

**EAST COAST RAILWAY
WALTAIR DIVISION**

STATION WORKING RULES OF KOTABOMMALI STATION

Date of Issue: -
Date brought in force: -

NOTE: -

The Station Working Rules must be read in conjunction with General & Subsidiary rules and Block Working Manual. These rules do not in any way supersede any rules in the above books

(1) STATION WORKING RULE DIAGRAM:

- a) Station Working Diagram No: SI/WRD-23004 Alt 'I'
- b) CSTE/ECor.Rly/ DRG No SI-23004 Alt 'I'
- c) Date up to which corrected:

(2) DESCRIPTION OF STATION:

2.1 a) GENERAL (LOCATION):

A	Name of the Station:	:	KOTABOMMALI (KBM)
B	Class of Station:	:	'B'
C	Section:	:	HOWRAH-MADRAS
D	Double/Single/Multiple line	:	Double Line
E	Electrified/Non-electrified	:	Electrified
F	Gauge BG/MG/NG	:	BG
G	Railway	:	East Coast Railway
H	Route	:	'B' Route
I	Situated at KM	:	715.503 KM
J	From	:	HOWRAH
K	No of Cabin	:	Centrally operated Visual Display Unit (VDU)
L	Standard of Interlocking	:	Standard-III(R)

2.2 BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLYING SIDINGS:

	Adjacent Block station	Distance	Direction
A	TILARU	13.715 KM	VSKP End
B	NAUPADA	13.9 KM	HWH End
C	Automatic Signals	NIL	
D	DK Station & Out Lying Siding	NIL	
E	Passenger Halt	Harichandrapuram (Dandugopalapuram) between KBM and NWP.	
F	Provision of IBS	Section KBM-NWP	UP at KM 707.440
			DN at KM 707.810

		Section KBM-TIU	UP at KM 721/23-25
			DN at KM 722/20-22

2.3 BLOCK SECTION LIMITS ON EITHER SIDE OF THE STATION ON DIFFERENT DIRECTIONS :

Between Stations	The Point from which the 'Block Section' Commences		The Point at which the 'Block Section terminates
KBM-TIU	UP	From UP IB Home signal No 15 of KBM.	Outermost facing point No 21A of TIU
	DN	From Dn IB Home signal No14 of TIU.	Up to DN BSLB board of KBM.
NWP-KBM	UP	From UP IB Home signal No 29 of NWP	Up to inter most facing point no 21A of KBM.
	DN	From DN IB home signal NO 14 of KBM.	Up to DN BSLB board of NWP.

2.4 GRADIENTS:

i) TOWARDS TIU END (UP LINE)

Station Towards	Chainage		Inter Distance	Gradient	
	From	To			
KBM-TIU	DN	000.000 M	720.02 M	720.02 M	1 IN 400 Falling
		720.02 M	721.600 M	01.58 M	LEVEL
		721.600 M	722.280 M	0.68 M	1 in 350 Raising.
		722.280 M	723.680 M	1.04 M	1 in 2000 Raising.
		723.680 M	In to section	---	1 in 500 Raising.
	UP	000.000 M	721.09 M	721.09 M	LEVEL
		721.09 M	722.340 M	1.25 M	1 in 350 Raising.
		722.340	In to section	---	1 in 2000 Raising.
KBM-NWP	UP	000.000	709.10 M	709.10 M	1 IN 1800 Raising
		709.10 M	708.90 M	0.2 M	LEVEL
		708.90 M	708.73 M	0.17 M	1 in 266 Raising
		708.73 M	708.23 M	0.50 M	1 in 510 Falling.
		708.23 M	707.12 M	1.11 M	LEVEL

		707.12 M	706.24 M	0.88 M	1 in 750 Falling
		706.24 M	705.14 M	1.1 M	LEVEL
		705.14 M	704.94 M	0.19 M	1 in 200 Falling
		704.94 M	704.83 M	0.11 M	LEVEL
		704.83 M	704.63 M	0.20 M	1 in 200 Falling
		704.63 M	703.48 M	1.15 M	LEVEL
		703.48 M	In to section	---	1 in 655 Raising
	DN	000.000 M	887.88 M	887.88 M	1 in 640 Falling
		887.88 M	708.97 M	178.91 M	LEVEL
		708.97 M	708.79 M	0.18 M	1 in 266 Falling
		708.79 M	708.27 M	0.52 M	1 in 500 Falling
		708.27 M	705.37 M	2.9 M	LEVEL
		705.37 M	705.21 M	0.16 M	1 in 200 Falling
		705.21 M	In to section	---	LEVEL

2.5 LAYOUT:

(A) RUNNING LINE IN THE MAIN YARD:

Sl No.	Name of the line	Electrified/ Non Electrified	Platforms with length
1.	Line No.1(Common Loop)	Electrified	HIGH LEVEL 560 M
2.	Line No.2 (DN Main)	-do-	--
3.	Line No.3 (UP Main)	-do-	HIGH LEVEL 560 M
4.	Line No.4 (UP Loop)	-do-	HIGH LEVEL 560 M

(B) SIDINGS:

SL NO.	Name of the line	Electrified/ Non Electrified	Platforms with length
1	HOT AXLE SIDING	Electrified	---
2	BALLAST STACKING GROUND SIDING		
3	PQRS SIDING		

2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT & HOLDING CAPACITY IN CSL:

Sl No	Name of the lines	Holding capacity	Direction of movements
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		in CSL	
1	Line No.1(Common Loop)	760 M (STR-STR)	Trains coming from NWP and proceeding towards TIU are UP trains. Trains coming from TIU and proceeding towards NWP are DN trains.
2	Line No.2 (DN Main)	787 M (STR-SB)	
3	Line No.3 (UP Main)	735 M (STR-SB)	
4	Line No.4 (UP Loop)	724 M (STR-SB)	

2.5.2 NON RUNNING LINES:

Sl.no	Name	Holding capacity in CSL in Mtrs	Electrified/ Non Electrified
1	HOT AXLE SIDING	107 M	Electrified
2	BALLAST STACKING GROUND SIDING	230 M	
3	PQRS SIDING	330 M	Electrified
4	SHUNTING NECK	400M	Electrified

2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT

1. UP Common lop starter signal no. 9 is shown on right hand side of track. DN inner distant signal is placed on right hand side of track.
2. Two distant signals (Distant & Inner Distant) are provided at both UP & DN lines of this station. The Main Distant signal is placed at a distance of 02kms from the stop signal. The farthest one from first stop signal is known as Main Distant signal and just rear of first Stop signal is known as Inner Distant signal, The Distant will show two indications i.e., Attention and Proceed. While the inner distant will show caution aspect at ON position.

2.6 LEVEL CROSSINGS:

Details are given in Appendix –‘A’

(3) SYSTEM AND MEANS OF WORKING:

System of working in force	:	Absolute Block System of working
Double Line/Single Line	:	Double Line
Block Instruments	:	SGE type lock and Block Instruments
Co-operative/Non co-operative	:	Non co-operative
Block Telephones	:	Attached with Block Instruments
Staff responsible For Block Instrument operation and custody of Key	:	SM on duty.

(4) SYSTEM OF SIGNALLING AND INTERLOCKING:**4.1**

1	Standard of Interlocking	Standard – III(R)
2	Type of Signaling	MACLS
3	Mode of Operating the signals	VISUAL DISPLAY UNIT (VDU)
4	Provision of Calling –On signals	Calling-on signals are provided below Home signals (i.e. in both UP & Down directions) as per GR.3.13 (1)(b), (2)(3)(4) & (6) (b).
5	Provision of Shunt signals	Shunt signal SH-4 & SH-3 are provided for shunting purpose.
6	Emergency cross over	22 A/B at TIU end and 21 A/B at NWP end are provided.
7	Track circuits	As per Para No.7.0 of Appendix ‘B’ of this SWR.
8	Axle counters	As per Para No.8.0 of Appendix ‘B’ of this SWR.
9	Crank handle	As per Para No.3.5 of Appendix ‘B’ of this SWR.
10	Emergency Point operation:	Emergency point operation facility is provided to operate the point from the Panel in case of failure of point controlling track circuit/Axle Counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.
11	Veeder counter	As per Para No. 6.3 of Appendix ‘B’ of this SWR.

4.2 CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDINGOVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF :

Double locking arrangement is provided in the relay room with one key within the custody of on duty SM & other one with the maintainer of the S&T department. JPO issued by PCOM and CSTE/ECorR vide No.JPO/02/2012, Dt.29.08.2012 should be followed.

4.3 POWER SUPPLY:

- i) Auto changeover panel is provided in the Station Master’s Office with the three power supplies viz., DN AT, UP AT and Local, for changing the switch to the required supply position.
- ii) Normally the switch will be kept towards DN AT or UP AT position. Whenever power block is to be given on the line, the on duty SM must ascertain that power is available on the other AT. If power block is to be given on the Up line, Down AT must be

available and vice-versa

- iii) In case of failure of one of the AT supply without any power block, the on duty SM has to check the manual switches provided in the SM room. In case of failure of both AT supplies, the Local supply shall be utilized by operating the switch. In case a failure of both DN AT & UP AT supplies a message shall be given to the AEE and CTFO/PSI for prompt rectification.
- iv) For IPS system that provides power supply to the signaling installation 230V AC is taken from the selection output of the Auto change Over Panel in SM Office. There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

REMOTE MONITORING ASM BOX:

Remote monitoring SM Box gives alarm to the SM for the following fault conditions:-

- i) 50% depth of discharge (DOD) of battery. In this condition audio/visual alarm comes, which can be acknowledged with audio cut-off.
- ii) 60% DOD, which warns for emergency. The alarm for this condition is same as for condition 1.
- iii) 70% DOD, which signals system, shut-down. In this condition signal feed is cut-off and all DC-DC converters continue working. Audio alarm continues till power supply is restored.
- iv) Any of the module fails, which calls for 'call S&T'.
- v) Whenever there is a failure of power supply in one AT the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply on both AT's and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

5 TELECOMMUNICATIONS:

- i) The Station is connected to VSKP -PSA Main line Control Circuit.
- ii) Telephone attached to SGE type Lock and Block Instruments for sections KBM-NWP and KBM-TIU stations
- iii) Railway Auto telephone is provided at the station.
- iv) Hot Line telephone communication is provided between KBM-NWP and KBM-TIU stations.
- v) Telephone communication is provided between Station Master to UP CH locations 1& 2 and to DN CH Locations.
- vi) Telephone attached to L.C. Gate at KM. 707/19-21, 718/25-27, 716/16-14, 715/3-5, 714/3-5.
- vii) IBS telephone is provided on UP IBS signal no. 15 and DN IBS signal no.14.
- viii) The station is connected to VSKP – PSA traction power control circuit.
- ix) VHF set is provided at the station.

(6) SYSTEM OF TRAIN WORKING:

6.1 DUTIES OF TRAIN WORKING STAFF:

The following is the complement of operating staff provided at the station in each shift for train passing duty.

COMPLEMENT OF STAFF	STAFF IN EACH SHIFT
SS/SM	1
Traffic Points Man	1
Traffic Gateman	1

The above staff shall work as per roster issued from time to time by Divisional Railway Manager (P) and these rosters shall be conspicuously displayed in the SM's office and in Gate lodge for traffic gate man (details duties are given in APPENDIX-‘D’).

6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINES AND ZONES OF RESPONSIBILITY.

The SM on duty is responsible to ascertain the clearance of the nominated line between BSLB/first facing point and advanced starter signal in each direction. The copy of SWR copy to be maintained by SM on duty.

USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SS under lock key by maintaining register for this purpose

6.1.3 ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER

All staff who are in any way connected with trains passing duties, shall before being allowed to take up independent charge of their duties and on his absence for a period of 15(Fifteen) consecutive days or more, and if there is any change made in the Station Working Rules, shall sign in the Assurance Register and SWR as a token of their having gone through and understood clearly the relative rules in connection with their duties.

6.2 CONDITIONS FOR GRANTING LINE CLEAR

- The train is worked under Absolute Block system with double line working and MACL signaling vide GR 8.03.
- Adequate distance for reception of trains at KBM.

Line No.	For UP Trains		For DN Trains	
	FROM	TO	FROM	TO
Line No.1	STR. SIG.N O.9	END OF OVER RUN LINE OR ADV STR NO-13	STR.SIG.NO.8	HPL CNTRL BY 27 OR ADV.STR No.12
Line No.2	---	---	STR.SIG.NO.10	ADV.STR No.12

Line No.3	STR.SI G.NO.1 1	ADV STR NO-13	---	---
Line No.4	STR.SI G.NO.7	END OF SAND HUMP OR ADV.STR.SIG.NO.13	---	---

6.2.1 ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN

Nil

6.2.1.1 SETTING OF POINTS AGAINST BLOCK LINE

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station, the points in rear should be immediately set against the blocked line except when shunting or any other movement is required to be done on that line vide GR 3.51.06.

Safety Point Alarm Unit (SPA):

A safety point alarm is provided on the panel board with different indications:

On complete arrival of a train at the station, the SM has to set the points immediately against the occupied line.

In case the SM forgets to alter the points, after a time lag of 02 minutes, an audible buzzer will be heard from this instrument along with the 'RED' indication of the line on which the train has arrived.

The SM shall then press 'ACK' button to mute the buzzer, and immediately set the required points against the line on which the train has arrived.

On setting the points against the occupied line, the RED indication will disappear.

In case SM fails to set the required points against the occupied line a fault message will be triggered SMS will be sent to concerned station mobile and all concerned staff.

If all the lines of a station happen to be blocked when line clear has been granted to a train the safety point alarm will not work and the point should be set for the line occupied by a stable load or a goods train by SM on duty in that order so that, in case of mishap, the chance of casualties minimized. In case of all the lines are occupied by passenger trains points should be set for a loop line to negotiate which the speed of incoming train would be reduced which in turn would minimize the consequences/causalities vide SR 3.51.06(b). These precautions shall be taken in addition to the observance of other precautions as contained in SR 5.04.01 and SR 5.23.01. Block collars to be placed on the concerned button of blocked line.

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE

Whenever trains are to be admitted on blocked line it is necessary that the train is Piloted In by a written authority T/509 given by the SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train. Calling on signal may be taken OFF. [Refer GR 5.09 & SRs there to].

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE

NIL

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE

When ever a train is to be dispatched from a non-signalled line, a starter order on form T-511 shall be given to the loco pilot to start from the non-signalled line. [Refer SR. 5.11.1]

6.2.1.5 DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL

NIL

6.2.1.6 ANY OTHER SPECIAL CONDITIONS:

(A) SPECIAL RESTRICTIONS:

Nil

(B) SPECIAL INSTRUCTIONS:

Nil

6.3 CONDITIONS FOR TAKING “OFF” APPROACH SIGNALS:-

The SM on duty shall nominate a clear line not only up to the starter but also for an adequate distance beyond it for reception of trains. [Refer GR 3.36, 3.38, 3.40, 4.17 and SR 3.36. 01, 3.36.02, 3.36.04, 3.40.01, 3.40.02, 3.47.01, 4.17.02 and Block Working Manual].

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO “ON”

Station Master should ensure that the signal is put back to ‘ON’ after passage of train as per GR 3.36(2)(b)

6.4 SIMULTANEOUS RECEPTION/DESPACTH, CROSSING AND PRECEDANCE OF TRAINS:

The following simultaneous reception and dispatch facilities are provided at this station.

1.	While Receiving of a DN train on line No.1 set to over run line (common loop)	Dispatch a DN train from line no. 2.
2.	While Receiving of an UP train on line No.1 (Common Loop) setting ORL	Dispatch an UP train from line no.3 or 4.
3.	While Receiving of an UP train on line No.4 (Common Loop) setting S4	Dispatch an UP train from line no.3.

6.5 COMPLETE ARRIVAL OF TRAINS

The entire block section between KBM-NWP and KBM-TIU are provided with High availability Single section Digital Axle counter (HASSDAC).

For Section KBM-NWP:

A pair of High availability single section digital axle counter is provided between **KBM** on DN line, one just beyond DN advanced starter No.12 of KBM and another one just beyond 400mts from the DN IB Home signal No. 14 of KBM for proving IB section and another pair of High availability single section digital axle counter near DN IB home signal no. 14 of KBM and another one just near BSLB of NWP station for proving LVV section between KBM-NWP. A pair of High availability single section digital axle counter is provided between **KBM-NWP** on UP line, one just beyond UP advanced starter No.25 of NWP and another one just beyond 400mts from the UP IB Home signal No. 29 of NWP for proving IB section and another pair of High availability single section digital axle counter near UP IB home signal no. 29 of NWP and another one just near IT2 track circuit beyond UP Home Signal No.1 of KBM station for proving LVV section between KBM-NWP.

For Section KBM-TIU:

A pair of High availability single section digital axle counter is provided between **KBM** on UP line, one just beyond UP advanced starter No.13 of KBM and another one just beyond 400mts from the UP IB Home signal No. 15 of KBM for proving IB section and another pair of High availability single section digital axle counter near UP IB home signal no. 15 of KBM and another one just near BSLB of NWP station for proving LVV section between KBM-TIU. A pair of High availability single section digital axle counter is provided between **KBM-TIU** on DN line, one just beyond DN advanced starter No.25 of TIU and another one just beyond 400mts from the DN IB Home signal No. 14 of TIU for proving IB section and another pair of High availability single section digital axle counter near DN IB home signal no. 14 of TIU and another one just near BSLB of KBM station for proving LVV section between KBM-TIU.

The position of the Block section whether cleared or occupied is reflected in the axle counter reset box provided in the Station Master's office which shows 'GREEN' when the Block Section is clear and 'RED' when occupied. Whenever a train enters in to the Block Section, "Block Section Clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of the train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and necessary action as per GR.14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, Advanced Starter signal cannot be taken off for next train and the concerned instrument shall remain locked in last operated position.

A resetting arrangement is provided in the SM office to reset the system to normal position in case of failure of Single Section Digital axle counter (SSDAC). The resetting to be initiated by the SM at the receiving station only after physical verification of complete arrival of train by exchanging private number. The resetting can be accomplished only with the co-operation of SMs at either end of the block section. Details of resetting procedure is given in Appendix-'B'

Note:

Before taking off reception and dispatch signals for UP or down directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication.

6.6 DESPATCH OF TRAINS

- a) Dispatch of trains is governed by the provisions of GR. 3.42 and SR there to, SR 3.36.04(b), SR 3.42.01(a), SR 3.42.04 and BWM 3.07(5)(a),(e),(f)&(g) and other relevant provisions of G & SR, BWM and SWR.
- b) **DISPATCH OF TRAINS FROM A NON-SIGNALLED LINE:**
Dispatch of trains from non-signaled line is governed by GR.5.11 and SR thereto.
- c) **ISSUE OF CAUTION ORDERS:**
Whenever in consequence of the line being under repairs or for any other reasons special precautions are necessary a Caution Order detailing the kilometers and speed at which train should run with reasons for taking such precautions shall be handed over to the Guard and LP in terms of GR 4.09 and SRs thereto.

6.7 TRAINS RUNNING THROUGH

In addition to the procedure detailed in paras 'Reception and Dispatch of trains' rules laid down in GR 3.40, 4.17, 4.42 with relevant SRs 3.42.02(a)(iii) and other relevant provisions of G&SR, BWM, OM shall be followed. (Refer GR 4.1, 4.11(2)).

6.8 WORKING IN CASE OF FAILURE

TRACK CIRCUITS:	In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.
AXLE COUNTER:	If the axle counter fails between IB portion and block sections, resetting procedure will be adopted as per Para 5.1 of SWR (App - B). If the axle counter indication does not appear 'Green & continues to show

	'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to Sectional Signal Maintainer for rectification.
BLOCK INSTRUMENTS:	In the event of partial/total failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer SR 6.02.03 & 6.02.06]
RECEPTION OF TRAIN ON OBSTRUCTED LINE:	Whenever trains are to be admitted on an obstructed line GR 5.09 & SRs there to, and para 6.2.1.2 shall be followed.
RECEPTION OF A TRAIN ON NON SIGNALLED LINE:-	NIL
DEFECTIVE SIGNALS:	Whenever signals become defective, the procedure laid down in GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c)] shall be followed. In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, Station Master on duty shall before giving line clear initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]
INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:	However, before declaring a point is defective, the setting of the point on the route to which it applies shall be inspected by the Station Master irrespective of the position of the switches point laid down in GR with relevant SRs shall be followed. [Refer GR 3.68, 3.70 & SR 3.77.01(b)] Initiate action in accordance with the procedure prescribed in GR and relevant Subsidiary Rules there to. [Refer GR 3.49(4) and 3.68, 3.77]
DEFECTIVE INTERLOCKING:	When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping and padlocking of points for admission of train. [Refer SR 3.69.03(c) & 3.69.01].
DEFECTIVE/ DAMAGED POINTS	When any point fails to operate normally by the route setting operation through VDU it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the

	route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle.
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6.9 PROVISIONS FOR WORKING OF TROLLIES/ MOTOR TROLLIES/MATERIAL LORRIES ETC

Motor trolleys are to run in accordance with rules laid down in SRs. Material Lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 5.11(2), 5.12, 5.13 of BWM].

- i) Trolleys, Motor Trolleys, Lorries which are not insulated shall not be allowed to run except on Line clear.
- ii) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly
- iii) In all other respects the Working of a light motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley.

(7) BLOCKING OF THE LINES:

A clear remark in 'RED' ink shall be made immediately in the Train Signal Register indicating date, time, and number of running line blocked. A record thereof shall also be made in the Station diary vide SR 3.36.03(b), 3.51.06(a), 5.23.01(a) shall be followed.

(8) SHUNTING:

8.1 GENERAL PRECAUTIONS.

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17, 5.18, 5.21, 8.06 and 8.15 with relevant SRs shall be observed. All shunt movements shall be supervised by Guard / Station Master on duty or by a competent Railway servant deputed by SM on duty as the case may be. The authority for shunting shall be the taken off of Shunt Signal or on form T/806 whichever is applicable. The limit up to which shunting is permitted and the lines involved must write on the shunting authority.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approach train is strictly prohibited.

8.3 PROHIBITION OF SHUNTING, SPECIAL FEATURES IF ANY:

- a) Hand shunting is prohibited at this station.
- b) Fly shunting is prohibited at this station.
- c) Shunting is not permitted in the yard unless the engine is leading towards the falling gradient.

8.4 SHUNTING ON SINGLE LINE-Within station section.

Not Applicable

8.5 SHUNTING ON DOUBLE LINE:

Block Back	The procedure of block back given in BWM 3.21 shall be followed.
Block Forward	GR 8.05 and SRs there to shall be followed
Following Train travelling away	Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and is blocked backed vide GR 8.06.
Up to IBS	NIL
Beyond IBS	NIL
During failure of Block Instrument	During failure of SGE Double line Block instrument shunting in the block section in advance / in rear up to & beyond IBS shall not be performed unless the section is clear of all trains and the Block section is Blocked back/ Blocked forward as the case may be.

8.6 SHUNTING IN THE SIDING TAKING OFF FROM THE STATION YARD:

While performing shunting in the sidings it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted as also the lines, occupied in shunting. The relevant provisions of GR 5.14 and SR thereto shall be meticulously followed.

(9) ABNORMAL CONDITIONS: -

(a) The rules to be observed in the event of abnormal conditions:	
i) During partial interruption/ failure of electrical communications instrument.	During partial interruption of communications trains shall be worked in accordance with BWM 5.16 & 5.23 & SR 6.02.06
ii) The Authority to proceed in to the occupied block section in case obstruction of line or accident etc.	Whenever it becomes necessary to send a train into the block station already occupied by another train or due to accident, trains shall be worked in accordance with SR 6.02.05. The authority to proceed shall be block ticket (i.e T/A 602) or as per SR 6.02.05.
iii) Trains delayed in block section.	When a train carrying passenger does not arrive with in '10' minutes or a goods train within 20 minutes after allowing for its normal running time from the station in rear the Station Master at the station in advance shall

	immediately advise the station in rear and the Section Controller on duty of this fact. The procedure laid down in GR 6.04 and SR thereto shall be followed.
iv) Failure / Passing of intermediate block stop signal at 'ON':	NIL
v) Failure of axle counter block / BPAC:	Para No.5.09 in Appendix 'B' of this SWR to be adopted.
vi) Failure of MTRC	NIL

(b) **Procedure for emergency operation of Points by Crank Handle:**

- (i) The detailed procedure for emergency crank handle operation of motor operated points are mentioned in Para No.4.2.3 of Appendix 'B'
- (ii) Procedure for Emergency operation of point with axle counter track circuit failure are mentioned in Para No.4.2 of Appendix 'B'.

(C) **Certification of clearance of track before "calling on signal" operation is initiated:**

Before taking off Calling-on Signal during failure of track circuit/axle counter, the route and the clearance of the track over which train would pass to be verified by SM.

(d) **Reporting failure of points, Track circuits / Axle counters and interlocking**

- (i) Whenever there is a failure of points, track circuits / axle counters or any other interlocking gear at the station the failure should be reported by SM on duty to the concerned signal maintenance staff on duty responsible for attending the failure and only after receipt of the written memo from the Signalling Maintainer for rectification of the fault, SM should restore the normal working.
- (ii) The entries in failure register to be done with message to the Section Controller.

9.1 TOTAL FAILURE OF COMMUNICATION: -

- a) In the event of total failure of all communications, trains shall be worked in accordance with provisions of SR 6.02.03.
- b) During partial interruption of communications the rules laid down in SR 6.02.06 shall be followed.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION :

In the event of single line working on a double line section when communication is available, the provision laid down in SR 6.02.01 shall be followed.

However the IBS signal shall be kept suspended and the entire section shall be treated as one section.

9.3 **DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:**

Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provisions of SR 6.02.05.

(10) **VISIBILITY TEST OBJECT:**

The signal lights of signal No.9 for UP direction and No.8 for DN direction of Line No.1 respectively during day and night are earmarked as the visibility test object vide GR 3.61 (2) (b) (iii)

(11) **ESSENTIAL EQUIPMENT AT THE STATION:**

(Details are given in Appendix-‘E’)

(12) **FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG.**

Placing of detonators is dispensed with since the station is equipped with the provision of double distant signalling vide SR.3.61.01 (d) note (i).

<u>LIST OF APPENDICES</u>			
	APPENDIX-A	:	WORKING OF LEVEL CROSSING GATES
	APPENDIX-B	:	SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.
	APPENDIX-C	:	ANTI COLLISION DEVICE (RAKSHA KAVACH)
	APPENDIX-D	:	DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT
	APPENDIX-E	:	LIST OF ESSENTIAL EQUIPMENTS PROVIDED AT THE STATION
	APPENDIX-F	:	RULES OF WORKING OF DK STATIONS, HALTS, IBH, IBS AND OUTLYING SIDINGS
	APPENDIX-G	:	RULES FOR WOKING OF TRAINS IN ELECTRIFIED SECTIONS.

WORKING RULES FOR LEVEL CROSSING GATE No. ML-408 AT KM: 723/7-9**1. GENERAL:****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

Following details shall be maintained at all manned level crossing gates:

1	No. of Level Crossing Gate	:	408
2	Engineering or Traffic gate	:	ENGINEERING ('C' Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/NWP
4	Location at Km.	:	KM. 723/7-9
5	At station	:	---
6	In between station	:	KBM-TIU
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Closed to Road Traffic
10	Interlocked/ Non-Interlocked	:	Non-Interlocked
11	Means of Interlocking	:	Non-Interlocked
12	Provision of gate single at Km.	:	(i) Up Line : Nil (ii) DN Line : Nil
13	Signaling arrangement	:	----
14	Means of communication Telephone.	:	Telephone Connected with KBM Station
15	Width of the level crossing gate	:	5.5 M
16	Type of road	:	Other
17	Name of road	:	-
18	Metalled /Non-Metalled	:	Non Metaled
19	Approach road	:	Non Metaled
20	Width of the road	:	5.5 M
21	Angle of road crossing (in case of the SKEW gates)	:	90°
22	Road gradients (if any)	:	[a]North/East Side: 1 IN 50 [b]South/West Side: 1 IN 60
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Curve Provided
24	Provision of height gauges	:	Provided
25	Type of barriers	:	Coupled Lifting Barriers
26	Length of check rails	:	7.5 M
27	Road surface in between level crossing gates.	:	Level C.C Block
28	Length of rumble strip/ speed breakers.	:	5.5 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	16435 12/2013
32	Census next due on	:	12/2016
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	Two
35	Nearest Railway Medical Assistance	:	Rly Health Unit Naupada
36	Nearest Private Medical Assistance available (if any)	:	Kotabommali and Naupada
37	List of equipment available (Yes/No)	:	Yes

WORKING OF LEVEL CROSSING GATE No. ML-399 AT KM: 712/22-24

1	No. of Level Crossing Gate	:	399
2	Engineering or Traffic gate	:	ENGINEERING ('C' Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/NWP
4	Location at Km.	:	KM. 712/22-24
5	At station	:	---
6	In between station	:	KBM-NWP
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Closed to Road Traffic
10	Interlocked/ Non-Interlocked	:	Non-Interlocked
11	Means of Interlocking	:	Non-Interlocked
12	Provision of gate single at Km.	:	(iii) Up Line : Nil (iv) DN Line : Nil
13	Signaling arrangement	:	----
14	Means of communication Telephone.	:	Telephone Connected with KBM Station
15	Width of the level crossing gate	:	5.5 M
16	Type of road	:	Other
17	Name of road	:	-
18	Metalled /Non-Metalled	:	Non Metaled
19	Approach road	:	Non Metaled
20	Width of the road	:	5.5 M
21	Angle of road crossing (in case of the SKEW gates)	:	90°
22	Road gradients (if any)	:	[a]North/East Side: 1 IN 50 [b]South/West Side: 1 IN 60
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Curve Provided
24	Provision of height gauges	:	Provided
25	Type of barriers	:	Coupled Lifting Barriers
26	Length of check rails	:	7.5 M
27	Road surface in between level crossing gates.	:	Level C.C Block
28	Length of rumble strip/ speed breakers.	:	5.5 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	16435 12/2013
32	Census next due on	:	12/2016
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	Two
35	Nearest Railway Medical Assistance	:	Rly Health Unit Naupada
36	Nearest Private Medical Assistance available (if any)	:	Kotabommali and Naupada
37	List of equipment available (Yes/No)	:	Yes

WORKING OF LEVEL CROSSING GATE No. ML-398 AT KM: 711/25-23

1	No. of Level Crossing Gate	:	398
2	Engineering or Traffic gate	:	ENGINEERING ('C' Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/NWP
4	Location at Km.	:	KM. 711/25-23
5	At station	:	---
6	In between station	:	KBM-NWP
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Closed to Road Traffic
10	Interlocked/ Non-Interlocked	:	Non-Interlocked
11	Means of Interlocking	:	Non-Interlocked
12	Provision of gate single at Km.	:	(v) Up Line : Nil (vi) DN Line : Nil
13	Signaling arrangement	:	----
14	Means of communication Telephone.	:	Telephone Connected with KBM Station
15	Width of the level crossing gate	:	5.5 M
16	Type of road	:	Other
17	Name of road	:	-
18	Metalled /Non-Metalled	:	Non Metaled
19	Approach road	:	Non Metaled
20	Width of the road	:	5.5 M
21	Angle of road crossing (in case of the SKEW gates)	:	90°
22	Road gradients (if any)	:	[a]North/East Side: 1 IN 50 [b]South/West Side: 1 IN 60
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Curve Provided
24	Provision of height gauges	:	Provided
25	Type of barriers	:	Coupled Lifting Barriers
26	Length of check rails	:	7.5 M
27	Road surface in between level crossing gates.	:	Level C.C Block
28	Length of rumble strip/ speed breakers.	:	5.5 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	16435 12/2013
32	Census next due on	:	12/2016
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	Two
35	Nearest Railway Medical Assistance	:	Rly Health Unit Naupada
36	Nearest Private Medical Assistance available (if any)	:	Kotabommali and Naupada
37	List of equipment available (Yes/No)	:	Yes

WORKING OF LEVEL CROSSING GATE No. ML-397 AT KM: 710/23-25

1	No. of Level Crossing Gate	:	397
2	Engineering or Traffic gate	:	ENGINEERING ('C' Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/NWP
4	Location at Km.	:	KM. 710/23-25
5	At station	:	---
6	In between station	:	KBM-NWP
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Closed to Road Traffic
10	Interlocked/ Non-Interlocked	:	Non-Interlocked
11	Means of Interlocking	:	Non-Interlocked
12	Provision of gate single at Km.	:	(vii) Up Line : Nil (viii) DN Line : Nil
13	Signaling arrangement	:	----
14	Means of communication Telephone.	:	Telephone Connected with KBM Station
15	Width of the level crossing gate	:	5.5 M
16	Type of road	:	Other
17	Name of road	:	-
18	Metalled /Non-Metalled	:	Non Metaled
19	Approach road	:	Non Metaled
20	Width of the road	:	5.5 M
21	Angle of road crossing (in case of the SKEW gates)	:	90°
22	Road gradients (if any)	:	[a]North/East Side: 1 IN 50 [b]South/West Side: 1 IN 60
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Curve Provided
24	Provision of height gauges	:	Provided
25	Type of barriers	:	Coupled Lifting Barriers
26	Length of check rails	:	7.5 M
27	Road surface in between level crossing gates.	:	Level C.C Block
28	Length of rumble strip/ speed breakers.	:	5.5 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	16435 12/2013
32	Census next due on	:	12/2016
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	Two
35	Nearest Railway Medical Assistance	:	Rly Health Unit Naupada
36	Nearest Private Medical Assistance available (if any)	:	Kotabommali and Naupada
37	List of equipment available (Yes/No)	:	Yes

1.2 EQUIPMENT:

	Items	<u>Quantity / Numbers</u>
1.	LED based Tri colour hand signal lamps	5 Nos.
2.	Hand Signal Flag Green	1 No with mounted stick
3.	Hand Signal Flag Red	6 Nos.
4.	Banner Flag Red	5 Nos.
5.	Posts for exhibiting red banner flag	4 Nos.
6.	Spare chains with padlocks	2 with stop marker
7.	Detonators	10 in each case
8.	Gate lamps	2 Nos.
9.	Tommy Bar	1 No.
10.	Mortar Pan	1 No.
11.	Spade / Fowrah	1 No.
12.	Rammer	1 No (In case of asphalted road this may not be provided)
13.	Pick Axe	1 No (In case of asphalted road this may not be provided)
14.	Tin case for flags	1 No.
15.	Can for oil	1 No.
16.	Water port / Bucket	1 No.
17.	Canister for Muster Roll	1 No.
18.	Set of spare spectacles of gateman wearing glasses	1 No.
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1 No.
20.	Basket	1 No.
21.	Whistle	1 No.
22.	Wall Clock	1 No.
23.	A small size chain for use in case of failure of gate boom/Leaf Lock	2 No.

1.3 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.

1.4 Mode of Operation:

Detailed mode of operation for opening and closing the level crossing gate shall be provide in the respective station Working Rules and Gate Working Instructions incorporating local operational requirements. When level crossing gate is required to be opened for passage of road traffic, the gateman will operate the winch after following the instructions given in Para2 item (i) to (v) of Annexure.

1.5 DUTIES OF GATEMAN:**1. ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2. POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gateman will stand in the manner indicated below:

- i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.
- ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

3. ROUTING DUTIES OF GATEMAN:

- i) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iii) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.

- iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- v) Gateman shall also prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.
- vi) If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- vii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- viii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- ix) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- x) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiv) Gateman shall see that the channel for the flange of the wheel is kept clean.
- xv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvi) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.

- xiii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:

In case gateman observes anything unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot / guard fails to take notice, gateman shall immediately inform the Station Master, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connected by telephone, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

a) **On double line section:**

- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and a red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

b) **Other action to be taken by Gateman:**

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (A) and (B) above.
- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.

- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

1.6 ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

1.7 Failure of Telephonic Communication:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted.

- (i) Station Master at the dispatching end shall issue a caution order to the driver of the departing train.
- (ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and depute his Assistant Loco Pilot to see the condition of the gate. If the gate is closed, the Assistant Loco Pilot will give the all right signal and if the gate is not closed the Assistant Loco Pilot must close the gate and then give all right signal. In the absence of the Assistant Loco Pilot, the Loco Pilot may take the assistance of Assistant Guard / Guard.
- (iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- (v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station Master shall also advise the gateman through gangman / patrolman or Loco Pilot of the first train that the telephone has become defective.
- (vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

1.8 Failure of Lifting Barriers :

- (i) When the gate cannot be closed due to failure of Electrical operation of lifting barriers, gate man will immediately inform the SM on duty under exchange of private

number and ensure the lifting barriers do not foul the track.

- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- (vi) He shall also advise the Station Master at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train the block section from his end.
- (vii) Station Master will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff repair the barrier and issue reconnection / fit memo for the same.

Note:

- (a) In case of failure of lifting barriers worked from the cabin, Station Master will send station porter to secure the gate against road traffic by safety chains and padlocks.
- (b) Authority to pass signals at 'ON' position as per rules shall also be issued to the Loco Pilot of both departing and arriving trains.

1.9 Obstruction at the Gate:

- (i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstruction at the gate, under exchange of private number.
- (iii) Station Master on duty shall be advised to put the reception / departure signals back to 'ON' position, if taken 'OFF' for a train.
- (iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).

- (vi) There he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstructions.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilot of all train to proceed cautiously, and pass the reception / departure signal at 'ON' position on green hand signal of the gateman, of the gate is broken, but is clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection / fit memo for the same.

1.10 Obstruction on the Track near Level Crossing:

If there is a rail fracture or obstruction on the track due to failing of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.7 above. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

WORKING RULES FOR LEVEL CROSSING GATE No. ML-401 AT KM: 715/3-5.**1. GENERAL:****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

Following details shall be maintained at all manned level crossing gates:

1	No. of Level Crossing Gate	:	401
2	Engineering or Traffic gate	:	Traffic Gate –“B” Class
3	Under control of station master or permanent way inspector.	:	SM/ KBM
4	Location at Km.	:	KM. 715/3-5
5	At station	:	Kotabommali
6	In between station	:	KBM-NWP
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double Line
9	Normal position	:	Open to Road Traffic
10	Interlocked/ Non-Interlocked	:	Interlocked
11	Means of Interlocking	:	Key Transmission by control No 33
12	Provision of gate single at Km.	:	i) Up Line : Station Signal ii) DN Line : Station Signal
13	Signaling arrangement	:	MACLS
14	Means of communication Telephone.	:	Telephone connected with KBM Station
15	Width of the level crossing gate	:	5.5 M
16	Type of road	:	Other
17	Name of road	:	Station Road of KBM
18	Metalled /Non-Metalled	:	Metalled
19	Approach road	:	Moorum
20	Width of the road	:	5.5 M
21	Angle of road crossing (in case of the SKEW gates)	:	90 ⁰
22	Road gradients (if any)	:	[a]North/East Side: 1 IN 60 [b]South/West Side: 1 IN 60
23	Road alignment (straight/Curve)	:	[a] North/East Side : Curve [b] South/East Side : Curve
24	Provision of height gauges	:	Provided
25	Type of barriers	:	Coupled Lifting Barriers
26	Length of check rails	:	7.5 M
27	Road surface in between level crossing gates.	:	C.C.Block

- 28 Length of rumble strip/ speed : 5.5 M breakers.
- 29 Road signs : Provided
- 30 Speed breakers indication board : Provided
- 31 TVU: : 0 12/2013
- 32 Census next due on : 12/2016
- 33 Demarcation for placement of : Provided detonators.
- 34 No. of gateman working : Three
- 35 Nearest Railway Medical Assistance : Rly Health Unit Naupada
- 36 Nearest Private Medical Assistance : Naupada and Kotabommali available (if any)
- 37 List of equipment available (Yes/No) : Yes

1.2 EQUIPMENT:

Items		<u>Quantity / Numbers</u>
SN	Description	Requirement
1	LED Tri colour hand signal lamps	Two
2	Green hand signal flag	One flag mounted on sticks
3	Red hand signal flag	Two flags mounted on sticks
4	Red banned flag mounted with sticks	2 Nos.
5	chains with 2 padlocks	2 chains with 2 padlocks
6	Stop Boards	2 retro reflective stop boards with stands
7	padlocks	One
8	detonators	Ten (10) in a tin case
9	Tommy bar	One
10	bucket	One
11	Whistle	One
12	Wall clock	One
13	A small size chain for use in case of failure of gate boom/leaf lock.	Two

1.3 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.

1.4 MODE OF OPERATION:

Gate shall normally be kept open to road traffic, whenever it is required to close the gate Station Master on duty shall inform the Gateman about the direction and description of the train intended to receive/dispatch. Gateman on duty shall insure clearance of road traffic, close and lock the gate. Thereafter transmit the control to the Station Master on duty as per the following procedure:

- i) For closing and opening of LC gate barriers. Gate working rule (prepared based on users manual to be followed).
- ii) After the gate is closed & locked against the road traffic. Then key 'H' can be extracted from EKT-1.
- iii) Key "H" thus extracted is inserted in EKT-2 & transmitted electrically to panel in conjunction with switch GS(Gate slot) reversed releases concerned UP & DN signals.
- iv) For opening the gate SM transmits control no. 33, Key 'H' is extracted from EKT-2, inserted in EKT-1 & turned..
- v) In case of emergency key 'K'(chained with crank handle) is extracted from EKT-3,electromechanically free provided at gate lodge(in a locked & sealed red box) for manual operation of individual lifting barriers by crank handling in case of emergency.
- vi) Extraction of key 'K' shall put back all the relevant signals at 'ON'.
- vii) Switch GS (gate slot) is provided in the gate lodge to put back the concerned UP & DN signals to ON in case of emergency.
- viii) Normally no indication is available on the VDU indicating that the gate control key is out and gate is in open condition.
- ix) When gate is closed, locked and the key is transmitted a flashing yellow indication will appear on the VDU seeing which the Station Master on duty receive the control by clicking on the LC gate control (33) icon and select "Receive" . The flashing white indication will become steady.
- x) The locked Red indication will appear when the gate has locked by any station of any one of the possible signal routes.
- xi) On complete arrive of the train and after the route is released locked red indication will disappear on VDU.
- xii) Station Master on duty then shall click" Transmit Control" (33) for transmitting the key back to gate man for operating the LC gate.

After transmission the key in indication will starts flashing at VDU suggesting that the key is transmitted to LC gate.

- xiii) An indication will appear near RKT at gate lodge suggesting the key can be extracted from the RKT. Key will then be extracted by the gate man by pushing button provided near RKT for operation of the gate.
- xiv) Flashing white indication on VDU will disappear suggesting that the key is taken out of RKT for operation of LC gate.

EMERGENCY RELEASE OF GATE KEY

In the event of gate locked (Red) indication persists on SM's panel even after train movement is completed or when it is required to open the gate due to emergency in gate locked condition on panel the following procedure shall be adopted by both station master on duty and gate man.

- i) Station Master on duty shall first cancel the signal by signal cancellation control of the relevant signal.
- ii) Station Master on duty then shall click on the 'Emergency gate release control' in the gate pop up menu.
- iii) The 'Red' locked indication will flash for 120 seconds and after the time has elapsed the 'Red' indication will disappear.
- iv) Station Master on duty then shall transmit 'Gate Control' by clicking 'Transmit control' (33).
- v) The 'Key In' indication (white) starts flashing suggesting the key is transmitted to Gate man.
- vi) At gate lodge an indication will appear near RKT suggesting that the key can be released from the RKT for opening of the LC gate.
- vii) Seeing the indication gate man on duty shall extract the key from RKT and operate the gate.
- viii) On release of key from RKT flashing indication will disappear. Any failure regarding transmission / extraction of gate key shall be intimated to the S&T officials for proper rectification. Till such time the failure is rectified the Station Master on duty shall pass the trains by P/IN or by P/OUT as the case may be.

1.4.1 Exchange of Private Number:

- i) Before taking off reception/departure signals SS/Dy. SS shall inform the gateman, the number, description and direction of the train.
- ii) The gateman shall close the gate and transfer the key to the Station Master.
- iii) The reception/departure signals will then be taken 'OFF' by SM on duty.
- iv) In order to ensure that road traffic is not held up for a long time, the Station Master man must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.

- v) When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train or to perform the shunting across the gate shall be personally responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate.

1.5 DUTIES OF GATEMAN:

1. ALERTNESS:

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2. POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gateman will stand in the manner indicated below:

- i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.
- ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

3. ROUTING DUTIES OF GATEMAN:

- i) Gateman shall ensure that red flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

- vi) Gateman shall also prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.
- vii) If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest Station Master, Gangmate or SSE(P-Way) any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- x) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiv) Gateman shall see that the channel for the flange of the wheel is kept clean.
- xv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvi) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xviii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:

In case gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.

- ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot / guard fails to take notice, gateman shall immediately inform the Station Master, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5. **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connected by telephone, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

a) **On double line section:**

- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and a red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.

- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

b) **On single line section:**

- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, fusees and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
 - vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- c) **Other action to be taken by Gateman:**
- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
 - ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
 - iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or SSE(P-Way) regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

1.6 **ENGINEERING ITEMS:**

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

1.7 **EMERGENCY RELEASE OF GATE KEY :**

In the event of gate locked (Red) indication persists on SM's panel even after train movement is completed or when it is required to open the gate due to emergency in gate locked condition on panel the following procedure shall be adopted by both station master on duty and gate man.

- i) Station Master on duty shall first cancel the signal by signal cancellation control of the relevant signal.
- ii) Station Master on duty then shall click on the 'Emergency gate release control' in the gate pop up menu.
- iii) The 'Red' locked indication will flash for 120 seconds and after the time has elapsed the 'Red' indication will disappear.
- iv) Station Master on duty then shall transmit 'Gate Control' by clicking 'Transmit control' (32).
- v) The 'Key In' indication (white) starts flashing suggesting the key is transmitted to Gate man.

- vi) At gate lodge an indication will appear near RKT suggesting that the key can be released from the RKT for opening of the LC gate.
- vii) Seeing the indication gate man on duty shall extract the key from RKT and operate the gate.
- viii) On release of key from RKT flashing indication will disappear. Any failure regarding transmission / extraction of gate key shall be intimated to the S&T officials for proper rectification. Till such time the failure is rectified the Station Master on duty shall pass the trains by P/IN or by P/OUT as the case may be.

1.8 Failure of Telephonic Communication:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- (i) Station Master on duty shall send written advice to the gateman through the porter with full details of number, description and direction of the train.
- (ii) Gateman on receipt of such advice shall close the gate and transmit the key to the Station Master which will enable them to take 'OFF' reception / departure signals.
- (iii) When sufficient time is not available because of greater frequency of train service Station Master will issue written authority to the train Loco Pilot to pass the signal at 'ON' position.
- (iv) In addition Station Master shall also issue a caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously.
- (v) The train Loco Pilot shall be instructed to pass the gate cautiously, on being hand signalled by the gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and ensure that gate is closed following GR 3.73(2)(b).
- (vi) In case of an approaching train, the Station Master shall advise the Station Master at the despatching end, under exchange of private number, that the telephone at the gate has failed.
- (vii) The Station Master at the despatching end shall then issue a caution order to the locopilot before despatching a train in the block section from his end.
- (viii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- (ix) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

1.9 Failure of Lifting Barriers :

- (i) When the gate cannot be closed due to failure of Electrical operation of lifting barriers, gate man will immediately inform the SM on duty under exchange of private number and ensure the lifting barriers do not foul the track.

- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- (vi) He shall also advise the Station Master at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train the block section from his end.
- (vii) Station Master will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff repair the barrier and issue reconnection / fit memo for the same.

Note:

- (a) In case of failure of lifting barriers worked from the cabin, Station Master will send station porter to secure the gate against road traffic by safety chains and padlocks.
- (b) Authority to pass signals at 'ON' position as per rules shall also be issued to the Loco Pilot of both departing and arriving trains.

1.10 Failure of the Gate Key with the gate in closed position when Gate Key cannot be extracted for opening the gate:

- (i) If the gate key cannot be extracted from EKT-1 on gate panel in closed position of the gate, the gate man must immediately inform SM on duty over telephone under exchange of private number.
- (ii) If Emergency Key is available at the gate lodge / cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- (iii) The record of the date and time of breaking the sealed cover of Emergency Key Box shall be recorded and signed with reasons.
- (iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- (v) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching

a train in the block section from his end.

- (vii) Station master will advice S&T staff responsible for electrical key transmitter to rectify the defect at the earliest.
- (viii) Normal working will be resumed only after S&T staff repairs the electrical key transmitter and reconnection/fit memo for the same.
- (ix) After rectification, the Emergency Key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.11 Failure of the Gate Key, with the gate in open condition:

- (i) If the gate key cannot be extracted from EKT-2 on gate panel in open position of the gate, the gate man must immediately inform SM on duty over exchange of private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass the trains on hand signals.
- (iv) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.
- (v) He shall also advise the Station Master at the dispatching end under exchange of private number to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) station master will advice S&T staff responsible for electrical key transmitter to rectify the defect at the earliest.
- (vii) Normal working will be resumed only after S&T staff repairs the electrical key transmitter and reconnection/fit memo for the same.
- (viii) After rectification, the Emergency Key shall be replaced in the Emergency Key Box and released by the S&T maintainer.

1.12 Obstruction at the Gate:

- (i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstruction at the gate, under exchange of private number.
- (iii) Station Master on duty shall be advised to put the reception / departure signals back to 'ON' position, if taken 'OFF' for a train.

- (iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).
- (vi) There he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstructions.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilot of all train to proceed cautiously, and pass the reception / departure signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection / fit memo for the same.

1.13 Obstruction on the Track near Level Crossing:

If there is a rail fracture or obstruction on the track due to failing of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.7 above. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

WORKING RULES FOR LEVEL CROSSING GATE No. ML-400 AT KM: 714/3-5.**1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

Following details shall be maintained at all manned level crossing gates:

1	No. of Level Crossing Gate	:	400
2	Engineering or Traffic gate	:	ENGINEERING ('A' Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/NWP
4	Location at Km.	:	KM. 714/3-5 (714.151)
5	At station	:	-
6	In between station	:	KBM-NWP
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Open to Road Traffic
10	Interlocked/ Non-Interlocked	:	Interlocked
11	Means of Interlocking	:	--
12	Provision of gate single at Km.	:	Up Line :713.971 DN Line : 714.331
13	Signaling arrangement	:	----
14	Means of communication Telephone.	:	Telephone Connected with KBM Station
15	Width of the level crossing gate	:	7.5 M
16	Type of road	:	Major District Road
17	Name of road	:	-
18	Metalled /Non-Metalled	:	Metaled
19	Approach road	:	Metaled
20	Width of the road	:	5.50 M
21	Angle of road crossing (in case of the SKEW gates)	:	90 ⁰
22	Road gradients (if any)	:	[a]North/East Side: 1 IN 60 [b]South/West Side: 1 IN 30
23	Road alignment (straight/Curve)	:	[a] North/East Side : Curve [b] South/East Side : Curve
24	Provision of height gauges	:	Provided
25	Type of barriers	:	-No-
26	Length of check rails	:	9.5 M
27	Road surface in between level crossing gates.	:	Level CC Slabs.
28	Length of rumble strip/ speed breakers.	:	7.5 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	62947, 10/2018
32	Census next due on	:	10/2021
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	Two
35	Nearest Railway Medical Assistance	:	Rly Health Unit Naupada
36	Nearest Private Medical Assistance available (if any)	:	Kotabommali and Naupada
37	List of equipment available (Yes/No)	:	Yes

1.2 <u>EQUIPMENT:</u>		
	Items	<u>Quantity / Numbers</u>
1.	LED based Tri colour hand signal lamps	5 Nos.
2.	Hand Signal Flag Green	1 No with mounted stick
3.	Hand Signal Flag Red	6 Nos.
4.	Banner Flag Red	5 Nos.
5.	Posts for exhibiting red banner flag	4 Nos.
6.	Spare chains with padlocks	2 with stop marker
7.	Detonators	10 in each case
8.	Gate lamps	2 Nos.
9.	Tommy Bar	1 No.
10.	Mortar Pan	1 No.
11.	Spade / Fowrah	1 No.
12.	Rammer	1 No (In case of asphalted road this may not be provided)
13.	Pick Axe	1 No (In case of asphalted road this may not be provided)
14.	Tin case for flags	1 No.
15.	Can for oil	1 No.
16.	Water port / Bucket	1 No.
17.	Canister for Muster Roll	1 No.
18.	Set of spare spectacles of gateman wearing glasses	1 No.
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1 No.
20.	Basket	1 No.
21.	Whistle	1 No.
22.	Wall Clock	1 No.
23.	A small size chain for use in case of failure of gate boom/Leaf Lock	2 No.

1.3 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.

12. Signal Failure and Inspection Register.

1.4 MODE OF OPERATION:

Gate shall normally kept open to the road traffic when ever it is required to close the gate SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive or dispatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

- i) Key 'P' from winch releases lever no. 1GF after closing the gate.
- ii) Lever no. 1GF when reversed effects boom locking & releases Key 'Q'.
- iii) Key 'Q' extracted is to be inserted in EKT-1 and turned.
- iv) Key 'IN' contact of EKT-1 along with the reversal of switches 1GS & 2GS will clear signal No. 1GS & 2GS respectively.
- v) Key 'Q' can be extracted from EKT-1 after GS1 & GS2 switches turned to normal.
- vi) After passage of UP/DN train, LC shall be released automatically after sequential occupation and clearance of track circuits.
- vii) In case of interlocking failure leading to non-extraction of normal key used for operation. An emergency key provided in ekt-2 (in locked and sealed red box) for opening of LC gate extraction of emergency key shall put back both UP & DN signals to ON.
- viii) Dead approach locking with time delay of 60 seconds provided on keyQ in EKT-1.
- ix) Approach warning is provided and effective.
 - a) For UP direction from UP IBS of NWP on occupation of UAXT(NWP-KBM).
 - b) For DN direction from 2kms in rear of DN gate stop signal.
- x) Approach buzzer for gate man and approach hooter for road users of LC gat to be provided.

1.5 DUTIES OF GATEMAN:

1. ALERTNESS:

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2. POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gateman will stand in the manner indicated below:

- i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.
- ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

3. ROUTING DUTIES OF GATEMAN:

- i) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iii) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- v) Gateman shall also prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.
- vi) If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- vii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- viii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- ix) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- x) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiv) Gateman shall see that the channel for the flange of the wheel is kept clean.

- xv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvi) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xiii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:

In case gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot / guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connected by telephone, regarding the defects / obstructions at the gate, under exchange of private number.

- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

a) **On double line section:**

- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and a red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

b) **Other action to be taken by Gateman:**

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (A) and (B) above.

- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

1.6 ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

1.7. Failure of Telephonic Communication:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- i) If the telephone falls at the gate connected with the station at the despatching end, Station Master shall issue a caution order to the Loco Pilot of the departing train.
- ii) Station Master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
- iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vi) Station Master will also advise the gateman through Gangman / Patrolman / Loco Pilot of the first train that the telephone has become defective.
- vii) Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

1.8 Failure of Lifting Barriers :

- i) When the gate cannot be closed due to failure of lifting barriers, the gateman shall immediately inform the Station Master on duty under exchange of private number, and ensure that lifting of barriers do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure that gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the loco pilot of the approaching train.
- v) Station Master on duty shall issue caution order to the loco pilot of a departing train.
- vi) He shall also advise the Station Master at the dispatching end, under exchange of private number; to similarly issue a caution order to the Loco Pilot before despatching a train in the block section.
- vii) Station Master shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the lifting barrier and issue reconnection / fit memo for the same.

1.9 Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge / cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) Station Master on duty shall issue caution order to the locopilot of a departing train.

- vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train in the block section from his end.
- vii) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.10 Failure of the Gate Key with the gate in open condition:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- v) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vi) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.11 Defective Gate Signals:

- i) The gateman shall treat the gate as defective and must not lower them under following circumstances:
 - a) If gate signals can be taken 'OFF' without closing the gate, or

- b) The key can be extracted from the operation winch when the gate is in open condition, or
- c) The key can be extracted from the gate barrier when the gate is in open condition
- ii) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- iii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / dispatch as prescribed for non-interlocked gates should be adopted.
- iv) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- v) Station Master on duty will issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train in the block section from his end.
- vii) Station Master shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection / fit memo for the same,

1.12 Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the Station Master on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.

- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master shall also inform the Station Master at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection / fit memo for the same.

1.13 Obstruction on the Track near Level Crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.8 above. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

WORKING RULES FOR LEVEL CROSSING GATE No. ML-395 AT KM: 707/19-21.**1. GENERAL:****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

Following details shall be maintained at all manned level crossing gates:

1	No. of Level Crossing Gate	:	395
2	Engineering or Traffic gate	:	ENGINEERING ('B' Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/NWP
4	Location at Km.	:	KM. 707/19-21 (707.625)
5	At station	:	-
6	In between station	:	KBM-NWP
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Open to Road Traffic
10	Interlocked/ Non-Interlocked	:	Interlocked
11	Means of Interlocking	:	--
12	Provision of gate single at Km.	:	Up Line :NIL DN Line : NIL
13	Signaling arrangement	:	----
14	Means of communication Telephone.	:	Telephone Connected with KBM Station
15	Width of the level crossing gate	:	7.5 M
16	Type of road	:	Other
17	Name of road	:	-
18	Metalled /Non-Metalled	:	Metaled
19	Approach road	:	Metaled
20	Width of the road	:	7.5 M
21	Angle of road crossing (in case of the SKEW gates)	:	90°
22	Road gradients (if any)	:	[a]North/East Side: 1 IN 60 [b]South/West Side: 1 IN 30
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Straight
24	Provision of height gauges	:	Provided
25	Type of barriers	:	-No-
26	Length of check rails	:	9.5 M
27	Road surface in between level crossing gates.	:	Level CC Slabs.
28	Length of rumble strip/ speed breakers.	:	7.5 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	54615 12/2013
32	Census next due on	:	12/2016
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	Two
35	Nearest Railway Medical Assistance	:	Rly Health Unit Naupada
36	Nearest Private Medical Assistance available (if any)	:	Kotabommali and Naupada
37	List of equipment available (Yes/No)	:	Yes

1.2 EQUIPMENT:

Items	<u>Quantity / Numbers</u>
1. LED based Tri colour hand signal lamps	5 Nos.
2. Hand Signal Flag Green	1 No with mounted stick
3. Hand Signal Flag Red	6 Nos.
4. Banner Flag Red	5 Nos.
5. Posts for exhibiting red banner flag	4 Nos.
6. Spare chains with padlocks	2 with stop marker
7. Detonators	10 in each case
8. Gate lamps	2 Nos.
9. Tommy Bar	1 No.
10. Mortar Pan	1 No.
11. Spade / Fowrah	1 No.
12. Rammer	1 No (In case of asphalted road this may not be provided)
13. Pick Axe	1 No (In case of asphalted road this may not be provided)
14. Tin case for flags	1 No.
15. Can for oil	1 No.
16. Water port / Bucket	1 No.
17. Canister for Muster Roll	1 No.
18. Set of spare spectacles of gateman wearing glasses	1 No.
19. Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1 No.
20. Basket	1 No.
21. Whistle	1 No.
22. Wall Clock	1 No.
23. A small size chain for use in case of failure of gate boom/Leaf Lock	2 No.

1.3 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.
12. Signal Failure and Inspection Register.

1.4 MODE OF OPERATION:

Gate shall normally kept open to the road traffic when ever it is required to close the gate SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive or dispatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

- i) Key 'G' released from the winch after closing the LC gate releases lever no. 1GF. Lever no. 1 reversed effects boom locking.
- ii) Key 'G1' extracted from 1GF after boom locking is to be inserted in the RKT and turned.
- iii) The Key 'IN' contact of RKT along with the reversal of switches 1S & 2S will release UP IBH signal No. 29 of NWP and DN IBH signal no. 14 of KBM respectively. .
- iv) In case of emergency, UP IBH signal no. 29 of NWP & DN IBH signal no. 14 of KBM can be put back to ON by the gateman by turning switch 1S and 2S respectively to normal position.
- v) In case of emergency key G1 can be extracted from RKT after putting back UP & DN IBH signals to ON and after a time delay of 60 seconds which is to be ensured by time delay circuit.

1.5 DUTIES OF GATEMAN:**1. ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2. POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gateman will stand in the manner indicated below:

- i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.
- ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

3. ROUTING DUTIES OF GATEMAN:

- i) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.

- ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iii) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- v) Gateman shall also prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.
- vi) If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- vii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- viii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- ix) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- x) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiv) Gateman shall see that the channel for the flange of the wheel is kept clean.
- xv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.

- xvi) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xiii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:

In case gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot / guard fails to take notice, gateman shall immediately inform the Station Master, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connected by telephone, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

a) **On double line section:**

- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and a red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

b) **Other action to be taken by Gateman:**

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (A) and (B) above.

- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

1.6 ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

1.7. Failure of Telephonic Communication:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- i) If the telephone falls at the gate connected with the station at the despatching end, Station Master shall issue a caution order to the Loco Pilot of the departing train.
- ii) Station Master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
- iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vi) Station Master will also advise the gateman through Gangman / Patrolman / Loco Pilot of the first train that the telephone has become defective.
- vii) Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

1.8 Failure of Lifting Barriers :

- i) When the gate cannot be closed due to failure of lifting barriers, the gateman shall immediately inform the Station Master on duty under exchange of private number, and ensure that lifting of barriers do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure that gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the loco pilot of the approaching train.
- v) Station Master on duty shall issue caution order to the loco pilot of a departing train.
- vi) He shall also advise the Station Master at the dispatching end, under exchange of private number; to similarly issue a caution order to the Loco Pilot before despatching a train in the block section.
- vii) Station Master shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the lifting barrier and issue reconnection / fit memo for the same.

1.9 Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge / cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) Station Master on duty shall issue caution order to the locopilot of a departing train.
- vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train in the block section from his end.

- vii) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.10 Failure of the Gate Key with the gate in open condition:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- v) He shall also advise the Station Master at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vi) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.11 Defective Gate Signals:

- i) The gateman shall treat the gate as defective and must not lower them under following circumstances:
 - a) If gate signals can be taken 'OFF' without closing the gate, or
 - b) The key can be extracted from the operation winch when the gate is in open condition, or
 - c) The key can be extracted from the gate barrier when the gate is in open condition

- ii) If the Gate or the Gate Signal or Warner / Distant Signal become defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wires, if necessary.
- iii) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / dispatch as prescribed for non-interlocked gates should be adopted.
- v) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- vi) Station Master on duty will issue a caution order to the Loco Pilot of a departing train.
- vii) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train in the block section from his end.
- viii) Station Master shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection / fit memo for the same,

1.12 Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the Station Master on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.

- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master shall also inform the Station Master at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection / fit memo for the same.

1.13 Obstruction on the Track near Level Crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.8 above. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

APPENDIX 'B'

DETAIL DESCRIPTION OF SIGNALLING AND INTERLOCKING INSTALLATIONS, INSTRUCTIONS FOR WORKING THEM NORMALLY AND IN EMERGENCIES ETC. INCLUDING POWER SUPPLY ARRANGEMENTS

1 BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALLATIONS

This is a 'B' class station provided with Standard –III(R) interlocking. The station is provided with Route setting type Electronic Interlocking between points, signals, track circuits and other signalling gears. The Station is equipped with Multiple Aspect Colour Light Signaling. All points and Signals etc. are power operated through a central **Visual Display Unit (VDU)** installed in the SM's Office

2.0 DESCRIPTION OF OPERATOR CONSOLE CUM VISUAL DISPLAY UNIT (VDU):

The Operator Console cum Visual Display Unit (VDU) is provided for operation of Signals, Points, L.C Gates, Crank Handles, Siding & other controls etc. A Mimic yard diagram based on SI plan no. SI/23004 ALT.'I' will be displayed on the VDU. The VDU is used for controlling and monitoring the station. Indications on the Station yard mimic diagram of VDU will be dynamically updated

2.1 SYSTEM OVERVIEW:

An Operator Console consisting of a VDU (a high-resolution 32" colour monitor), with keyboard and pointing device (mouse) connected with a computer (CPU) is provided. The CPU is connected to the Electronic Interlocking (E.I) equipment to exchange control and indication messages. The system is programmed to display the Station Yard Mimic VDU diagram on the VDU and that it allows access to all functions through pop-up menus. When a particular function is selected, an appropriate Menu will appear on the screen. A function (clearance of Signal or cancellation, Route release, Point operation, Gate release etc.) can be executed through selecting the required operation by clicking the Left button of the pointing device (mouse) on the desired function.

2.2 An additional VDU connected with a computer is provided as stand by arrangement in case of failure of the working operator console. In case of failure of the working operator console the system shall switch over to the stand by VDU automatically

2.3 ICONS AND INDICATIONS PROVIDED ON THE VDU

In addition to mimic yard diagram including signal, points, track circuit, Axle counters, L.C.gates, sidings as indicated in the WRD, various other ICONS and indications have been provided on the VDU. A brief description of the same are described below

SL. NO.	ICONS	INDICATIONS	FUNCTIONS	REMARKS
1	SM Key	Yellow light when key is 'IN'	Ensures operation of VDU by authorized person	Protected by pass word
2.	---	Emergency Route release	Flashing indication appears when Emergency route release operation is initiated.	
3.	---	Emergency Gate release	Flashing indication appears when Emergency gate release operation is initiated.	
4.	Emergency Point operation key	Yellow light when key is 'IN'	Ensures emergency point operation by authorized person	For each operation concerned counter shall register one count higher.
5.	---	System indication Central – On/Off	Indicates System 'A' or 'B' is in working mode	
6.	---	System indication Goomty– On/Off	Indicates System 'A' or 'B' is in working mode	
7.	Point failure Ack. button	Yellow	Flashing indication appears when any point fails. SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement buzzer stops. After verification at site inform S&T staff Immediately.
8.	Signal failure Ack. button	Yellow	Flashing indication appears when any signal fails. SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement buzzer stops. Inform S&T staff Immediately.

9.	CH-1, CH-2, CH-3 and CH-4 buttons	Yellow lamp indicates 'KEY IN'. Red lamp indicates 'CH LOCKED'	In normal condition yellow lamp will be lit. Whenever the crank handle is locked in route or otherwise red indication will glow.	
10.	DN Reset key and button (NWP end)	Yellow-Power on Green-prep reset	SM has to follow 'Key In' procedure followed by left click on the button icon to reset LVCD Axle counter.	This operation is required for Resetting of LVCD Axle Counter of Concerned Section. For each operation concerned counter shall register one count higher.
11.	UP Reset key and button (NWP end)	Yellow-Power on Green-prep reset		
12.	DN Reset key and button (TIU end)	Yellow-Power on Green-prep reset		
13.	UP Reset key and button (TIU end)	Yellow-Power on Green-prep reset		
14.	DN IB Axle counter Reset key and button (TIU end)	Yellow - Power on Green-prep reset	SM has to follow 'Key In' procedure followed by left click on the button icon to reset IB Axle counter.	Permission is granted by TIU. For each operation concerned counter shall register one count higher.
15.	'Permission received from TIU' Acknowledgement button	Yellow - Permission Received	To acknowledge SM has to left click on the Acknowledgement button	
16.	'Permission granted to TIU' button	Yellow - Permission granted	To grant permission for resetting SM has to left click on the permission granting button	
17	UP IB Axle counter	Yellow - Power on Green-prep reset	SM has to follow 'Key In' procedure followed by left click on the	

	Reset key and button (NWP end)		button icon to reset IB Axle counter.	
18	'Permission received from NWP' Acknowledgement button	Yellow Permission Received	- To acknowledge SM has to left click on the Acknowledgement button	Permission is granted by NWP. For each operation concerned counter shall register one count higher.
19	'Permission granted to NWP' button	Yellow Permission granted	- To grant permission for resetting SM has to left click on the permission granting button	
20	'DN Train Run away' in IB section muting button	Yellow - acknowledged	On getting alarm/buzzer SM shall left click on the button icon to acknowledge the incident.	Buzzer will sound. On acknowledge-ment buzzer stops. Inform S&T staff Immediately.
21.	'UP Train Run away' in IB section muting button	Yellow - acknowledged	On getting alarm/buzzer SM shall left click on the button icon to acknowledge the incident.	
22	'DN Train Entering Section' muting button	Yellow - acknowledged	On getting alarm/buzzer SM shall left click on the button icon to acknowledge it.	
23	'UP Train Entering Section' muting button	Yellow - acknowledged	On getting alarm/buzzer SM shall left click on the button icon to acknowledge it.	
24	UP Block release button	Yellow – Prepared for Block release.	On getting indication SM shall left click on the button icon which shall release Block Handle.	After complete arrival of train this will be activated
25.	DN Block release button	Yellow – Prepared for Block release.		After complete arrival of train this will be activated

26.	L.C.Gate control-33 button	Yellow lamp indicates 'Gate Closed'. Red lamp indicates 'Gate LOCKED'.	SM shall right click on the button icon to select menu to Transmit / Receive/ emergency operation of gate as required.	In case of emergency operation 'Emergency gate release' indication will appear. For each operation concerned counter shall register one count higher.
27.	Hot axle Sdg. Control – 31	Yellow lamp indicates 'KEY IN'. Red lamp indicates 'SDG. LOCKED'	SM shall right click on the button icon to select menu to Transmit / Receive of siding control as required.	
28.	PQRS Sdg. Control – 27	Yellow lamp indicates 'KEY IN'. Red lamp indicates 'SDG. LOCKED'	SM shall right click on the button icon to select menu to Transmit / Receive of siding control as required.	
29.	Counter	-	As and when required SM shall point the cursor on the counter icon and right click on it. A drop down menu will appear indicating all the counters available in the system. SM shall select the required counter on the menu and can read the latest counter reading.	-
30	Line Block button	Red when blocked	SM shall point the cursor on the icons provided on the berthing track and right click . One drop menu will appear indicating line blocked and un-blocked, SM has to select the required menu.	When line block is selected the concerned berthing portion of track will appear as thick Red line.

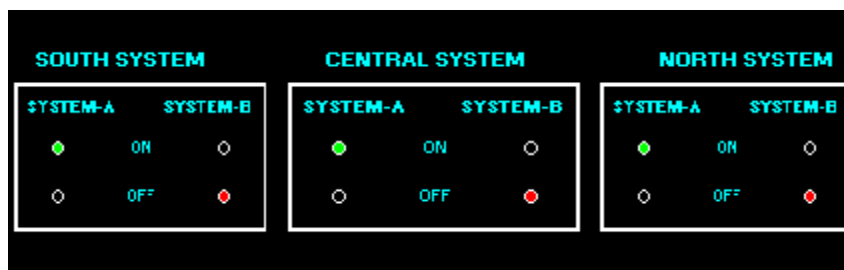
3.0 **OPERATIONAL PROCEDURE THROUGH VDU AND INDICATIONS:**

In addition to the mimic yard diagram various other indications will be available on the

VDU. The implications of different indications provided and the operational procedure for different functions shall be strictly followed as per the following description.

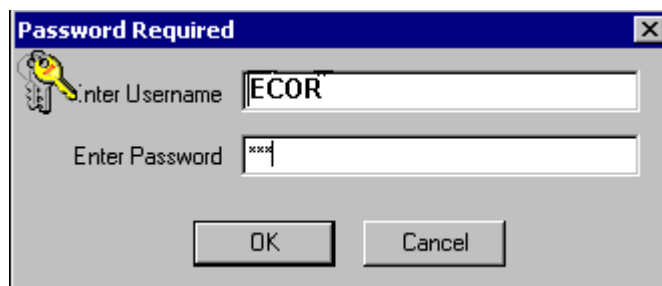
3.1 ELECTRONIC INTERLOCKING (E.I) SYSTEM INDICATIONS

Electronic Interlocking Equipment (E.I) at the center along with both goomties can work in either of the two modes i.e, System-‘A’ or System-‘B’. On the VDU (Computer), there are two system indications in which Green indication mentioning the On-line system and the Red indication mentioning that the system is in power off condition.



3.2 OPERATION PROCEDURE OF SM's KEY

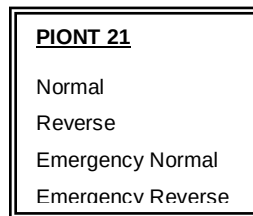
To prevent the unauthorized operation by any person other than SM on duty this facility is provided on VDU. On duty SM needs to track the pointer to the “SM KEY” icon and click the ‘KEY IN’ menu by the clicking left button of the mouse, by this a Password window will appear. SM on duty needs to enter the password and press the ‘OK’ Button provided on the Password window. This will allow operating all the controls e.g., Signals, Points, and Crank handles Etc. through VDU. In case incorrect password or user name is entered, no operation can be made. In such cases the same procedure is to be repeated till correct password is entered.



Enter the USER NAME and PASSWORD and click the OK button.
Now the OP VDU is ready for use & the entire yard can be controlled from the VDU.
Similarly select the KEY OUT when the Station Master to Prevent the Unauthorized Operation with User name and password

3.3 OPERATION AND INDICATION OF POINT

To Operate the Point the SM/ASM needs to track the mouse pointer to concerned point's Normal/Reverse indications on the VDU, after clicking by the left button on the mouse a pop-up menu will appear as below:



3.3.1 REVERSE TO NORMAL OPERATION

Track the pointer to NORMAL menu and click. A Normal flashing indication will appear and the indication will be steady after the point is set to Normal.

3.3.2 NORMAL TO REVERSE OPERATION

Track the pointer to REVERSE menu and click. A Reverse flashing indication will appear and the indication will be steady after the point is set to Reverse.

3.3.3 POINT INDICATIONS

When the point is free a steady strip of light will appear in the point zone (In case of cross-over at both ends) indicating the point is in normal/reverse condition. When the point is operated the same strip of light starts flashing till the point is set and becomes steady when the point is set and detected. When the point is engaged in a route a Small yellow light will appear near the point indicating that the point is locked and cannot be operated now.

3.4 PROCEDURE FOR SETTING OF ROUTES AND TAKING OFF SIGNALS:

To Take-Off a Signal on the desired route the SM on duty needs to track the mouse pointer over the concerned Signal on the VDU, after clicking by the left button of the mouse a pop-up menu will appear as below:

<u>SIGNAL S1</u>
S1 – S7 (ORL)
S1 – S7 (ML)
S1 – S9
S1 – S11
C1 – S7
C1 – S9
C1 – S11
MAIN SIGNAL CANCEL
MAIN ROUTE RELEASE
CALLING ON SIGNAL CANCEL
CALLING ON ROUTE RELEASE

SM on duty will select the route as per the requirement by moving the mouse pointer on the appropriate menu & left clicking on the menu. It will set the route and clear the signal provided all the conditions required to clear the signal is satisfied. Similarly by following the similar procedure operation of other signals can be done.

3.4.1 SETTING A ROUTE AND ITS INDICATIONS

To set a route of a signal, click on a possible route of the signal, after doing so the route gets initiated & Red-flashing indication will appear on the replacement track of the signal. Point operation is initiated as per the requirement of the desired route and Normal/ Reverse set indications will start flashing if favorable point detection is not available. After setting of points in the route, overlap & isolation Flashing indication will be replaced by steady indication and a complete yellow 'Route set' indication will appear from the replacement track of the signal to the last track of overlap section of the route. Also the points lock indication will appear. A Point locked can be ensured from the Red Steady indication will appear near the point. Finally a Route locked Yellow Steady indication will appear on the immediate rear of the signal. Now the signal will be Taken-off. The yellow route set indication will turn to red when different track circuit portion within the route is occupied during passage of a train.

3.4.2 SHUNT SIGNAL OPERATION:

The same procedure as main signal has to be followed as explained above. To set the signal route for shunt signals SM on duty shall put the pointing device on the Shunt signal icon and left click on the same. A drop down menu will appear indicating different actions that can be selected. After selecting the desired route SM on duty shall left click on it. Desired will be initiated and the Shunt signal will be taken off.

3.4.3 CALLING ON SIGNAL OPERATION:

The same procedure as main signal has to be followed as explained above. To set the signal

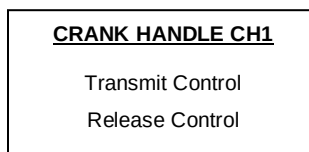
route for CALLING ON signals SM on duty shall select the desired route and left click on the same after a train occupies the approach track circuit in immediate rear of the stop signal. The signal is cleared after a lapse of 120 seconds provided other conditions are fulfilled.

3.5 CRANK HANDLE CONTROL OPERATION:

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicating that the crank handle is free. To Transmit or Receive control of the Crank Handle, click on the crank handle control button icon provided like the following on VDU.



The appearing pop-up menu gives details of the possible commands on the Crank Handle



To Transmit the Crank Handle KEY to the field personnel SM on duty has to click transmit control menu. After transmission the 'KEY IN' indication will start flashing, now the KEY can be extracted from the RKT at site. After extracting the key from the RKT, the 'KEY IN' indication will disappear. When the Manual point operation is over, after putting KEY IN' flashing indication will appear on the VDU, Now the SM on duty has to Release the control for the Steady indication by clicking release control menu.

S.No.	CRANK HANDLE	CONTROL POINTS
1	CH1	21A/B
2	CH2	22A/B
3	CH3	23A/B, 24A/B
4	CH4	25A/B, 26A/B

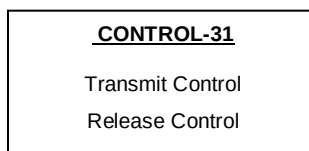
A Crank handle locked indication (Red) will appear when the particular point is on the signal route set over it or engaged in route setting in any other way.

3.6 SIDING CONTROL OPERATION:

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicating that the siding point is free. To Transmit or Receive of the Siding Control, click on the Siding control button icon provided like the following button on the VDU.



The appearing pop-up menu gives details of the possible commands on the Siding Control



For Transmitting the Siding Control KEY to the field personnel SM on duty has to click transmit control menu. After transmission the KEY IN indication will start flashing, now the KEY can be extracted from the RKT. After extracting the key from the RKT, the key IN indication will disappear. When the Siding point operation is over, after putting the KEY in the RKT, A KEY IN flashing indication will appear on the VDU, Now the SM/ASM has to Release the control for the Steady indication by clicking release control menu

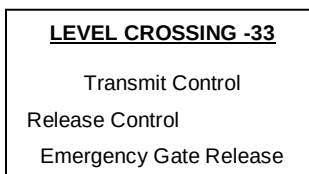
A Siding Control locked indication (Red) will appear when a route is set over the particular Siding point or in some manner it is involved in route setting procedure.

3.7 LEVEL CROSSING GATE OPERATION:

To Transmit or Release control of the Level crossing gate, click on the Level crossing control button icon provided like the following button on the VDU.



The appearing pop-up menu gives details of the possible commands on the Level crossing gate.



Normally no indication will be available on the VDU indicating that the gate control key is out and gate is open. When it is required to close the gate SM on duty shall intimate the gate man to close the gate supported by exchanging PN. Upon instructed by the SM on

duty the gate man shall close and lock the gate and after reversing the concerned slot lever he shall transmit the gate control key to station by inserting and transmitting the key in the RKT. A flashing yellow indication will appear on the VDU seeing which SM on duty receive the control by clicking on the L.C. Gate control button icon and select 'Receive'. The flashing indication shall become steady.

When the key is required to be transmitted to the Gate man, SM on duty has to transmit the control by clicking transmit release after transmission the KEY IN indication will starts flashing, now the KEY can be extracted from the RKT. When the gate has been closed, locked & slot lever is in reverse position, After putting the key in the RKT, A KEY IN flashing indication will appear on the VDU. Now the SM/ASM has to release the control for the steady indication.

The locked indication will appear when the LC Gate has locked by initiation of any of the possible signal routes.

3.8 OVERLAP TIME RELEASE (WHITE LIGHT):

Separate indications (White Light) for each overlap are provided near the starter signal to indicate the free or locked condition of overlap. This indication light will glow when overlap is locked by any Home Signal route and there will be no light when overlap is free. The locked indication starts flashing when the approaching train clears the rear end point zone track and occupies the berthing track. After a time release of 120 seconds the white flashing light will disappear indicating concerned overlap is free.

4.0 EMERGENCY OPERATIONS:

To carry out different emergency operations the following procedures are to be followed

4.1 CANCELING A ROUTE/ EMERGENCY ROUTE RELEASE:

To cancel a signal route when the route is set and the signal is taken-off, click on the signal. After clicking by the left button on the mouse a pop-up menu will appear as shown in Para 3.4 above. Click on the signal cancel (Main/ Calling on) of the concerned signal, the signal will immediately go to 'ON' aspect, after doing so click on the Route release menu the route locked indication will starts flashing for 120 sec & the Emergency Route Release Indication (UP / DN as the case may be) will flash for the entire time interval. After the completion of 120 sec, the locked route will be released. This action will be recorded in a counter. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Route cancellation along with the latest counter no. in a register.

4.2 EMERGENCY NORMAL OPERATION OF POINTS:

When the Point zone Track circuits/ Axle counters failed without any Point lock condition

by any signal routes, a point can be operated by the Emergency Point operation.

Note: Before resorting to this operation SM on duty shall verify that the point zone is clear of any vehicle occupying the track section and the same is clear of any obstruction

4.2.1 NORMAL OPERATION

Before doing the emergency operation the Emergency Point Operation Key is to be made "KEY IN" by clicking the 'KEY IN' menu. The user name and password is to be logged in. The user name of this station is 'ECOR' and password of this station is KBM. Track the pointer to 'EMERGENCY NORMAL' menu and click. A Normal flashing indication will appear and the indication will be steady after the point is set to Normal. This action will be recorded in a counter. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Emergency Point Operation along with the latest counter no. in a register.

After the completion of the Emergency point operation, the Key to be 'KEY OUT' by clicking 'KEY OUT' menu. The user name and password is to be given for "KEY OUT" also.

4.2.2 EMERGENCY REVERSE OPERATION OF POINTS

Before doing the emergency operation an Emergency Point Operation Key is to be made 'KEY IN' by clicking the 'KEY IN' menu. The user name and password is to be logged in. The user name of this station is 'ECOR' and password of this station is KBM. Emergency reverse menu to be clicked. Track the pointer to 'EMERGENCY REVERSE' menu and click. A Reverse flashing indication will appear and the indication will be steady after the point is set to Reverse. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Emergency Point Operation along with the latest counter no. in a register.

After the completion of the Emergency point operation, the Key to be 'KEY OUT' by clicking 'KEY OUT' menu. The user name and password is to be given for 'KEY OUT' also.

4.2.3 EMERGENCY CRANK HANDLE RELEASE OPERATION :

When a crank handle is locked due to route set earlier is not released or otherwise to Transmit or Release control of the Crank Handle, SM on duty shall cancel the relevant signal first and then click on the crank handle control button icon provided like the following on the VDU.



On clicking, the appearing pop-up menu gives details of the possible commands on the Crank Handle



For Transmitting the Crank Handle KEY to the field personnel SM on duty has to click transmit control menu. After transmission the 'KEY LOCKED' (Red) indication will start to flash for 120 seconds & 'KEY IN' remains steady. After a lapse of 120 seconds the 'KEY LOCKED' indication will vanish & 'KEY IN' indication will start to FLASH. After extracting the key from the RKT, the 'KEY IN' indication will disappear. When the Manual point operation is over, after putting the emergency crank handle key in the RKT, flashing 'KEY IN' indication will appear on the VDU, Now the SM on duty shall Release the control for the Steady indication by clicking 'RELEASE CONTROL' menu.

The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Emergency Crank Handle Operation along with the latest counter no. in a register.

4.3 EMERGENCY GATE OPERATION

L.C. Gate control can be released and the gate can be opened by this operation when LC gate control remains in locked condition due to setting of any of the signal routes over it or otherwise. For releasing the gate by the Emergency operation the SM on duty has to cancel the signal by signal cancellation control of the relevant signal. Then he has to click the Emergency Gate release control in the Gate pop-up menu. Now the 'LOCKED' (Red) indication will flash for 120 seconds & after the time has elapsed the 'LOCKED' (Red) indication will vanish. Now the SM on duty shall transmit the 'GATE CONTROL' in this condition and 'KEY IN' indication starts flashing. Now the KEY can be extracted from the RKT at Gate Lodge and gate can be opened. This action will be recorded in a counter. The counter will increment the number for each and every such action and also, this number should be recorded by the SM/ASM manually in a register.

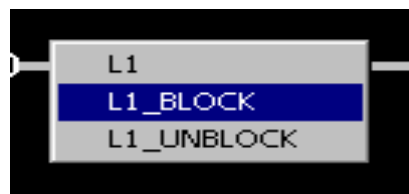
The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Emergency Gate Operation along with the latest counter no. in a register.

4.4 **LINE BLOCK AND UNBLOCK (REMINDER COLLAR):**

When SM on duty requires demarcating a berthing/stabling line as BLOCKED / FREE line he shall adopt the following procedure:

4.4.1 **LINE BLOCK:**

To set the 'LINE BLOCKED', the SM on duty shall select "L. No. ___ BLOCK" command using the left mouse button, after selecting the Line Block that particular line will be blocked for all the possible Track circuit section on that particular line. The 'TRACK BLOCK' yellow colour indication will be displayed after the successful application of such a blocking process on the VDU.



4.4.2 **LINE UNBLOCK:**

To release the set block of any particular line, the SM/ASM should select "L. No. ___ UNBLOCK" command using the left mouse button. After selecting the "L. No. ___ UNBLOCK" that particular line will be available for the train movement leading to all the possible L1 Track circuit section.

5.0 **PROCEDURE FOR RESETTING OPERATION OF LVCD (DIGITAL) AXLE COUNTER IN SECTION KBM-NWP AND KBM-TIU**

- 5.1 The entire block section between KBM-NWP and KBM-TIU are provided with High availability Single section Digital Axle counter (HASSDAC).

For Section KBM-NWP:

A pair of High availability single section digital axle counter is provided between **KBM** on DN line, one just beyond DN advanced starter No.12 of KBM and another one just beyond 400mts from the DN IB Home signal No. 14 of KBM for proving IB section and another pair of High availability single section digital axle counter near DN IB home signal no. 14 of KBM and another one just near **BSLB** of NWP station for proving LVV section between KBM-NWP. A pair of High availability single section digital axle counter is provided between **KBM-NWP** on UP line, one just beyond UP advanced starter No.25 of NWP and another one just beyond 400mts from the UP IB Home signal No. 29 of NWP for proving IB section and another pair of High availability single section digital axle counter near UP

IB home signal no. 29 of NWP and another one just near IT2 track circuit beyond UP Home Signal No.1 of KBM station for proving LVV section between KBM-NWP.

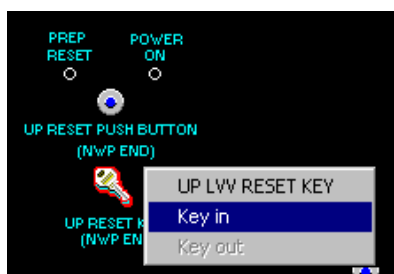
For Section KBM-TIU:

A pair of High availability single section digital axle counter is provided between **KBM** on UP line, one just beyond UP advanced starter No.13 of KBM and another one just beyond 400mts from the UP IB Home signal No. 15 of KBM for proving IB section and another pair of High availability single section digital axle counter near UP IB home signal no. 15 of KBM and another one just near **BSLB** of NWP station for proving LVV section between KBM-TIU. A pair of High availability single section digital axle counter is provided between **KBM-TIU** on DN line, one just beyond DN advanced starter No.25 of TIU and another one just beyond 400mts from the DN IB Home signal No. 14 of TIU for proving IB section and another pair of High availability single section digital axle counter near DN IB home signal no. 14 of TIU and another one just near BSLB of KBM station for proving LVV section between KBM-TIU.

The occupation and clearance of the axle counter section are indicated on VDU by RED & GREEN light respectively. When after arrival of a train the LVCD Axle counter does not show clear indication and the 'Section Occupied' indication continues to glow DY. SS/SM on duty shall initiate resetting procedure for the LVCD Axle Counter, monitoring the Block section. Before initiating Resetting procedure SM on duty shall ensure that the train which has left arrived completely at receiving station and block section is clear [free] of trains. If the track indication of that particular block section is showing 'Red' then the following actions are to be performed by the SM on duty.

The SM on duty at KOTABOMMALI Station shall verify with on duty SM at receiving station over phone, to ensure the complete arrival of the train in his station.

Resetting of High availability single section Digital Axle Counter Cooperation is necessary from adjacent station.



On duty SM shall track the pointer to the “ **Axle Counter Reset key** ” icon and click left button of the mouse and select “**KEY IN**” option.



Move the Curser pointer near to the Axle Counter Reset push button icon, and click left button of the mouse and select “**Reset**”. In VDU VDU ‘**Power on**’ indication will appear above the reset push button and it will remain for 10 sec. This action will be recorded in a counter. The counter will increment the number for each and every such action and also, this number should be recorded by the SM/ASM manually in a register.



The on duty SM shall inform the SM on duty at adjacent to carryout aforesaid resetting procedure. After completing reset operation in both side “**PREP RESET**” indication will appear above the reset push button icon.



The Piloting In or out is mandatory for completion of Axle counter reset operation.

Number changed for resetting, shall be recorded in the TSR and in the register provided for this purpose.

6.0 MAIN SIGNAL LAMP FAILURE INDICATION AND BUZZER ACKNOWLEDGMENT:

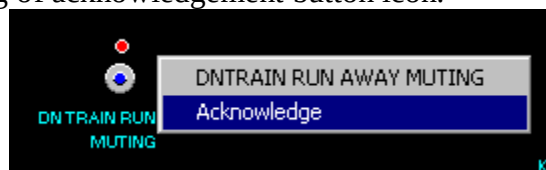
Double filament signal lamps have been used for main signals at this station. In case main filament fuses auxiliary filament will automatically lit up with same intensity. However failure of main filament will be indicated by the appearance of ‘RED’ light on VDU along with audible buzzer, which can be acknowledged and muted by pressing the ‘SIGNAL FAILURE ACKNOWLEDGEMENT’ button icon. However the RED light will continue to glow until the lamp is replaced by a new lamp. For rectification of failure SS/SM on duty should inform the concerned S&T staff about the group which has failed. For the purpose of giving main filament failure indication the following groups are formed on either side.

6.1 **POINT FAILURE INDICATION (RED), POINT FAILURE BUZZER AND POINT FAILURE ACKNOWLEDGEMENT:**

Whenever there is failure of point due to non-setting, point failure indication flashing light appears near the point button icon along with point failure Buzzer. The buzzer stops when the point failure acknowledgement button icon is pressed, but the flashing light above the ACK button shall continue to glow. The flashing light at the concerned point zone can identify the defective point. After the failure is rectified, the flashing light above the 'POINT FAILUR ACK' button will disappear.

6.2 **TRAIN RUN AWAY INDICATION AND BUZZER ACKNOWLEDGEMENT:**

- The Train Run away buzzer is provided on both direction to ensure passing a train Through IBH Signal at 'ON'.
- When the Train hits the IBH track circuit, the audible Buzzer will ring as well as red indication will appear in VDU above the Run away Muting Button. The buzzer can be silenced by pressing of acknowledgement button icon.



6.3 **SHOWING OF COUNTERS:**

One counter icon has been provided on the VDU. When selected a drop down menu will appear indicating the following counters.

- 1 Emergency Route Release.
- 2 Emergency Point Operation
- 3 Emergency Crank handle release
- 4 Emergency Gate release
- 5 LVCD axle counter resetting for section KBM-TIU DN line
- 6 I.B. Axle counter resetting for section KBM-TIU DN line.
- 7 LVCD axle counter resetting for section KBM-TIU UP line
- 8 I.B. Axle counter resetting for section KBM-TIU UP line.
- 9 LVCD axle counter resetting for section KBM-NWP DN line
- 10 I.B. Axle counter resetting for section KBM-NWP DN line.
- 11 LVCD axle counter resetting for section KBM-NWP UP line
- 12 I.B. Axle counter resetting for section KBM-NWP UP line.

When the pointing device is placed any one of the menu the latest counter number will pup-up on VDU.

7.0 **TRACK CIRCUITS:**

All lines are track circuited from Home signal to Advance starter signals at either direction of the yard. Track circuits are provided in the yard as 1AT, 1T1, 1T2, 12T, 12AT, 21AT, 21BT, 23T, 25AT, 25BT, 14T, 14AT, L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3, L4T1, L4T2, L4T3, 22AT, 22 BT, 24AT, 24 BT, 26AT, 26BT, 13 AT, 13T, 2AT, 2T1, 2T2.

Approach Track Circuit (5 Rail lengths) for Calling-on signal are also provided in rear of the Home signals in both directions. In addition there are (5 Rail length) track circuits beyond Advanced starter Signals in both the directions for replacement of Last Stop Signal. Indications for the above track circuits are available on VDU at SM's office. Yellow strip on VDU indicates 'ROUTE IS SET AND TRACK CLEAR' and Red strip indicates 'TRACK OCCUPIED CONDITION'.

- 7.1** On account of the doubtful operation of any track circuit by a light vehicle including self-propelled vehicle such as motor trolley or light engine or tower wagon etc., indicating the occupancy/clearance of track, it is necessary that the Station Master on duty satisfies himself that the said vehicle has cleared the point zone track circuits/Axle Counter by observing the track indications of the track on either side of the crossovers by positively checking the 'entrance' and 'exit' track circuits/Axle Counter are showing occupancy and clearance in accordance with the train movement.

8.0 AXLE COUNTER:

- (i) The entire block section between KBM-NWP and KBM-TIU are provided with High availability Single section Digital Axle counter (HASSDAC).

For Section KBM-NWP:

A pair of High availability single section digital axle counter is provided between **KBM** on DN line, one just beyond DN advanced starter No.12 of KBM and another one just beyond 400mts from the DN IB Home signal No. 14 of KBM for proving IB section and another pair of High availability single section digital axle counter near DN IB home signal no. 14 of KBM and another one just near **BSLB** of NWP station for proving LVV section between KBM-NWP. A pair of High availability single section digital axle counter is provided between **KBM-NWP** on UP line, one just beyond UP advanced starter No.25 of NWP and another one just beyond 400mts from the UP IB Home signal No. 29 of NWP for proving IB section and another pair of High availability single section digital axle counter near UP IB home signal no. 29 of NWP and another one just near IT2 track circuit beyond UP Home Signal No.1 of KBM station for proving LVV section between KBM-NWP.

For Section KBM-TIU:

A pair of High availability single section digital axle counter is provided between **KBM** on UP line, one just beyond UP advanced starter No.13 of KBM and another one just beyond 400mts from the UP IB Home signal No. 15 of KBM for proving IB section and another pair of High availability single section

digital axle counter near UP IB home signal no. 15 of KBM and another one just near **BSLB** of NWP station for proving LVV section between KBM-TIU. A pair of High availability single section digital axle counter is provided between **KBM-TIU** on DN line, one just beyond DN advanced starter No. **25** of TIU and another one just beyond 400mts from the DN IB Home signal No. 14 of TIU for proving IB section and another pair of High availability single section digital axle counter near DN IB home signal no. 14 of TIU and another one just near BSLB of KBM station for proving LVV section between KBM-TIU.

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of a train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and necessary action as per GR. **14.13** is to be followed. The axle counters are interlocked with the respective block instruments for that section. If Axle Counter fails, Advanced Starter signal shall not come to 'OFF' and the concerned instrument shall remain locked in last operated position for section KBM – NWP and IB Home Signals shall not assume 'OFF' aspect and the concerned Block Instruments shall remain locked in last operated position for section KBM – TIU.

A resetting arrangement for resumption of the system, in case of failure of Axle Counter, has been provided in the SM office of the adjacent Block stations. After being assured by both the SM that the last vehicle has arrived completely at the receiving station, the resetting procedure shall be initiated after exchanging Private Number vide G&SR 4.17, 4.17.01.

(Details of resetting procedure given in APPENDIX-'B' under para _5.1 of this SWR)

NOTE:

Before taking off reception and dispatch signals for UP and DN directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The indication of track circuit / Axle counter shall exhibit Red Light when track is occupied and Yellow light when track is clear and route is set. There will be no track indication when any route is not set.

9.0 TAKING OFF CALLING-ON SIGNAL:

Miniature colour light Calling-on signal is provided below the Home signals in terms of GR.3.13 (6)(b). A Calling-on signal shows no light in the 'ON' position. A Calling-on signal is taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' for admission of train on blocked line or due to failure of main signal due to any other reason

- 9.1** To take off Calling-on signal the train must come to stop at the foot of the home signal, occupying the track circuit (1AT, 2AT as the case may be) in rear of the Home signal. When a train occupies the track circuit, a RED light strip will appear on the VDU. The particular route on which the train is intended to be received shall be set by selecting and setting desired route through VDU by SM on duty. After a lapse of 60 seconds, the Calling-on signal clears i.e. white light glows at the concerned Calling-on signal on the VDU

NOTE:

SM on duty to ensure that no through signals are given while receiving a train on Calling-on.

- 9.2** **RELEASE/CANCELLATION OF ROUTE:**

Normally when a train is received on any route or dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released. When the route is not released automatically after passage of train over it or when SM on duty intends to cancel the route set by him shall follow procedure for cancellation of route described in Para 4.1 of APPENDIX-B above.

NOTE:

UP and DN Calling-on signals and UP and DN Advanced starters are to be manually cancelled after the passage of the train to release the route.

- 9.3** **REPLACEMENT OF SIGNALS TO 'ON':**

Signals are replaced to 'ON' automatically by the passage of a train beyond the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the SM shall follow para no. 3.4 of APPENDIX-B.

- 9.4** **INTERLOCKING OF SIGNALS:**

The Block Instrument cannot be made normal unless the respective Home signal is put back to 'ON' and the respective Block Section monitored by Axle Counter is clear of trains. Signals once taken 'OFF' can be put back to danger in case of emergency by following para no. 3.4 of APPENDIX-B even when the SM's Key is withdrawn from VDU.

UP Advance Starter signal of KBM is interlocked with the clearance of IB section i.e., clearance of section up to 400 Mtrs. beyond UP IB Home which is controlled by IB zone Axle Counter.

DN advance Starter signal of KBM is interlocked with the clearance of IB section i.e., clearance of section up to 400 Mtrs. beyond DN IB Home which is controlled by IB zone Axle Counter.

9.5 PILOTING OF TRAINS IN TO STATION YARD.

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. Whenever both Home signal and Calling-on signal failed, all trains will be piloted in vide SR. [Refer SR 3.69.03(a) & (c)].

The SM on duty shall nominate a clear line and shall advise the TPM on duty at station to set the nominated route with the help of crank handle if the points cannot be set from the VDU. Then the TPM shall set the facing and trailing points and clamp and padlock the same under the supervision of SM on duty.

The SM on duty shall then hand over the written authority (T/369(3b)) to the TPM for piloting the train. While going towards Home signal the TPM shall check the points and satisfy him self that the route is correctly set.

After the train has brought to a dead stop at the Home signal the TPM shall hand over the pilot memo to the loco pilot, board the engine and display proceed hand signal to pass the Home signal.

NOTE:

- i) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of the facing points, if any and ensure clearance on the nominated route vide SR [Ref. SR 3.69.03(c)]
- ii) The keys of padlock of the clamps put ON to the points on the route for piloting In or piloting OUT shall be in the personally custody of the SM on duty or any other authorized operating officials till such time the train / engine / vehicle has utilized the route or alternatively such movement is cancelled.

9.6 PILOTING OF TRAINS - OUT OF STATION YARD:

When the starter signal has become defective, the Station Master on duty shall advise the on duty TPM to set all points correctly for the outgoing trains. Then he shall clamp and padlock the same under the supervision of SM on duty. Then the SM on duty shall hand over the pilot memo T/369(3b) (along with the other authority if necessary) to the on duty TPM. The TPM on duty shall hand over the authority to the Loco pilot of the train and display proceed hand signal at the foot of the starter vide SR. [Refer SR 3.70.01].

In case the advanced starter signal has become defective, such signal shall be passed on the written authority on the form T/369(3b). The TPM shall hand over the pilot memo in form T/369(3b) to the loco pilot after the train stopped. [Refer SR 3.70.02]

9.7 SHUNTING:

Caution aspect of starter signals for shunting up to Advance Starter.

For back shunting individual shunt signal No.3 and 4 are provided at North and South side of the yard respectively for shunting back to the station yard in desired direction. For taking OFF Shunt signals please refer Para no. 3.4.2 of of APPENDIX-B.

10.0 HOT AXLE SIDING:

The Hot axle siding at KBM end of the yard with one side entry is taking off from Common Loop (Line No.1). The entrance point and corresponding derailing switches are coupled and operated by arc lever at site. The entrance point is fitted with hand plunger locks. These hand plunger locks are unlocked by Hot axle siding key Q1 released by operating Sdg. Control No.31 on VDU at SM's office. Reception signals (i.e. 2A. C2A. in DN direction and 1C. C1C. in UP direction) and shunt signal Nos.SH3B, SH4A and signal No.8 are electrically interlocked in such a way that these signals cannot be taken 'OFF' if the Hot axle siding key is transmitted at site or taken 'OUT' from the RKT provided at Hot axle siding location at site. The take off points from common loop line to goods siding are detected by Electrical point detector (EPD) for correct setting of the hand points.

11.0 VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN INTO STATION YARD:

In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard shall be kept clear of any obstruction for the passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the SS/SM on duty personally through VDU indications and/or physical verification of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the point's etc.

12.0 CRANK HANDLING/EMERGENCY OPERATION OF POINTS:

Crank handle operation is interlocked with the Signalling and interlocking system at this station. Key for Crank handles are normally locked inside the RKT instrument inside Location boxes in the yard and can be taken out only when all the signals leading are in the 'normal' position and the route is not locked for whatever reasons. Crank handle can be transmitted or released by following procedure as laid down in Para no.3.5 of Appendix-'B'. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

13.0 OBSERVATION OF TRACK CIRCUIT AFTER STABLING OF TRAINS ON RUNNING LINES:

When a train is stabled on a running line for a duration exceeding ten hours, the use of the said running line for passing the trains 'IN' 'THROUGH' or 'OUT' at the station shall

be done with a lot of care and diligence. Station Master on duty shall meticulously observe the proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If the Station Master on duty is not satisfied with the proper functioning of the track circuits on which the train was earlier stabled, the signals leading on the line shall be suspended and the S & T maintenance staff be informed to attend.

14.0 LOCKING OF RELAY ROOM:

Double locking arrangement is provided in the relay room with one key within the custody of on duty SM & other one with the maintainer of the S&T department. JPO issued by PCOM and CSTE/ECOR vide No.JPO/02/2012 Dt.29.08.2012 should be followed.

15.0 MAINTENANCE OF S & T INSTALLATION AND ADHERENCE TO MAINTENANCE SCHEDULES:

Regular maintenance of the S&T installations, adherence to schedules of maintenance testing of points, track circuits, level crossing gates, associated interlocking apparatus cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.

The tests, checks and replacements etc., shall confirm to the schedules of maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject.

16.0 PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF AN INTERLOCKING GEAR:

In case of failure of any interlocking gear at the station, the failure report should be communicated by the Station Master to the sectional Maintainer, the signal inspector of the section and others through a memo as per GR and SR 3.51.04 and 3.68.04 and document all such transactions.

17.0 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

Before declaring a point as defective, the setting of the point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the buttons.

18.0 RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

After receipt of the failure information, the sectional Maintainer shall attend to the failure after giving a 'Disconnection Memo'. After rectification of the fault, the Sectional Maintainer shall give 'Reconnection Memo' detailing the rectification. Thereafter the

Station Master on duty shall personally check this defective apparatus. After satisfying him self that the gear is in good and proper working order, he shall resume the normal working of the said defective apparatus in terms of SR.3.68.04 (C) and (D).

19.0 PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:

Whenever any normal maintenance or special works for major renewals etc., are involved, the Signal and Telecom department should preplan these works. Field staff and the Inspector of the section should give to the Station master in writing 'Advance Intimation' about this work in terms of G and SR.15.08.01.

20.0 EMERGENCIES:

Notwithstanding, anything contained in the aforesaid para as when equipment is found defective and unsafe for passage of trains, the Signal and Telecom staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of the defect or damage to the interlocking installation to the Station master and take the Station Master's acknowledgement. After this, the usual practice of exchange of disconnection memo and reconnection memo can follow. The Station Master must act promptly on such messages and take adequate precaution treating the S&T installation as defective and pass trains over the affected interlocking equipment's according to extant instructions as contained in GR and SR.3.77.

21.0 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNAL POINTS AND USE OF EMERGENCY CRANK HANDLE:

- 21.1** Whenever a Signal or a Point become defective any movements over the Points on the running lines should be made after clamping and padlocking both the facing and trailing Points by Station Master on duty personally for all trains at the Station.
- 21.2** In case of failure of Signal or a Point and in case the Point can not be operated from the Panel, the emergency Crank Handle which is Interlocked with the system has to be extracted and the following procedure has to be observed.
- 21.3** One common emergency Crank Handle is provided for all the Motor operated Points. This is mechanically riveted to the Key of HKT. This Key along with Crank Handle can be released from the HKT by pressing the Common HKT Push Button after cutting the seal between HKT and the Crank Handle. The Station Master on duty in case of Point Motor failure will take out the Crank Handle set the Point manually by inserting Crank Handle on the Motor.
- 21.4** When the Crank Handle is removed from HKT for operation of the defective Motor Operated Points, the responsibility for its safe custody re-sets with the ASM/SM on duty till it is replaced back in HKT and sealed by Signal Maintainer.

- 21.5** The case of failure of Motor Operated Points should be promptly reported to the concerned Signal Inspector/ESM for immediate rectification.
- 21.6** Whenever an emergency Crank Handle is required to be used by a Signal Official for maintenance of work attending to failure, the Signal Official will give a disconnection memo to the Station Master on duty and after making necessary entries in the emergency Crank Handle register, the Station Master on duty will obtain acknowledgement of the Signal Official in the emergency Crank Handle Register and then handover to him the emergency Crank Handle for the Points concerned. All the Points will be treated as defective till the Emergency Crank Handle is returned back to Station Master on duty.
- 21.7** Before parting with the Emergency Crank Handle either for attending failure or for Maintenance work by Signal Maintenance Officials, the Station Master on duty will ensure that the reception and departure Signals are put back to on position. The Points of all the lines should be treated as Non-interlocked and the Station Master on duty is responsible for introduction of Non-interlocked working and the trains will be piloted IN and OUT duly clamping and Padlocking the Points, both in facing and trailing directions over which the train is to pass, as per GR 3.69 and 3.70 with relevant SR's. The Station Master on duty will be personally responsible for setting and locking of Points, for reception and dispatch of all trains.
- 21.7.1** The Emergency Crank Handle Register is to be maintained in the following proforma by the Station Master on duty wherein the particulars of usage of the Emergency Crank Handle must be recorded:
- 1 Date:
 - 2 Point Number which failed or required to be tested
 - 3 Time failure
 - 4 Disconnection memo number received from S&T Staff:
 - 5 Signature of SM/Signal Official to whom the Emergency Crank Handle is handed over
 - 6 Time Emergency Crank Handle is sent out
 - 7 Individual Point numbers, and Line number nominated for admission of dispatch for which Points are set, Clamped and Padlocked
 - 8 Train number to be admitted or dispatched
 - 9 Signature of the Station Master on duty to ensure correct setting, Clamping and Padlocking of the Points
 - 10 Date and Time fault rectified
 - 11 Time of Emergency Crank Handle received back by SM on duty
 - 12 Signature and Designation of the Signal Official who rectified the fault

IMPORTANT NOTE

When performing shunting operations in the sidings it must be clearly noted that the siding Points are interlocked with the system in the NORMAL position of the Points and

in REVERSED position they are not interlocked. The Official responsible for shunting operation must clamp the Points at the both ends before permitting any movement.

22.0 INTERLOCKING OF SIGNALS WITH BLOCK INSTRUMENTS

22.1 INTERLOCKING WITH HOME SIGNALS

All the UP and DOWN HOME Signals are Electrically interlocked with the respective DLBI so that before the handle of the DLBI Instrument can be turned from TRAIN COMING FROM position to LINE CLOSED position of UP or DOWN direction as the case may be must be in their NORMAL position.

22.2 The DN IB home Signal is Electrically interlocked with I.B. Axle counter section between KBM-NWP & DLBI of section KBM-NWP so that this Signal can not be taken OFF until the Handle of the concerned Block Instrument is in 'LINE CLEAR' position.

22.3 The UP IB home signal is controlled and interlocked with I.B. Axle counter section between KBM-TIU & Down I.B. Home signal is interlocked with DLBI of section KBM-TIU so that this Signal can not be taken OFF until the Handle of the concerned Block Instrument is in 'LINE CLEAR' position.

22.4 SUSPENSION OF LAST STOP SIGNALS & I.B. HOME SIGNAL:

When the Double line block instrument for section KOTABOMMALI-NAUPADA is suspended with its handle in any position for whatever reason the concerned Last Stop Signals controlled by the DLBI must be treated as suspended and trains shall be Piloted Out.

When the Double line block instrument for section KBM-TIU is suspended with its handle in any position for whatever reason the concerned I.B. Home Signals controlled by the DLBI must be treated as suspended and trains shall be Piloted Out.

23 NORMALISATION OF THE BLOCK AXLE COUNTER AND OF BLOCK WORKING BY RESETTING FEATURE

23.1 High availability single section Digital Axle Counters are provided on both UP and Down line Block Sections between KBM-TIU and KBM-NWP

23.2 The occupation and clearance of the axle counter section are indicated on the VDU by 'RED' and 'GREEN' light

23.3 If any Block proving Axle Counter [LVCD] section fails, the IB Home Signal at the rear station cannot be taken 'OFF' and Block instrument at Advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last Vehicle Checking Device is to be resorted to either Section.

- 23.4** No train shall be allowed on signal to leave a station in any particular direction unless: -
Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF. [Refer Para No:5 of appendix 'B' for procedure of resetting of LVCD Axle counter]

24.0 TELECOMMUNICATIONS

As per para 5 of general portion of SWR.

25.0 POWER FAILURE INDICATION / BUZZER AND POWER ACKNOWLEDGE-MENT

(A) POWER SUPPLY ARRANGEMENT FOR THE SIGNALLING INSTALLATION

Power signalling and interlocking installations and the ancillary field units are fed from the following sources of power supply.

- i) Normally supply from UP AT/DN AT connected to OHE Traction distribution [230 V 50 Hz].
- ii) Stand by supply from Andhra Pradesh State Electricity Board (APSEB) [Single phase 230V-50Hz].
- iii) Normal power supply [Single phase 230V-50Hz] to the Signalling & Interlocking installation at the station is drawn from the traction power sources. Whenever traction power supply fails SS/SM on duty shall operate the rotary change over switch provided in the CLS power panel at SM's room connecting the power supply from the healthy sources to the installation.

The SS/SM on duty however maintain the record of power failures either of the traction supply or local supply and he must promptly report the failure of any one or both the power sources immediately through the section controller and to the concerned Electrical Staff and S&T maintenance staff.

- i) Auto change over panel is provided in the SM's office with the three power supplies viz UP AT, DN AT and local power supply for changing the switch to the required supply position. The availability of the supply is indicated by luminous indicator above the circuit breaker for each supply.
- ii) Normally the switch will be kept towards UP AT or DN AT position. Whenever the power block is to be given on the line, on duty SS/SM must ascertain the power is available on the other AT and change over the switch to desired position e.g if power block is to be given on the UP line, DN AT must be

available and vice versa.

- iii) In case of failure of one of the AT supply without any power block, on duty SS/SM has to check whether the Miniature Circuit Breaker has tripped. (Three Miniature Circuit Breakers are provided in the changeover switch board, one for each supply and their normal position is UP and when tripped, it goes to DN). In case of failure of both AT supplies without any power block, the local supplies shall be utilized by operating the change over switch. If the Miniature Circuit Breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and a message shall be given to the AEEE/GEN and CTFO/GEN for prompt rectification.
- iv) Whenever there is a failure of power supply in one AT, the on duty SS/SM shall take prompt action to inform to all concerned for the rectification, The on duty SS/SM himself, during his daily checks, shall test the availability of power supplies on both AT's and make entry in station dairy duly initiating action for rectification of failure, if any.

(B) WORKING OF INTEGRATED POWER SUPPLY TIPS], INDICATIONS & ACTION TO BE TAKEN BY SS/SM ON DUTY

- i) Power supply to the signalling installation is fed through IPS installed in the S&T power supply room. The IPS is normally fed through UP AT/DN AT traction power selected by SS/SM on duty. Standby power supply is through APSEB local supply. Auto change over panel is provided in the SM's room for selection of output of either traction power supply or local power supply. The available traction/local supply is fed to the IPS through auto-change over switch provided in SM's room.
- ii) The IPS system is connected with Battery as a back-up power source for safe working during transition of power and in case NO 230v AC supply is available due to any reason.
- iii) In the event of failure of all the sources of 230V, 50 Hz AC supply, the signalling system shall be fed by power generated by back-up battery Bank connected to IPS for a limited period of 0 to 10 hours. The health of battery bank is monitored through one IPS monitoring Panel provided in the SM's room which shall be display the voltage 110V DC [Battery bank provided as back-up source of power supply]. Depending upon the health of the Battery Bank and the system, the following indication/alarm will appear on the Remote Monitoring Panel, their implications and action to be taken by SS/SM on duty is tabulated below.

SN	Instruc- tion	Health Battery Bank/Equipment.	Visual Indication	Audio Indication	Action to be taken by SS/Dy. SS on duty
A	-	50% DOD	Red	Alarm	Alarm shall be acknowledged by SM on duty.
B	-	60% DOD	Red	Alarm	-do-
C	System shutdown	70% DOD	Red	Alarm	Signal feed cut off and all DC-DC converters to Work. Audio alarm will continue till power Supply is restored.
D	Call S&T staff.	Equipment fault.	Red,	Alarm	Failure of any module will give the alarm in ASM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

On duty SS/SM in each shift shall check and record the readings, indications, etc in the station dairy duly initiating rectification of failures of IPS system, if any.

In the event of failure of remote monitoring ASM console due to any reason or when both traction power and local power failed, the SS/SM on duty shall inform concerned Electrical staff immediately. In case 'Call S&T staff ' or 'system shut down' indication appear on the remote monitoring panel of IPS and/or malfunctioning of the remote monitoring panel SS/SM on duty shall inform the same to concerned S&T staff immediately.

NOTE: In case of failure of all AC supply sources IPS Battery Bank can provide power supply, before system shut down indication of IPS.

NORMAL POWER SUPPLY TO IBS GOOMTY AT KM 722.120:

Normal power supply to the Signaling and Interlocking installation at the IBS goomty is drawn from the traction power sources (230V-50 HZ, UP AT and DN AT) with auto-change over arrangement in IB Goomty through auto change over panel. When ever any of the traction power supplies fails, the auto-change over unit will automatically connected to the other available AT supply. IPS is provided in the IBS goomty.

In case of failure of both AT supplies SS/SM should immediately inform to the concerned section controller, Electrical staff and S&T maintenance staff.

26.0 WORKING OF AUTOMATIC FIRE DETECTION AND ALARM SYSTEM:

- In case of any alarm-Zone number on the LCD display can be seen.
- Note down the zone No. and panel display name, by referring display chart.
- Then open the key pad and press the "OFF" button and enter the code 1111 (1 digit four times).
- Automatically it will get reset.
- Once you find the zone number rush to that particular area where the detector gives alarm.
- The movement the detection detects any smoke particles, the RED LED will blink along with the alarm.
- Once you reach the area where the detector is giving the alarm, check whether the alarm is due to the fire or for any other reason.
- To alert the people in case of emergency press "*" sign of the n̄e which is present inside the key pad together for few seconds. This will enable you to hear the panel alarm.
- To reset the panel press "OFF" button and enter the code 1111 (1 digit four times).
- If the power fails on this will enable us to see the red indicator on the panel.
- In case of failure in power and if the battery is fully charged, the panel can function effectively as long as the charge in the battery is present.

AUTO DIALLING:

If you hear alarm from the panel, this system will dial the Railway Auto telephone/mobile number you fed. The pre recorded messages will be heard on the phone. If you want to make two way communications, press "6" on your mobile. You can have this communication for 50 seconds. If you want to talk more, press again "6" before completion of 50 seconds for another 50 seconds or you can acknowledge the receipt of call by pressing "2" on SSE/Signal' mobile, in case number "2" is not pressed the system will dial again the same telephone number as per the programmed dial attempt and still if acknowledgement not come from 1st number then panel will dial 2nd number till the time acknowledgement comes it will keep on dialing.

APPENDIX 'C' TO STATION WORKING RULES OF KOTABOMMALI STATION

ANTI COLLISION DEVICE [[RAKSHA KAVACH]

---NIL----

APPENDIX-‘D’ TO STATION WORKING RULES OF KOTABOMMALI STATION**DUTIES TO BE PERFORMED BY THE STAFF:****1.0 STATION MASTER (IN CHARGE):**

- i) He is responsible for trains passing during his shift.
- ii) He is responsible for the general and satisfactory working of the station and for the efficient discharge of duties by staff working under him.
- iii) He shall keep all Rule books, Registers, Files and documents neat and up to date.
- iv) He shall ensure that all equipment, apparatus, and instruments including signaling and interlocking gears and fittings are kept clean and oiled by S&T officials.
- v) His special attention is drawn to Chapter-II of G&SR and GR 5.01 to 5.08 with relevant SRs and O.M. Chapter-2. He shall follow the instructions laid down in SR.3.68.01 © and (d) and SR 14.07.01 and B.W.M.2.09 (e).
- vi) He shall promptly attend to accidents and report them.
- vii) He shall supervise the work of safe working staff and conduct night inspections and report lapses of staff working under him.

2.0 STATION MASTER (Block/Log) & (VDU):

- i) He is responsible for trains passing during his shift.
- ii) He shall promptly bring to the notice of SM incharge all irregularities and accidents in course of his shift duties.
- iii) During the absence of SM I/C, the duties of the Station Master will devolve on him.
- iv) He shall follow SR 3.68.01(c) and (d) SR 14.07.1 and OM Chapter-2 (2.02) (d) & (e).
- v) His special attention is drawn to Chapter-2 of G&SR 1976 and GR 5.01 to 5.08 with relevant SRs.
- vi) As an assistant to SM I/C, he shall carry out the instructions given from time to time.

3.0 TRAFFIC POINTS MAN :

- i. He shall work under the orders SM on duty.
- ii. He shall couple and uncouple vehicles under the supervision of SM.
- iii. He shall watch and guard the packages and other Railway property lying in the Station premises.
- iv. He shall report any irregularities coming to his notice.
- v. He shall do loading and unloading of parcels, smalls and Guard's boxes. He shall do piloting IN and OUT.

- vi. He shall deliver any official message to the proper person/office. He shall carry out any other duties entrusted to him by the SM on duty.
- vii. He shall follow OM Chapter-2.

4.0 TRAFFIC GATE MAN:

- i. He is responsible to operate L.C. Gate at his end.
- ii. He shall attend to the call of SM on duty and do the work entrusted by the SM on duty connected to gate operation.
- iii. He shall promptly report any abnormality to SM on duty.
- iv. He shall also protect the gate when required as given in gate working rules.
- v. He shall do all necessary functions related to gate working as stated in gate working rules.
- vi. He shall follow OM Chapter-2(g).

NB: - All staff should be in uniform while on duty and follow their rosters issued by DPO/WAT from time to time.

APPENDIX 'E' TO STATION WORKING RULES OF KOTABOMMALI STATION**ESSENTIAL EQUIPMENT**

A list of essential equipment's is given below which shall be maintained in good Working order.

Sl. No	Description	Station
1.	Detonators	20
2.	LED based Tri colour flashing torch	3(1 Spare)
3.	Hand Signal Flags	3(1 Spare)
4.	Safety chains with Pad locks	6
5.	Clamps with Padlocks	8
6.	Skids	5
7.	Wedges	4
8.	Fire & Sand buckets	6
9.	Fire Extinguishers	2
10.	Line block collars	6
11	Motor trolley on line borad	2
12	Block suspension board	2

APPENDIX 'F'**1. RULES FOR WORKING INTERMEDIATE BLOCK SIGNALLING BETWEEN KBM-TIU & KBM-NWP.**

- (i) The block section between KBM-TIU has been split into two block sections by providing Intermediate Block Stop signals at KM 721/23-25[controlled by KBM station] for UP line and, on DN line at KM 722/20-22 [controlled by TIU North cabin]. Intermediate Block stop signals are controlled through double line lock and block instruments at the respective receiving ends
 - a] The Block working for section between KBM-TIU on UP and Down lines is controlled by the provision of Double line Lock and Block Instruments (SGE type) and are provided at KBM station and at TIU. The UP Advanced starter signal No. S 13 of KBM and DN Advanced Starter signal No. 15 of TIU are controlled by the clearance of IB section through respective IB section monitoring axle counters and the IB Home signals are controlled in turn through the line clear position of respective Double line lock and block instruments at the receiving stations.
- (ii) The block section between KBM-NWP has been split into two block sections by providing Intermediate block stop signals at km: 707.810 (controlled by KBM station) for DN line and on UP line at km: 707.440 (controlled by NWP station). Intermediate block stop signals are controlled through Double line lock and block instruments at the respective receiving ends.
 - a] The block working for section between KBM-NWP on UP and DN lines is controlled by the provision of DLBI (SGE type) and are provided at KBM and at NWP stations. The DN advanced starter signal no. 12 of KBM and UP advanced starter signal no. 13 of NWP to 15 of NWP are controlled by the clearance of IB section through respective IB section monitoring axle counters and the IB home signals are controlled in turn through the line clear position of respective DLBIs at the receiving stations.
- iii) Trains between intermediate block signal to respective Home signal of Station in advance in both the sides are worked by means of SGE type lock block instrument vide 4.09, 5.07, 14.01 to 14.14 of the G & SR and chapter V of BWM.
- iv) Last stop signal to the intermediate block stop signal in both the sides are controlled by Electronic Axle counter and are worked under absolute block system in terms of G & SR 14.01, 14.13. Indications on VDU provided at KBM station.

2. INDICATIONS PROVIDED ON VDU FOR I.B. SECTION.

The indications of signals, IB and Block sections in both up and down directions are

shown in the following table:

2.1 SECTION KBM-TIU:

SN	Signal Aspect [S-13]	IB Section Indication [13 AXT]	IB Home Aspect [S-15]	Block Section Indication	Remarks.
1	Green	While Illuminated	-	-	Advance starter No:13 is taken off to dispatch a train up to IB Home.
2	Red	Red	-	-	IB Section is occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of TIU.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

2.2 SECTION TIU -KBM

SN	Signal Aspect [S-25]	IB Section Indication [12 AXT]	IB Home Aspect [S-14]	Block Section Indication	Remarks.
1	Green.	While Illuminated.	-	-	Advance starter No: 25 is taken off to dispatch a train up to IB Home.
2	Red.	Red.	-	-	IB section occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of KBM.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

2.3 SECTION KBM-NWP:

SN	Signal Aspect [S-12]	IB Section Indication [12 AXT]	IB Home Aspect [S-14]	Block Section Indication	Remarks.
1	Green	While Illuminated	-	-	Advance starter No:12 is taken off to dispatch a train up to IB Home.
2	Red	Red	-	-	IB Section is occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of NWP.
4	-	-	Red	Red	Block section is

					occupied or IB Home passed at danger.
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2.4 SECTION NWP –KBM

SN	Signal Aspect [S-15]	IB Section Indication [25 AXT]	IB Home Aspect [S-29]	Block Section Indication	Remarks.
1	Green.	While Illuminated.	-	-	Advance starter No: 25 is taken off to dispatch a train up to IB Home.
2	Red.	Red.	-	-	IB section occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of KBM.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

2.5 Buzzer/Bell

One audio buzzer is provided in the SM room at KBM to detect Train Entering section for out going trains. After train passes the intermediate block stop signal, the buzzer/bell will start ringing KBM station. On hearing the buzzer/bell the SM must acknowledge the same by clicking on train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the cabin master of the station in advance who shall turn commutator of the Double Line Lock and Block Instrument from the Line Clear position to 'Train On Line position' and acknowledge train entering section following the procedures laid down vide Block Working Manual

Train Run-Away buzzer:

a) When a train passes IB signal at ON position SM/KBM of dispatching station receives the train run away buzzer and displays flashing indication on the VDU.

The SM/KBM by acknowledging the train run away button, the buzzer stops and the indication remains steady and after train passes IB signal and beyond 400mts the indication also disappears.

b) In the event of failure of I.B. track circuit [i.e. track clear indication not available] which shall not permit taking 'OFF' last stop signal, it should be ensured by SM on duty at the dispatching station through exchange of private number with the SM of the receiving station that the last train that passed the last stop signal of

his station has fully arrived at receiving station, before allowing the next train to enter in to the section, such permission to the next train shall be granted and the section KBM-TIU & KBM-NWP shall be shall be treated as single section

- i] By issuing the pilot memo when normalization of the system is not possible. In such case, line clear has to be taken on lock and block instrument. Trains are to be dispatched from the station only after obtaining line clear till such time track circuit are last stop signal is restored to normal.
- c) **NORMALIZATION OF THE TRACK CIRCUIT AND OF BLOCK WORKING BY RESETTING FEATURE:**
 - i] No train should be allowed to leave station in any particular direction unless I.B. track clear indication is available for the relevant track circuited portion of I.B. section and last stop signal can not be taken off and provision stipulated in Para g.III to be followed.
 - ii] A Resetting arrangement for the resumption of I.B. Axle counter under failure condition through co-operative features of both the SM on duty at either end station of the Block section is provided, which should only be resorted to after the train that was lastly sent arrives fully at the receiving station and is certified in this respect by the SM at the receiving station through exchange of private number
 - iii] For monitoring of I.B. section working & re-setting of I.B. Axle counters, Track Indications and Re-setting arrangements are provided with button icons on the VDU at KBM station and operating panels [re-setting panels] provided at TIU/KBM stations. Counters are also provided for the purpose of recording the re-settings for the I.B. Axle Counters in case of failures in IB section. The Re-setting button and permission granting button on the Resetting Panel shall at TIU/NWP should normally be kept sealed by the S&T staff and SM will inform the Maintainer for resealing the same whenever the seal has been broken
 - iv] The SM on duty at KBM station shall maintain a separate register for use of resetting at IB Axle Counters wherein every operation of the resetting button shall be recorded giving details of date of use, train, number, time, number registered in the counter on VDU and reasons for resetting and initial each such entry
 - v] The procedure for resetting of the I.B. Axle counters in terms of clause g.II above shall be as follows

SECTION KBM-TIU ON UP LINE

	DISPATCHING STATION [KBM]		RECEIVING STATION [TIU]
1	SM on duty shall call the attention	1	SM on duty at TIU after verifying that

	of SM of TIU station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.		the said dispatched train arrives fully, shall exchange private number with SM on duty at KBM and gives permission to re-set by pressing the 'Permission Granting' button provided on the re-set panel.
2	On getting re-set permission on VDU SM on duty shall acknowledge by clicking on 'Permission received from TIU' acknowledgement button icon. For each such operation the reset counter provided in VDU shall increase by one digit. SM on duty shall make an entry of changed Reset counter number in re-setting register.	2	SM on duty at TIU shall continue to press the 'Permission Granting' button.
3	SM on duty then shall re-set the I.B. Axle counter by clicking on 'DN Re-set Key' and select 'Key In'. After which he shall click on the 'Re-set button' icon, which will reset the Axle Counter.	3	SM TIU shall also press 'Re-set' button provided on re-set panel at TIU station simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on VDU.	4	The SM on duty at TIU shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SM of KBM station giving reasons for the re-setting operation.

SECTION TIU-KBM ON DN INE:

	DISPATCHING STATION [TIU]		RECEIVING STATION [KBM]
1	SM on duty shall call the attention of SM of KBM station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SM on duty at KBM after verifying that the said dispatched train arrives fully, shall exchange private number with SM on duty at TIU and gives permission to re-set by clicking the 'Permission Grant' push button [To TIU] provided on the VDU.
2	On getting re-set permission on re-set Panel SM on duty shall acknowledge by pressing 'Permission received from KBM' acknowledgement button. For each such operation the reset counter provided in Operating	2	SM on duty at KBM shall continue to click the 'Permission Granting' button'.

	Panel shall increase by one digit. SM on duty shall make an entry of changed Reset counter number in re-setting register.		
3	SM on duty then shall re-set the I.B. Axle counter by turning 'DN Re-set Key' and press the 'Re-set button' on the re-set panel, which will reset the Axle Counter.	3	SM KBM shall also click 'Re-set' button provided on VDU at KBM station simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on re-set panel.	4	The /SM on duty at KBM shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/ Dy. SS of TIU station giving reasons for the re-setting operation.

SECTION KBM-NWP ON DN LINE:

	DISPATCHING STATION [KBM]		RECEIVING STATION [NWP]
1	SS/SM on duty shall call the attention of SS/Dy.SS of NWP station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/SM on duty at NWP after verifying that the said dispatched train arrives fully, shall exchange private number with Dy.SS/SM on duty at KBM and gives permission to re-set by pressing the 'Permission Granting' button provided on the re-set panel.
2	On getting re-set permission on VDU SS/SM on duty shall acknowledge by clicking on 'Permission received from NWP' acknowledgement button icon. For each such operation the reset counter provided in VDU shall increase by one digit. SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.	2	SS/SM on duty at NWP shall continue to press the 'Permission Granting' button.
3	SS/SM on duty then shall re-set the I.B. Axle counter by clicking on 'DN Re-set Key' and select 'Key In'. After which he shall click on the 'Re-set button' icon, which will reset the Axle Counter.	3	SS/SM NWP shall also press 'Re-set' button provided on re-set panel at NWP station simultaneously at the same time for re-setting of I.B. Axle counter.

4	On completion of re-setting process I.B. section clear indication will appear on VDU.	4	The SS/SM on duty at NWP shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/SM of KBM station giving reasons for the re-setting operation.
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SECTION NWP-KBM ON UP LINE:

	DISPATCHING STATION [NWP]		RECEIVING STATION [KBM]
1	SS/ SM on duty shall call the attention of SS/SM of KBM station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/SM on duty at KBM after verifying that the said dispatched train arrives fully, shall exchange private number with SS/SM on duty at NWP and gives permission to re-set by clicking the 'Permission Grant' push button [To NWP] provided on the VDU.
2	On getting re-set permission on re-set Panel SS/SM on duty shall acknowledge by pressing 'Permission received from KBM' acknowledgement button. For each such operation the reset counter provided in Operating Panel shall increase by one digit. SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.	2	SS/SM on duty at KBM shall continue to click the 'Permission Granting' button'.
3	SS/SM on duty then shall re-set the I.B. Axle counter by turning 'UP Re-set Key' and press the 'Re-set button' on the re-set panel, which will reset the Axle Counter.	3	SS/SM KBM shall also click 'Re-set' button provided on VDU at KBM station simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on re-set panel.	4	The SS/SM on duty at KBM shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/SM of NWP station giving reasons for the re-setting operation.

2.6 DISPATCH OF TRAINS

Dispatch of trains is governed by the provision of G & SR 3.42, 3.70 and Block working manual rules

i) From KBM towards TIU/NWP

Train will be dispatched in accordance with the General Rules 3.42, 3.70., 3.75, 4.35 and 8.01 and subsidiary Rules thereto

ii) KBM TO IBS ON UP AND DOWN LINES

The SM on duty shall ensure that the portion of line between Advanced Starter and 400 Mtrs beyond IBS at their respective ends is clear of obstruction and indication to this effect is available in the VDU and shall also ensure any non-isolated shunting at their respective ends suspended and shunting authority issued if any is withdrawn and kept in his custody

Advise the Station Master at the station in advance, of the train No. and description of such intended train to be dispatched and shall take his assent supported by Private Number and shall then set and lock the route and take off the Starter and Advanced Starter

iii) IBS SIGNAL TO THE STATION IN ADVANCE

The SM on duty shall obtain line clear over lock & Block instruments from the station in advance to dispatch a train past the IBS signal at the respective ends and shall take off the IBS signal by means of taking of signal No.15 & 14 of KBM respectively.

After the train passes the intermediate Block Stop signal of KBM a buzzer will ring in the VDU. On hearing the buzzer/bell the SM must acknowledge the same by clicking train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the cabin master of the station in advance who in turn will turn commutator of the Double line Lock and Block Instrument from the line clear position to Train On Line position and acknowledge train entering section. After dispatch of a train from KBM into the Block section between KBM and intermediate Block Post in case when the intermediate stop signal is not taken 'off' but the buzzer has started ringing, this may be either due to the train passing intermediate Block stop signal at 'ON' position or due to failure of the track circuit in advance of that intermediate Block Signal and shall exchange Private Number with the station Master in advance indicating the occurrence and the number of the train. On getting the information from the station Master supported by Private Number, the SM on duty at KBM in turn will inform SCR on duty about this.

The procedure must be rigidly followed irrespective of the fact whether line clear for train has been received from station in advance or not and this must be recorded in the Train Register and SM's diary book of both the Stations/Cabins.

(i) Dispatch of trains towards TIU/NWP in case of failure of the UP/Down Advanced Starter signal at KBM Station due to failure of "Axle Counter" device or

otherwise. If the failure of the Advanced starter of KBM due to the failure of axle counting device or the indication lamp (repeated by indication lamp) showing 'Red' light either due to power failure or due to any other causes, the re-setting "Push Button" provided with Veeder counter at the SM's office for resorting the normal function of the signal, should be operated accordingly to the following instruction whenever the Advance starter signal of KBM is found defective by the Station Master and the following procedure shall be adopted

On receipt of this information, the SM on duty after ensuring that all trains which had left his Block Station had arrived complete and intact at **TIU/NWP** station (by exchange Private Number with the SM **KBM** confirming this), shall press the resetting button of the axle counter. When the resetting is successful, it shall be indicated by a green light in the resetting panel provided in the SM's office at **KBM**. The use of this resetting button is registered on the veeder Counter and the SM should record this giving the details of the occasion with timings in the Veeder Counter register kept in the station.

If it is not possible to restore normal working of the counter by use of the resetting button, the ESM-in-charge of the section shall be served with a written memo to attend the defective signal and rectify the same. The ESM-in-charge of the section on being served with a memo by the SM, shall attend the failure and rectify the fault. The ESM after ensuring that all S&T gears relating to defective signal have been attended to and are in working order except the axle counter which needs re-setting shall establish communication with SM concerned and ask him to reset the axle counter by pressing the reset push button. Where after the SM on duty, after ensuring that all the trains which had left his Block Station had arrived complete and intact at TIU /NWP (by exchanging of P.N with **SM /TIU/NWP** confirming this) shall press the resetting button provided in the VDU at **KBM** station and resume the normal working.

- iv) DESPATCH OF TRAINS IN CASE OF FAILURE OF INTERMEDIATE BLOCK STOP SIGNAL
 - [a] When a driver finds an intermediate Block Stop signal at 'ON' Position he shall stop his train in rear of the signal and advise the guard of the fact by sounding long continuous whistle and shall then contact the Station Master of the Block Station in rear over the signal post telephone provided for the purpose vide SR.3.75.01[i].
 - [b] If the SM of KBM station, on being contacted over Telephone by the loco pilot, finds that the signal is defective, he shall, after obtaining "Line Clear" for the train from the station in advance, authorized the loco pilot on the telephone to pass intermediate Block Signal at "ON" and enter the block section ahead. He shall give loco pilot the Private Number and identification Number under which he has received "Line Clear" for the train from the station in advance

The loco pilot shall then sound one short, one long and one short whistle and, on receipt of Guard's signal shall proceed ahead duly exchanging signals with him.

The station Master on being contacted by the loco pilot on signal post telephone if he is unable to obtain "Line Clear" for the train due to total interruption of communications, shall call for the Guard's through the loco pilot and on being contacted by guard, he shall advise the guard of the circumstances and give a Private Number for the train to proceed up to the next block station. The guard shall prepare a memo in duplicate authorizing the loco pilot to proceed with the Private Number received from the Station Master. In such case the speed of the train shall be restricted as prescribed in GR 3.75(3).

- c] In such case the LP shall pass the IB signal at "ON" and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding 15 Kilometers an hour if he has a good view of the line ahead, otherwise at a speed not exceeding 8 kilometers an hour and report the failure to the Station Master at the block station ahead

While complying with the instructions contained in GR 3.75(3), when the loco pilot has to pass IB signal at "ON" after waiting for 5 minute at the signal, he shall proceed cautiously preparing to stop short of any obstruction at a speed not exceeding 15KMPH when view ahead is clear and 8 KMPH when view ahead is not clear due to curve, obstruction, rain, fog or any other cause until he reaches the foot of the next stop signal and even the signal is "OFF" the loco pilot shall continue to look out for possible obstruction short of the same and will act upon its indication only after he has reached it. Before starting, the loco pilot shall sound one long whistle which may be repeated as necessary and shall then start his train on receipt of Guard's signal. Thereafter he shall exchange signals with the Guard.

On reaching the block station ahead the loco pilot shall report the failure of the signal to the Station Master. If, the telephone is provided at the intermediate Block Stop signal Post is out of order the loco pilot will pass the IB signal as per GR 3.75(3) & SR 3.75.02, and on reaching the block station ahead, the loco pilot shall report the failure of the signal to the SM, Following train shall not be allowed to leave **KBM** unless the complete arrival of the receiving train is certified by the SM on duty at **TIU/NWP** under exchange of Private Numbers.

The station Master of the block station working the intermediate block stop signal on becoming aware that such a signal is defective shall, before dispatching the train, treat the entire section up to the block station immediately ahead of the intermediate block post as one block section and issue a written authority to the loco pilot to pass the defective intermediate Block Stop Signal at "ON" without stopping at the signal. In accordance with the procedure prescribed by special instruction.

A written authority as mentioned in GR 3.75(4) shall be in Form T/369[3b] in which the Private Number and identification Number obtained from the station in advance in support of the "Line Clear" shall be recorded. Display of "Proceed hand signal at the foot of defective Intermediate Block Stop Signal may be dispensed with.

- d) However, if the SM on the Block station immediately in rear of an intermediate Block Signal is aware that UP/DN intermediate Block Signal is defective shall before Dispatching a train shall verify that all trains which had left his Block Station had arrived complete and intact at **TIU/NWP** station (by exchanging Private Number with SM- **TIU/NWP**) shall press the resetting button of Axle counter equipment. Thereafter driver shall be handed over the authority of T-369[3b] to pass IBS Signal at “ON” position where in, the Private Number and indication number obtained for line clear, shall also be written. The use of this re-setting push button is registered on the veeder counter and SM should record this usage giving details of the occasion with timings in the veeder Counter/register and also train registers.

2.7 **INDICATION CUM RESETTING PROVISION IN THE VDU AT KBM:**

The VDU Provided for following light indications

- a) Two green indications for the track- circuited portion by Axle Counter, which remain normally lit to indicate that the track is clear. These lamps extinguish no sooner the train passes the last stop signal and their place two red indication are lit to indicate that the track is occupied
- b) Two red indications for the last stop signal replacement track circuit which remain lit so long this track- circuit is occupied or in under failure condition
- c) Two red indication ahead of the IBS Signal, which are lit if the train passes the side signal in “ON” Position. These indications continue to glow till such time the lock and block working is resumed through emergence re-setting feature.
- d) Two red indications just ahead of IBS Signal for the IBS signals replacement track circuit. These indications normally remain dark and are lit either during occupation by a train or during failure of this track circuit.
- e) Two red indications for the block section for receiving trains. These indications shall normally remain no indications and shall be lit only when the incoming train passes the IBS signal. It remains lit till such time train arrives fully and Block Instrument is normalized.
- f) **RE SETTING PROVISION IN THE VDU AT KBM STATION**

For resetting of I.B. Axle counter please refer Para No: 5.2 of Appendix ‘B’ of this SWR

- g) **SPECIAL INSTRUCTION IN CASE OF A TRAIN PASSING IBH AT ‘ON’ POSITION**
- i) In case train run away indication appears the SM receiving Station shall not turn

the block instrument handle to line clear position and SM at sending station shall not take any action to dispatch the third train unless the second train which passed the IB signal in the 'ON' position has actually arrived and its complete arrival is verified by the receiving station.

- ii) Every case of a train passing IB signal at 'ON' position without strictly following the provision of GR 3.75 should be treated as a breach of block rule by the driver and action to be taken accordingly.
- iii) When train run away indication appears at the Dispatching Station without any train in the section, the IBS system should be treated as failed and Signal Maintainer should be advised. All the subsequent trains shall be Piloted OUT after duly taking line clear treating entire section as one Block section as per GR 3.75(4).
- iv) when ever a train after having obtained line clear passes IBS (when not taken off) in "ON" position the train run away indication appears at the Dispatching cabin and train entering section indication appears at the receiving cabin, under such circumstances no further train shall be allowed in the section till the said train arrives completely at the receiving station i.e., station in advance, and its complete arrival received at the receiving station i.e. station in rear supported by Private Number treating the entire block section as single section.
- v) If any train passes IB Signal at 'ON' position when there is a train in the Section between IBS and the station ahead, the train run away indication will appear at both receiving and Dispatching station. Under such circumstances the SM in the receiving station shall not turn the Block instrument to Line Clear position and SM/Cabin Master at sending station shall not take action to dispatch the (3rd) train, unless the 2nd train which passes the IBS in the 'ON' position has actually arrived and its complete arrival is verified by the receiving station.
- vi) Permission button to be pressed for the run away train by break opening the seal only after verifying that the last vehicle of the run away train has arrived in tact and ensured by exchange of private number with the SM of the sending station. In case of failure of Axle Counter equipment at the sending station, permission button may also be pressed for normalizing the system only after verifying that there is no train in the section and after duly exchanging Private number with the SM of the sending station.
- vii) Whenever a train run away indication appears when there is a train in the section, no further train should be allowed in the section till resetting is done as per item No.30.3 above.
- viii) Before any re-setting operation is done, the Dispatching station should advise the receiving station giving details of the last train that has entered the section and

should ensure by exchanging of private number that the last train has arrived complete at receiving station

- . Every Case of re-setting shall be entered in a register in the following proforma

Date and time	Train No. Last entered the block section	Private No. of station ahead for Complete Arrival of the train Under Col.2	Veeder Counter No Before resetting operation completed	Train No. Entering Block section Immediately after the resetting operation	Remarks	Signature of SM
1	2	3	4	5	6	7

- ix) If resetting is not possible under item as mentioned above, the system should be treated as failed and train will work treating the entire section up to the Block Station immediately ahead of the IBS Post as one block section as per GR 3.75(4).
- x) Action to be taken when a train passes Intermediate Block Stop Signal at ‘ON’
- h) By SM/Cabin Master of Block Station in advance of the Intermediate Block Stop signal
- i) Shall not turn the Block Instrument commutator to “Line Closed” Position Unless the complete arrival of the train which passed IBS at “ON” position is ensured, without any exception even for such a train which leaves the rear station after obtaining line clear and passes IBS at “ON” position, since there is a chance of leaving a vehicle or vehicles in the Axle Counter area where the function of Axle Counter also fail when IBS is passed at “ON” position.
- ii) In case the bottom needle of the SGE type block instrument is in its ‘Line closed’ position action should be taken to turn the block instrument comutator to ‘TOL’ Position vide BWM 5.16(2)(iv) and must not turn to “Line closed” and then to “Line clear” position unless the train which had passed the “Intermediate Block Stop Signal” in the ‘ON’ position arrives complete and its complete arrival is verified.
- I] By the SM of Block Station in rear of the intermediate Block Stop Signal must ensure that last stop signal controlling entry of trains into the section between the last stop signal and the intermediate Block Stop Signal is in its ‘ON’ position and shall under no circumstances take ‘OFF’ or attempt to take ‘OFF’ the said last Stop signal even if the Axle counter/Track circuit section from his block station up to and including the adequate distance beyond the Intermediate Block Stop signal

shows 'clear' unless the train which had passed the intermediate Block Stop signal in the 'ON' position arrives complete the block station in advance and its complete arrival is verified, and intimate the SM of the block station in advance the number, description and the departure time of the last train Dispatched from his block station under exchange of Private number.

- J] By the SM of both the block stations in rear and in advance of the intermediate Block Stop Signal.
- i) After the complete arrival of the last train, according to the information received vide sub-para (b) above, the SM of the block station in advance shall communicate the same to the SM of the station in rear supported by a Private Number which shall be acknowledged by the later by issuing Private Number. Thereafter the SM of the dispatching station and the SM of the receiving station shall operate the 'Resetting' and 'reset' panel respectively in conjunction. This simultaneous operation will cause the 'counter' to 'reset panel' at the departure end cabin of the dispatching station to illuminate then the Station Master shall operate the push button which in turn will record the next higher number in the counter at the cabin.
 - ii) The SM of the Block Station in advance shall then take steps to normalize the block instrument.
 - iii) Record of Private Number exchange and the number shown in the counters shall be maintained by the concerning SM in the train signal (Cum log) Register/Train Log Register.

It is to be noted that in terms of GR3.75 whenever intermediate block stop signal is at 'on' a loco pilot must stop his train in rear of the signal and contact the SM of the block Station in rear on the telephone provided on the signal post who will authorize him to pass the signal in 'ON' position supported by Private Number and identification number which were taken for the line clear from the station in advance. If the telephone is not provided or is out of order, the driver, after waiting for 5minutes shall pass it at "ON" but he must report the failure to the SM at the Block Station ahead after following the provision in GR.3.75(3). This would mean that the driver shall either get an authority on telephone from the station master or must report at the station ahead about the failure of the telephone. If none of those provision are complied with, it should be taken as breach of Block Rules.

- K] In the event of failure of IBS signal in the "OFF" position or cannot resume to "ON" position immediately after it has been passed by a train, the station master controlling the signal shall take steps to put back the IBS signal to "ON" position and treat IBS signal failed and train shall be dispatched treating entire section between his station and station in advance as one Block section.
- L] RUNNING OF MOTOR TROLLYS ON IBS ZONE:

- i) While allowing motor trolley/4 wheeler tower wagon/material trolley etc., entire section between **KBM-TIU/NWP** shall be treated as one block section and shall be issued **T-369 [3B]** for passing IBS at “ON” position.
- ii) After the complete arrival of the said Motor Trolley/4 wheeler tower wagon/material trolley etc., at the station ahead, Station Master at adjacent station shall exchange Private Number in token of complete arrival and then shall resume normal working by resetting the Axle Counter as stated in the SWR.
- iii) Motor Trolleys shall not be allowed on following line clear.

NOTE:- Backing of train on the portion of line after passing the intermediate Block Stop signal normally shall not be allowed, However, if it becomes inevitable to back, such backing may be done with great caution as mentioned in SR 3.75.04

M] SIGNAL POST TELEPHONE

A telephone socket (RE Type portable telephone kept with drivers) with a RED Press button at the bottom is provided at the foot of each IB signal and is meant for loco pilot to contact the SM in rear by pressing the RED button. The driver of the train encountering the IB signal at ‘ON’ position shall contact the station in rear to find out the occupancy or otherwise of the block section ahead.

- N] NORMAL POWER SUPPLY TO IBS GOOMTY AT KM 722.120 & 707.641:
Normal power supply to the Signaling and Interlocking installation at the IBS goomty is drawn from the traction power sources (230V-50 HZ, UP AT and DN AT) with auto-change over arrangement in IB Goomty through a panel. When ever any traction power supplies fails, the auto-change over unit will automatically connected to the other available AT supply.

APPENDIX – ‘G’ TO STATION WORKING RULES OF KBM

Details of the working train on 25 KVAC traction of KBM Station.