------------------	------	----------------------	----------------	---------

ANNEXURE 'B'

CHECK LIST FOR P.WAY OF MAINTENANCE

SL.NO.	ITEMS OF CHECK	MODE OF CHECKING
1.	Track gauge & Cross levels	-check at 4 locations in one Rail length (At either joint & at two intermediate points)
2.	Packings	-At every 4th sleeper on the previous days work by taking the sounding with the help of either "Canne boule" of beater.
3.	Alignment	As per the tolerance given in the "Technical specification at para 8.3 for curves and straight track.
4.	Points & Crossings	-a) Gauge : At Switch portion: Crossing portion and the intermediate connecting track (Lead) b) Check for tightness of all fittings c) Check for proper lubrication of the switch portion for smooth operation of points. d) Check the clearances at nose of crossings and check rail clearances over each block and compare value given at para 3.8.(d) of the technical specification.
5.	Yard Drainage	-Check for possible blockage and prevent likely water stagnation.
6.	Level Crissubgs	-a) At the time of annual overhauling, cross check the condition of rails, sleepers and fittings; see that all the items of work are done as described in the "Technical specification" at para 3.7. -b) Normal checking will be for check. clearance, channels should be free from blockage approaches should have good packings and road between the two sets gate posts should be in well maintained condition.
7.	Materials	-Keep a close watch on the "Daily Material Transaction Register" of the contractor to see that he is properly accounting the materials issued to him for track work.

VI

FOOD CORPORATION OF INDIA

VOLUME - IV

CONDITIONS OF CONTRACT

**NAME OF WORK : SYSTEMATIC MAINTENANCE
OF RAILWAY SIDING FOR THE YEAR**

CONDITIONS OF CONTRACT

DEFINITIONS:

1. The “Contract” means the documents forming the tender and acceptance thereof and the formal agreement executed between the Corporation and the Contractor, together with the documents referred therein including these conditions, the specifications, designs, drawings and instructions, issued from time to time by the Engineer-in-Charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.
2. In the contract the following expressions, unless the context other wise requires, shall have the meaning hereby respectively assigned to them.
 - (a) The expression “Works or work” shall unless thereby something either in the subject or context repugnant to such construction, be construed and taken to mean the work by or by virtue of the contract, contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
 - (b) The “Site” shall mean the land or other places on, into or through which work is to be executed under the contract or any adjacent land, or path, through which work is to be executed under the contract or any adjacent land or path which may be allotted or used for the purpose of carrying out the contract.
 - (c) The “Contractor” shall mean the individual or firm or company, whether incorporated or not undertaking the work and shall include the legal personal representatives of such individual or the persons composing such firm or company or the successors of such company and the permitted assignees of such individual or firm or firms or company.
 - (d) The expression “Corporation” where used means the Food Corporation of India and its successors.
 - (e) The “Engineer-in-Charge” means, the Deputy Manager (Engg) who shall supervise and be in charge of the work.
 - (f) “Managing Director” shall mean the Managing Director of the Food Corporation of India.
 - (g) The term “Superintending engineer” includes the joint Manager (Engg)
 - (h) The term “Executive Engineer” includes the Deputy Manager (Engineering) of the Food Corporation of India.

Words importing the singular number include the plural number and vice versa.

3. PERIOD OF CONTRACT:

The period of contract shall be twelve (12) months from the date of commencement of work. However the Corporation reserves the right to extend the work for another one year under the same terms and conditions and at the same rates and the Contractor will be bound to execute the work during the extended period on the same terms and conditions and at the same rates.

4. The contractor shall arrange adequate number of necessary tools and tackles required for the execution of the works at his own cost. A list indicating requirement of various tools and tackles are given in the enclosed Annexure-A. However, the list is indicative and only for the guidance of the Contractor. The contractor shall arrange all additional requirements for the smooth execution of the works without any extra claim.

5. The Contractor shall arrange well in time adequate quantity/number of consumables required for the execution of the work at his own cost. A list indicating the consumables is appended at Annexure-B for guidance. The released materials will be handed over at the place as per the direction of the Engineer in charge without any extra cost.

6. All charges on account of octroi, terminal or sales tax & other duties on materials obtained for the works from any source (excluding the materials supplied by the Corporation) shall be borne by the Contractor and the Corporation will not accept any liability in this regard.

7. The contractor shall before the commencement of the work get himself registered with the area Labour Officer and P.F Commissioner and submit copy of authenticated documents to the effect, to Engineer-in-Charge.

8. The contractor shall employ labour (such as Mater, Keymen, Gangmen, Blacksmith, Carpenter) having experience in track maintenance work/track works. Where siding length requires the use of push trolley, the trolley men employed by the Contractor shall have adequate experience of pushing trolleys to avoid accidents and injury to themselves. the Mate & Keymen must have experience in analogous posts on Indian Railways.

In addition to the above, a supervisor having wide supervisory experience of Permanent Way and holding the rank of PWI on the Indian Railways must be employed by the Contractor who will supervise day to day works at site from the date of commencement of work. In case the PWI is not available then the work will not be allowed to commence and the corporation will be free to get the work done by other means at the risk and cost of the contractor.

9. The contractor shall comply with all the relevant provisions of the various Acts and Rules framed thereunder relating to the “Employment of Contract Labour ” by the Contractor such as:-
- a) The Contract Labour (Regulations & Abolition) Acts, 1970 and Rules framed thereunder.
 - b) The Factories Act, 1948 and Rules framed thereunder.
 - c) The Workmen’s Compensation Act, 1923, and Rules framed thereunder.
 - d) The Employees Provident Fund Act and Misc. provisions Act, 1952 and various schemes thereunder.
 - e) The Minimum Wages Act, 1947 and the Rules framed thereunder.
 - f) The Inter-state Migrant Workmen (Regulation of Employment and conditions of Services) Act, 1979 and any other present future Acts Rules which may be enacted/ framed/made applicable by the Central Government on the State Government as the case may be and is applicable to the Contract Labour from time to time.
 - g) Applicable Acts to cover statutory bonus, retrenchment benefits and Accident Insurance. Any Civil/Criminal liability arising out of the non-compliance of the provisions of any Act or rules as applicable to the ‘Contract Labour’ on account of the failure of the Contractor will be at the sole risk; responsibility and cost of the Contractor.
10. PAYMENT OF WAGES:

The Contractor shall pay wages to his workers not less than the minimum rate of wages under the “Minimum Wages Act” as may be prevailing from time to time and as promulgated/notified by the State Govt. through its official gazette, during the execution, of the work.

The Contractor shall submit every month, to the Engineer-in-charge a true statement showing in respect of the second half of the preceeding month and the first half of the current month respectively for:

- i) The number of employees employed by him on the work:
- ii) Their working hours:
- iii) The wage paid to them:
- iv) The accidents that occurred during the said fortnights showing the circumstances under which they happened and the extent of damage/injury caused to them;

and;

- v) The number of female workers who have been allowed.

Maternity Benefit and the amount paid to them.

failing which, the contractor shall be liable to pay the corporation, a sum not exceeding Rs.100/- (Rupees one hundred only) for each default on materially incorrect statement. The decision of the Engineer-in-charge shall be final in deducting from any bill due to the Contractor the amount levied as fine.

- 11. The corporation shall not be responsible for any accidents to the labour employed by the Contractor. The Contractor shall provide necessary medical aid to his work men at his own cost. If any workmen meets with an accident and the contractor is negligent in providing medical aid, Corporation reserves the right to get the work man medically treated and deduct the medical charges/expenses from the bills of the Contractor.
- 12. If there is any loss or damage to FCI's property due to the negligence of the Contractor's employee, the Contractor shall make good the loss as assessed by the Engineer-in-Charge.
- 13. **SUSPENSION /FORECLOSURE /TERMINATION OF CONTRACT**

The Contract may be terminated for any reason by the Corporation by giving written notice of 30 days of fee equivalent to it to the Contractor, and such termination of contract shall be binding on the Contractor. The contractor shall not have any claim on account of such termination.

14. Necessary work permit from the Engineer-in-Charge must be obtained for working of Material Trolley online of transportation of materials. Before starting the work, the Material Trolley must be protected with Engineering signals as per rules. The contractor shall report back to the Engineer-in-Charge as soon as the work is over and the Material Trolley is removed clear from the track to cancel the above work permit.
15. The Contractor shall keep the track clear from any obstruction ie., falling of trees due to storm, runover of stray cattle etc. during the entire period of the contract for which no extra payment will be made.
16. No speed restriction, caution order, or line block shall be imposed by the Contractor or his representative while carrying out normal track maintenance work without the approval of the Engineer-in-Charge or his authorised representative.
17. In case of emergencies affecting the track safety, such as rail fracture, washout, land slide etc., the contractor or his representative shall impose speed restriction/line block and inform the Engineer-in-Charge without any delay.

RERAILMENT OF DERAILED WAGONS & LOCOMOTIVES

In case of rerailling operation of derailed wagons & Locomotives the Contractor will ensure mobilisation of men and equipment to the site of accident within 2 hours of receiving intimation from the Engineer-in-Charge. The intimation of such happenings to the "PWI" of the contractor at site will constitute as being intimation given to the contractor.

The actual operation of rerailling repairing of damaged track to achieve fitness for movement of traffic shall be ensured in the shortest time possible. If any night time work is involved in course of such activities, the contractor shall have proper & sufficient lighting arrangement as a part of the plant & equipment at all times.

18. The Contractor shall paint and maintain in good order the curve station numbers (inclusive of turnout and turn-in-curves) along with value of versines super elevation against each station, during the entire period of the contract for which no extra payment will be made, inclusive of cost of paint.
19. The Contractor shall keep the point lever boxes and the switch portion of the points & crossings clean and well oiled and in proper working condition at all times during the entire period of his contract.

20. Daily checking and tightening of track fittings shall be done by well experienced keymen for the entire section
21. The curves, points & crossings, bridges, level crossings, etc. shall be inspected at regular intervals. The schedule of inspections, made by the Engineer-in-Charge must be adhered and any defects detected in the course of such inspections, shall be rectified promptly and as per the direction of the Engineer-in-Charge.
22. The Contractor shall be responsible for executing the work on principle of sound engineering practice and will adhere to the specifications given “Technical Specifications” and will also in conjunction abide by the Indian Railways, “Schedule of Standard Dimensions (B.G.)” and as per the instructions of the Engineer-in-Charge.
23. For putting ballast in track on account of recoument of ballast/ ballasting of track, the quantity measured for payment will be in all cases after deduction of voids at 8%.
24. **SITE ORDER BOOK:**

The Contractor will maintain a “Site Order Book” in the form of a register, all pages numbered with the legend “this register contains from page 1 to page.....serially numbered’. This Site Order Book shall be presented to the Engineer-in-Charge of his representative whenever asked for at site or in the office of the Engineer-in- Charge” for appending the orders of the inspecting officers.

Contractor or his representative shall append his signature in token of acknowledgement of the above order. Further he will put the date of compliance of the order/instructions at the end of the particular entry.

25. **SITE OFFICE ACCOMODATION**

Contractors Office and stores facility shall be arranged by the Contractor at his own cost.

26. **HOUSING**

Housing accomodation, water and electricity to the staff of the Contractor will be arranged by the Contractor himself..

27. **INSPECTIONS**

The work of the Contractor is subject to inspection by the Corporation or its authorised representative at all times.

28. SUPPLY/PURCHASE OF TRACK MATERIAL:

For the supply/purchase of items of track materials contained in the bill of quantity at Part-III, the items will be subject to “Preshipment Inspection” for quality control by the Corporation or its authorised representative. Without this inspection and passing, no materials will be accepted by the Corporation or its representative.

The Contractor shall intimate the Engineer-in-Charge in writing as soon as the materials are ready for supply, with the name of the material, quantity being offered for inspection, the address of the factory/location where the inspection is to be done. Consequently the Corporation will direct its representative for inspecting the materials.

29. PAYMENT TERMS:

The monthly Bill along with the monthly progress report in prescribed format given at Annexure-A in volume-III Technical Specification, & materials statement shall be submitted by the Contractor for the work done on the previous month, by 3rd of every month to the engineer-in-charge. The Engineer-in-charge shall then arrange to have the bills verified by taking or causing to be taken wherever necessary the requisite measurements of the work and payment shall be arranged accordingly.

30. The monthly bills, which will be treated as an advance only, will be paid to the Contractor within 15 days of submission of the bills by the Contractor.

31. It will be the responsibility of the Contractor to contact the concerned Indian Railway authorities for getting the statutory half yearly/annual inspections done & getting the safety certificate issued, which the Contractor will submit to the Engineer-in-Charge promptly and further payments to the Contractor shall be released only after the production of the safety certificate from the concerned Railways.

However, the inspection charges levied by the Railways will be paid by the Corporation directly to the Railways.

32. SECURITY DEPOSITS:

The Corporation will deduct security deposit from each running bill @ 10% of the gross value of the bill. This amount will be refunded to the Contractor in the final bill subject to satisfaction of clause - 32 above and other clearances.

The limit of deduction of security deposit as per the Corporation's standard norms is as follows:-

10% of the tendered value of the work subject to a maximum of Rs.5,00,000/- only.

- 33.1. Sales Tax or any other tax on materials in respect of this contract shall be payable by Contractor & Corporation shall not entertain any claim what-so-ever in this respect.
- 33.2. In pursuance to or under any law such notification or order any royalty, cess fees or the like, becomes payable to the State Government/Local Authorities in respect of any materials used by the Contractor in the works in connection with this contract, in which case it shall be lawful for the Corporation and it will have the right to recover the amount to be paid already paid by the Corporation in the circumstances aforesaid, from the dues of the Contractor.
- 33.3. The rates quoted by the Contractor shall be inclusive of sales-tax and no sales-tax shall be payable in addition to the contracted cost. In cases, where the local sales tax enactments provide for the deduction of sales tax at sources, the same will be deducted at the rates specified in such enactments from the bills of the Contractor and deposited with the sales tax authorities without any liability on the Corporation.

34. PENALTY

In case of derailment if it is established that (other than material failure) the cause of derailment is on account of faulty maintenance of Permanent Way, Contractor will be penalised by an amount of:

(a) Rs.1,000/- (Rupees One thousand only) for minor derailment (Damage of track upto 50M length)

(b) Rs.2,000/- (Rupees Two thousand only) for major derailment (Damage over 50M length of track)

In case of damage to bridge/culvert, embankment, platforms etc., if any on account of derailment, attributable to Permanent Way, the Contractor shall undertake urgent repairs to such structures at his own cost. No extra payment for such repairs (both labour & materials) shall be payable).

Damage to Locomotives and wagons, if any on account of such derailment (attributable of Permanent Way) shall be assessed by a team of experts whose opinion shall be final and Binding on the Contractor. The Contractor's authorised representative will be associated.

as a member of the enquiry committee in the fact finding enquiry to ascertain, the cause of the derailment. In case it is established that the damage is due to the faulty maintenance of the track by the Contractor a penalty equal to 10% of the cost of repairs to the Rolling stock will be imposed on the Contractor.

35. FORCE MAJEURE:

Events such as, but not limited to war, hostilities, revolutions riots, civil commotion strikes, lockouts, conflagrations, epidemics, accident, fire, wind, floods, droughts, earthquake, insurgency, militancy or because of any laws, orders, proclamations regulations or ordinance of any government/or because of any act of God or for any other cause beyond the reasonable control of either parties will broadly constitute "Force Majeure" Notice in writing of such cause with necessary evidence shall be given within 30 (thirty) days from the happening of the event and in case it is not possible to serve notice within the said thirty days period, then within the shortest possible period, without delay.

As soon as the cause of Force Majeure has been removed, the Contractor shall notify FCI of such delay incurred on effected activity. From the date of occurrence of a case of Force Majeure obligations of either party as to the contract condition shall be suspended during the continuance of any inability so caused until the cause itself and the inability resulting there from have been removed and the agreed time of completion of the respective obligations under this Agreement shall extended by a period equal to the period of any delay occasioned by such events.

Should one or both the parties be prevented from fulfilling the contractual obligations by state or Force Majeure lasting for a period of six months or more, the two parties shall consult each other and decide regarding the future execution of the Agreement,.

36. The Engineer-in-Charge may, without prejudice to his right against the contractor in respect of any delay or inferior workmanship or otherwise or to any claims for damage in respect of any breaches of the contract and without prejudice to any rights or remedies under any of the provisions of this contract or otherwise and whether the date for completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases:-

i) If the Contractor, having been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work, or that the work is being performed in an inefficient or otherwise improper or unworkman-like manner shall omit to comply with the requirements of such notice for a period of seven days and thereafter, or if the Contractor shall delay or suspend the execution of the work so that either in the judgement of the Engineer-in-Charge (which shall be final and binding) he will be unable

to secure completion of the work by the date of completion, or he has already failed to complete the work by that date.

- ii) If the contractor being a company shall pass a resolution or a courts shall make an order that the company shall be wound up or if a receiver or a manager on behalf of the creditor shall be appointed or if the circumstances shall arise which entitle the court or creditor to appoint a receiver or a manager or which entitle the court to make a winding up order. When the contractor has made himself liable for action under any of the cases aforesaid, Engineer-in-Charge on behalf of Food Corporation of India shall have powers.
- a) To determine or rescind the contract as aforesaid (of which termination or rescission notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination or rescission the security deposit of the Contractor shall be liable to be forfeited and shall be absolutely at the disposal of the Corporation.

and/or

- b) To employ labour paid by the Food Corporation of India or to employ any other agency to carry out the incomplete work or any part of the work, debiting the Contractor with the cost of such labour/ agency (the amount of which cost of labour/ cost of the other agency certified by Engineer-in-Charge shall be final and conclusive against the Contractor) and at the risk of the contractor. The certificate of the Engineer-in-Charge as to the value of the work done shall final and conclusive against the Contractor, provided always that action under this sub-clause shall only be taken after giving notice in writing to the Contractor.

FOOD CORPORATION OF INDIA
PROFORMA FOR AGREEMENT FORM

THIS AGREEMENT made this.....day of.....
.....between the Food Corporation of India established under the Food Corporation Act 1964, having its Head office at No.16-20. Barakhmba Lane, New Delhi-110001 and its Regional office at.....(which expression shall mean and include its successor or successors in office and assigns) acting through the Deputy Manager (Engg), Food Corporation of India..... hereinafter called the “Corporation” on the one part and M/s. Shri..... hereinafter called the “Contractor” (which expression shall mean and include their heirs, executors and administrators and assigns) of the other part.

WHEREAS The Corporation being desirous of having provided and executed certain works mentioned, enumerated or referred to in the specifications conditions of contract, schedule of quantities of works, drawings and other documents consisting of the ‘Tender’ and acceptance thereof copy hereto annexed all of which are deemed to form part of this contract and are included in the terms CONTRACT whenever herein used.

AND WHEREAS The Corporation accepted to the tender of the Contractor..... for the provision and the execution of the said work at the rates stated in the schedule of quantities of work (hereinafter called the “Schedule of Rates”) upto the terms and subject to the conditions of contract.

NOW THIS AGREEMENT WITNESSTH & IT IS HEREBY agreed and declared as follows:-

1. In consideration of the payments to be made to the Contractor for the work to be executed by him, the Contractor does hereby covenant with the Corporation that the Contractor shall and will duly provide, execute and complete the said works on or before the dates mentioned in the said conditions attached to the tender documents and perform all other acts and things in the contract mentioned or described or which are to be implied there from or may be reasonably necessary, for the completion of the said works and in the manner and subject to the terms and conditions of stipulations mentioned on the contract.
2. In consideration of the due provision, execution and completion of the said works the Corporation does hereby, agree with the Contractor that the Corporation will pay to the Contractor the respective amount for the work actually done by him at the “Schedule of Rates” as contained in the appended schedule and such other sums as may become

payable to the Contractor under the provisions of the Contract, such payments to be made at such time and in such manner as provided for in this agreement.

3. The Contractor has furnished a sum of Rs.....as Earnest Money and agrees that the balance Security Deposit amounting to Rs.....shall be recovered from the bills payable to the Contract from time to time till the whole of the Security Deposit of Rs.....stipulated in the memorandum of the tender and clause of the Conditions of the Contract is recovered.

4. In consideration of the due provision execution and completion of the said works the contractor does hereby agree to pay the Corporation the sum as may be due to the Corporation for the services, if any, rendered by the Corporation to the Contractor, and such other sum or sums as may become payable to the Corporation towards loss damage to the corporation, for the services if any rendered by the Corporation to the Contractor, and such other sum or sums as may become payable to the Corporation towards loss, damage to the Corporation's equipment, materials, plant, and machinery, liquidated damages, if any as set forth in the said conditions of contract such payment to be made at such manner as is provided in the contract.

IN WITNESS WHEREOF the parties have executed these presents in duplicate the date and year first above written.

SIGNED AND DELIVERED FOR AND ON BEHALF OF
AT
IN THE PRESENCE OF
WITNESS 1.

2.

SIGNED AND DELIVERED FOR AND
ONBEHALF OF THE FOOD CORPORATION OF INDIA IN THE PRESENCE OF
WITNESS 1.

2.