

EAST COAST RAILWAY

WALTAIR DIVISION



**STATION WORKING RULES
OF
GARUDABILLI (GRBL)**

EAST COAST RAILWAY

WALTAIR DIVISION

INDEX OF GORUDABILLI STATION

Sl.No	DESCRIPTION	PAGES
1	Station Working Rules (Main Body)	1-15
2	Appendix-A	16-47
3	Appendix-B	48-59
4	Appendix-C	60
5	Appendix-D	61-62
6	Appendix-E	63
7	Appendix-F	64
8	Appendix-G	65-74

EAST COAST RAILWAY

WALTAIR DIVISION

INDEX OF CORRECTION SLIPS

[illegible]

EAST COAST RAILWAY
WALT AIR DIVISION
STATION WORKING RULES OF GARUDABILLI STATION
(BROAD GAUGE)

No.WTF/5/SWR/GRBL

Date of issue:

Date brought into force:

NOTE:

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

(1) STATION WORKING RULES DIAGRAM:

- i) STATION WORKING RULE DIAGRAM No. : SI/WRD/11168 ALT 'G'
 ii) SIGNAL INTERLOCKING PLAN : SI/11168 ALT 'G'
 iii) DATE UP TO WHICH CORRECTED :

(2) DESCRIPTION OF STATION:**2.1 GENERAL (LOCATION):**

i)	Name of the Station	:	GARUDABILLI
ii)	Class of Station	:	'B' Class
iii)	Section	:	RAIPUR – VIZIANAGRAM
iv)	Double/Single line	:	Double Line
v)	Electrified/non electrified	:	Electrified
vi)	Gauge BG/MG/NG	:	BG
vii)	Railway	:	East Coast Railway
viii)	Route	:	'D-Spl.'
ix)	Situated at KM	:	454.816
x)	From	:	RAIPUR
xi)	No. of Cabins	:	Centrally Operated panel interlocking.
xii)	Standard of Interlocking	:	Standard III.

2.2 Block Stations, IBH, IBS on either side and their distance and outlying sidings:

	Adjacent Block station	Distance	Direction
A	GOTLAM	5.953 KM	VZM end
	GAJAPATINAGARAM	10.235 KM	RGDA end
B	Automatic Signals	NIL	
C	DK Station & Out Lying Siding	Sleeper Factory Siding	
D	Provision of IBS	NIL	

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

Between Station		The Point from which the block section commences.	The Point at which block section ends.
1)	GRBL-GPI	Advanced block section commences at DN advanced starter signal No. 12.	Terminates at DN facing point No.18 A of GPI.
2)	GRBL-GTLM	Advanced block section commences at UP advanced starter signal No. 13.	Terminates at UP BSLB of GTLM.

2.4 GRADIENTS:**a) TOWARDS GPI ON UP & DOWN LINES**

	Chainage in Mtrs.		Stretch	Gradient
	From	To		
ON DN LINES	00.00	276.20	276.20	Level
	276.20	956.20	680.00	1 in 400 Falling
	956.20	994.20	38.00	Level
	994.20	3214.20	2220.00	1 in 150 Raising
	3214.20	Into Block Section	---	Level
ON UP LINES	00.00	782.73	782.73	1 in 400 Falling
	782.73	850.00	67.27	1 in 155 Falling
	850.00	994.20	144.00	Level
	994.20	3214.20	2220.00	1 in 150 Raising
	3214.20	Into Block Section	---	Level

b) : TOWARDS GTLM ON UP & DOWN LINES

	Chainage in Mtrs.		Stretch in Mtrs.	Gradient
	From	To		
ON DN LINES	00.00	120.00	120.00	Level
	120.00	600.00	480.00	1 in 400 Raising
	600.00	800.00	200.00	1 in 170 DN line
	800.00	3050.20	2250.00	1 in 150 Raising
	3050.20	Into Block Section	---	Level
ON UP LINES	00.00	120.00	120.00	Level
	120.00	600.00	480.00	1 in 400 Raising
	600.00	738.00	138.00	1 in 215 Raising
	738.00	800.00	62.00	1 in 170 DN line
	800.00	3050.20	2250.00	1 in 150 Raising
	3050.20	Into Block Section	---	Level

2.5 LAY OUT:**(A) RUNNING LINES IN THE MAIN YARD**

SI No.	Name of the line	Electrified/ Non Electrified	Platforms with length
1	Line No.-1 (UP Loop)	Electrified	Rail Level 350.52 x 7.7 M
2	Line No.-2 (UP Main)	Electrified	---
3	Line No.3 (DN Main)	Electrified	Rail Level 350.52 x 10.7 M
4	Line No.4(Common Loop)	Electrified	-do-
5	Line No-5 (Goods Common Loop)	Electrified	

(B) SIDINGS:

SI No.	Name of the line	Electrified/ Non Electrified	Platforms with length
1	Sleeper Factory Siding (Line-6)	Electrified	---
2	Sleeper Factory Siding (Line-7)		
3	Goods Siding		

2.5.1: RUNNING LINES, DIRECTION OF TRAFFIC, HOLDING CAPACITIES IN CSL.

SI No	Name of the lines	Holding capacity in CSL	Direction of movements
1	Line No.-1 (UP Loop)	728 M (STR to SB)	(a)Trains coming from GTLM and proceed towards GPI are DN trains.
2	Line No.-2 (UP Main)	756 M (STR to SB)	
3	Line No.3 (DN Main)	788 M (STR to SB)	
4	Line No.4(Common Loop)	722 M (STR to STR)	(b) Trains coming from GPI and proceed towards GTLM are UP trains.
5	Line No-5 (Goods Common Loop)	686 M (STR to STR)	

2.5.2. NON RUNNING LINES:

SI.No	Name	Holding capacity in CSL in mtrs	Electrified/ Non Electrified
1	Goods Siding	60.131	Electrified
2	Sleeper Factory Siding (Line No-6)	230 (DE TO DS)	
3	Sleeper Factory Siding (Line No-7)	230 (DE TO FM)	

2.5.3 ANY SPECIAL FEATURE IN THE LAYOUT

Nil

2.6 LEVEL CROSSINGS:

Detailed workings of LC gates are mentioned 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

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

1	Standard of Interlocking	Standard – III
2	Type of Signaling	MACLS
3	Mode of Operating the signals	Panel Interlocking
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). To take 'OFF' Calling-on-signal the train must come to a stop at the foot of

		the Home Signal, occupying the track circuit in rear of the signal. The time release for Calling-On signal for both UP & DN Home signals is 60 seconds.
5	Provision of Shunt signals	Shunt signal SH-4 & SH-3 are provided for shunting purpose.
6	Emergency cross over	18 at VZM end and 17 at RGDA end are provided.
7	Track circuits	Both UP and DN Main lines and DN Loop are provided with Berthing Track circuits as, <ul style="list-style-type: none"> • UP main line: UMT1, UMT2, UMT3 • DN main line: DMT1, DMT2, DMT3 • Common loop: L4T 1, L4T 2, L4T 3 • UP Loop : L1T1, L1T2, L1T3 • Goods Common Loop : L5T1,L5T2,L5T3 • Point zone track circuits are also provided as 18BT, 20AT, 19BT, 17AT, 17BT, 23 AT, 23BT, 19AT, 18/22AT, 22BT, 20/24 AT, 24 BT & 21T • 1T,1T1,2T,2T1,12T,12AT,13T & 13AT also provided. • IAT and 2AT are the track circuits of UP and DN calling on signals respectively.
8	Axle counters	Digital Axle Counters are provided for Last vehicle verification between section <ul style="list-style-type: none"> a) GRBL-GPI as DDAXT & URAXT. b) GRBL-GTLM as UDAXT & DRAXT.
9	Crank handle	When any point fails to operate normally by the Route Setting operation through Panel 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 for motor operated points shall be followed as per operating manual para-2.19. <p style="text-align: center;">CH1-19A/B,23 A/B CH2-21 A/B,22 A/B CH3-17 A/B CH4-18 A/B CH5-20 A/B,24 A/B</p>
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	Emergency Crank Handle:	Procedure as per Para 19.0 & 20.0 of Appendix 'B' to be followed.
12	Emergency Gate Release:	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 operate the Emergency Gate release control. 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 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.

4.2 CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN SM AND S&T MAINTENANCE STAFF:

Double locking arrangement is provided in the relay room with one key with in the custody of on duty SM & other one with the maintainer of the S&T department. JPO issued by COM and CSTE/ECOR 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, 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 SSE/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) Telephone attached to SGE Type lock and block instrument connected to GPI & GTLM
- ii) Hot line telephone provided between GRBL-GPI and GRBL-GTLM.
- iii) Magneto phone communication is provided between SM/GRBL and L.C. Gates No. RV-334, 335,336,339 & 340.
- iv) The station is connected to VZM-RGDA train control phone.
- v) The station is connected to VZM-RGDA traction power control circuit.
- vi) An Auto telephone is connected to Divisional HQs.
- vii) VHF set is provided at the station.
- viii) Telephone is connected with the Crank handle locations at both end of the yard and UP & DN gate lodge for crank handle.
- ix) CUG phone is provided at the station.

(6) SYSTEM OF TRAIN WORKING:

6.1 DUTIES OF TRAIN WORKING STAFF:

The duties of the train working operational staff in detail are described in Appendix 'D' of this SWR.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:

COMPLEMENT OF STAFF	STAFF IN EACH SHIFT
SM	1
Traffic points man	1
Traffic Gate Keeper	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 Station Master'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 THE LINES AND THE ZONES OF RESPONSIBILITY:

- i) The Station Master on duty is responsible to nominate clear line that is clear of all obstructions from the Home signal to the Starter signal inclusive of adequate distance beyond it for admission of trains vide 3.40(1)(a), 3.40(3)(b).
- ii) The clearance of the running line for the reception of the train is to be verified by the Station Master on duty by verifying illuminated indication provided on the panel board.

6.1.3 ASSURENCE OF STAFF IN THE ASSURENCE 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:

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

Line No.	For UP Trains		For DN Trains	
	FROM	TO	FROM	TO
Line No.1	UP STR. SIG.NO.5	END OF OVER RUN LINE OR UP ADV STR NO-13	--	--
Line No.2 (MAIN LINE)	UP STR. SIG.NO.11	UP ADV.STR. No.13	--	--
Line No.3 (DN MAIN)	--	--	DN STR. No.10	DN ADV.STR NO.12
Line No.4 (COMMON LOOP)	UP STR.SIG.NO.7	END OF SAND HUMP OR UP ADV.STR.SIG. NO.13	DN STR.SIG.NO.8	END OF OVER RUN LINE OR DN ADV.STR.SIG.NO.12
LINE No.5 (GOODS COMMON LOOP)	UP STR.SIG.NO.9	END OF OVER RUN LINE OR UP ADV.STR.SIG. NO.13	DN STR.SIG.NO.6	END OF OVER RUN LINE OR DN ADV.STR.SIG.NO.12

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

6.2.1.1 SETTING OF POINTS AGAINST BLOCKED 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 (SPAU):

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 causalities 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 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:

NIL

6.2.1.5 DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:

NIL

6.2.1.6 ANY OTHER SPECIAL CONDITIONS SHOULD BE MENTIONED GIVING REFERENCE TO THE G&SR:**a) SPECIAL RESTRICTIONS:** Nil**b) SPECIAL INSTRUCTIONS:** Nil**6.3 CONDITIONS FOR TAKING OFF APPROACH SIGNALS:**

A) Conditions for taking 'OFF' approach signals are governed by GR.3.40 (1)(b), 3.40 (2)(b), 3.40 (3)(b) and relevant SR's there to.

B) Calling-on signal may be taken off for the admission of train in the event of failure of Home signal in terms of GR 3.69 (3)(c) or for the admission of a train on obstructed line in terms of GR 5.09 and SRs thereto.

6.3.1 RESPONSIBILITY OF SM 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/DESPATCH, CROSSING & PRECEDENCE OF TRAINS:

Simultaneous reception and dispatch of trains. In addition to the normal double line facility of receiving UP and DOWN trains independently the following existing interlocking at this Station permits simultaneous reception and dispatch of trains.

Reception of UP train on UP Loop set to Overrun line.	AND	Dispatch of another UP train from UP Main/Common loop/Goods Common loop.
Reception of UP train on Common Loop set to Sand hump.	AND	Dispatch of another UP train from UP Loop/UP Main.
Reception of an Up train on Goods Common Loop	AND	Dispatch of another UP train from UP Loop/UP Main/Common loop.
Reception of DN train on Common Loop set to Overrun line.	AND	Dispatch of another DN train from DN Main.
Reception of a DN train on Goods Common Loop set to Overrun line.	AND	Dispatch of another DN train from DN Main/Common Loop.

6.5 COMPLETE ARRIVAL OF TRAINS

The entire block section between GRBL-GTLM & GRBL-GPI on both UP and down lines are monitored by Digital axle counter system. Complete arrival of the train can be ensured by the indication of Last Vehicle Check device provided on panel. The position of block section whether occupied or clear is indicated on the panel. If the panel still continues to show red or if there is any LVCD failure, SM on duty shall obtain Complete Arrival Certificate from the guard in the Complete Arrival Register (T/1410) maintained at that station for stopping train. In case of through passing trains, the SM on duty shall satisfy himself the complete arrival of the train by verification of Last Vehicle indicator vide SR 4.16.05 that the train has arrived complete. In case of the failure of LVCD, the re setting procedure shall be adopted as per 20.6 of Appendix B.

6.6 DESPATCH OF TRAINS:

- a) Dispatch of trains is governed by the provisions of GR. 3.42 and SR thereto, SR 3.36.04(b), SR 3.42.01(a), SR3.42.04 and BWM 3.07(5)(a),(e),(f)&(g) and other relevant provisions of G & SR, BWM and SWR.
- b) **TRAINS ENTERING BLOCK SECTION SIGNAL:**
The SM on duty after verifying that the train has passed past the advanced starter signals (Both physically & through Panel Indication) shall send the TRAIN ENTERING BLOCK SECTION Signals vide BWM 2.07.5(a)
- c) **DISPATCH OF TRAINS FROM A NON-SIGNALLED LINE:**
Dispatch of trains from non-signaled line is governed by GR.5.11 and SR 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 by SM on duty before a train is piloted.
AXLE COUNTER:	If the Digital axle counter fails between the block sections, resetting procedure will be adopted as per Para 25.0 of SWR (App - B). If the Digital 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 BWM. 6.16, 6.17 & 6.18.
RECEPTION OF TRAIN ON OBSTRUCTED LINE:	Whenever trains are to be admitted on an obstructed line GR 5.09 & SRs there to, to be observed.
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(b) (i)& 3.69.01].
DEFECTIVE/DAMAGED POINTS	When any point fails to operate normally by the route setting operation through Panel 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.

6.9 PROVISIONS FOR WORKING OF TROLRIES /MOTOR TROLRIES / MATERIAL LORRIES:

- Motor trolleys shall be worked as per GR 15.25, 15.26(b) and SR thereto, and circulars and orders issued from time to time BWM 5.11(2), 5.12.
- Material lorries shall be worked as per GR 15.27 and SRs thereto and BWM 5.11(2), 5.13 and 5.14(2)(b).
- The extant instructions and circulars regarding working or Motor Trolleys and Material Trolleys shall be followed.

NB: Trolleys which are to be run on track circuited area shall be insulated as per SR 15.20.02.

(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

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16 to 5.23, 8.06, 8.14 and 8.15 with relevant SRs and shall be followed.

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. 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 approaching train is strictly prohibited.

8.3 PROHIBITION OF SHUNTING ANY 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:

- a) Block Back: Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and it is blocked back vide GR 8.06(2) and BWM 5.15(1)(B).
- b) Block forward: Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and is blocked forward Vide GR 8.06(3) and BWM 5.15[2][b].
- c) Following a train travelling away: NIL
- d) Up to IBS: NIL
- e) Beyond IBS: NIL
- f) During failure of block instrument on double line:

8.6 SHUNTING IN THE SIDING TAKING OFF FROM STATION YARD/ SLEEPER FACTORY-SIDING.

While performing shunting in the siding 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 followed.

A.SLEEPER FACTORY SIDINGS:

The sleeper factory sidings are takes off from the line No.5 and is isolated by a hand point lever provided at site. The sidings are terminates at dead end. The entrance and exist of these sidings are controlled by 27. The KEY-S thus provided for setting and locking of the points. While extracting the KEY-S from HKT, no signal shall be taken OFF for line No.5.

B. GOODS SIDING:

The goods siding takes off from line No.1 and are operated individually by arc levers in succession. When control No.26 is transmitted from panel a key R1 and Q1 will be released. Key R1 will be inserted in point and releases Key R2, this key R2 will be inserted in the other end of the point and point will be operated to reverse. Then key Q1 will be inserted on other side of siding point and releases Q2 and Q2 will be inserted on the other end of point, then the point is operated to reverse and set to goods siding. After the movement is completed with key Q2 point will be normalized and key Q2 will be inserted in the other end and releases Key Q1. This key Q1 will be transferred back to SM with control 26. The same process will be followed on the other end of the siding to make points normal.

(9)

ABNORMAL CONDITIONS:**a) THE RULES TO BE OBSERVED IN THE EVENT OF ABNORMAL CONDITIONS:**

- (i) During partial interruption/failure of Electrical communication instrument. The procedure details in SR 6.02.06 shall be followed.
- (ii) The authority to proceed in the occupied block section in case of obstruction of line is accident etc. The procedure detailed in SR 6.02.05 should be followed.
Rules and regulation for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket, when communications are available shall be followed in accordance with the provisions of SR 6.02.05.
- (iii) Trains delayed in Block Section - The procedure detailed in GR 6.04. and SR should be performed
- (iv) Failure/passing of intermediate block stop signal at 'ON': NIL
- (v) Failure of axle counter: The rules laid down in GR. 3.51.04 and 3.68.04 shall be followed.
- (vi) Failure of MTRC: NIL

b) PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE:

- (i) The detailed Procedure for emergency operation of points by Crank Handle of motor operated points is given in Para No.21.0 to 21.07 (Appendix-B).
- (ii) Procedure for emergency operation of points with point zone axle counter/Track circuits failure and emergency route release.[GR 3.39 and GR 3.77]
- (c) 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 on duty.

d) **REPORTING FAILURE OF POINTS, TRACK CIRCUIT/AXLE COUNTER AND INTERLOCKING:**

- (i) Whenever there is a failure of points, track circuit/Axle Counter or any other interlocking gear at the station, the failure should be reported by SM on duty to the concerned Signalling Maintenance Staff on duty responsible for attending to 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 COMMUNICATIONS:

- a) During total failure of 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 6.02.02 and SR 6.02.03 shall be followed.
- c) In the event of single line working on a double section during total failure of communications, the provisions laid down in SR 6.02.02 shall be followed.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

In the event of signal line working being introduced on double line when communications are available the provisions laid down in SR 6.02.01 shall be followed.

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

- a) During total interruption of communications, when a light engine/train engine/motor trolley/ is sent to open communications under authority to proceed without line clear, the relevant provisions of SR 6.02.02, SR 6.02.03 and SR 6.02.04 shall be followed.

For trains proceed on the 'Authority to proceed without line clear' The last stop signal shall not be taken 'OFF' but an authority to pass the last stop signal at 'ON' in the prescribed Form T/C 602 shall be issued.

- b) **ISSUE OF BLOCK TICKET (T/A 602):**

Rules and regulations for working train 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.

- c) **PARTIAL INTERRUPTION OF COMMUNICATIONS:**

During partial interruption of communication, the procedure detailed in SR 6.02.06 shall be followed

(10) VISIBILITY TEST OBJECT:

The signal lights of UP starter signal No.5 and DN starter signal No. 10 of DN main line are earmarked to serve as Visibility Test object vide GR 3.61 (2) (b)(iii).

(11) ESSENTIAL EQUIPMENT AT THE STATION:

The list of essential equipment is given in Appendix 'E' of the SWR.

**(12) FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG
PROCEDURE FOR WORKING OF TRAINS DURING FOGGY WEATHTER**

- i) During thick, foggy or tempestuous, dust storm etc weather, when the visibility of the signal is impaired. The SM on duty shall initiate action to depute Fog Signalmen with Detonators Vide GR 3.61 in order to indicate the location of the station approach signals to the Loco Pilot of an approaching train.
- ii) The Fog Signalmen shall be proceed to the 1st approaching stop signal of the station and place one detonators at a distance of 270M from the first approaching stop signal towards the approaching train and another detonator at a distance of 10M from the first one and he shall stand 45M away from the detonator.
- iii) The Fog signal men shall be permanent employees, no temporary or casual labour shall be deployed as Fog signal man.
- iv) The assurance of Fog signal man available at the station (including Engineering Branch if available) shall be obtained in the fog signal register every year in the month of 'October'.
- v) Details of supply of detonators, available stock, use, and testing etc. shall be maintained in the fog signal register maintained at the station as per GR 3.64 and SR there to

Note: Names of Fog Signal men available at the station shall be exhibited in the SM's office.

LIST OF APPENDICES

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 EQUIPMENT PROVIDED AT THE STATION.
APPENDIX 'F'	:	RULES FOR WORKING OF DK STATIONS, HALTS, IBH, IBS AND OUTLYING SIDINGS.
APPENDIX 'G'	:	RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS.

APPENDIX-'A'**APPENDIX 'A' TO STATION WORKING RULES OF GARUDABILLI STATION LEVEL CROSSING GATES****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	:	RV-340
2	Engineering or Traffic gate	:	Traffic
3	Under control of station master or permanent way inspector.	:	SM GRBL
4	Location at Km.	:	KM. 455.432
5	At station	:	GRBL
6	In between station	:	GRBL & GTLM
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	:	Electrical Key Transmission.
12	Provision of gate single at Km.	:	i) Up Line : Nil ii) DN Line : Nil
13	Signaling arrangement	:	MACLS- Station Signals
14	Means of communication Telephone.	:	Telephone
15	Width of the level crossing gate	:	7.5 M
16	Type of road	:	Other
17	Name of road	:	Station Road of GRBL (Vandram NH-43)
18	Metalled /Non-Metalled	:	Metalled
19	Approach road	:	Metalled
20	Width of the road	:	5.8 M
21	Angle of road crossing (in case of the SKEW gates)	:	90 ⁰
22	Road gradients (if any)	:	[a]North/East Side:
		:	[b]South/West Side:
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Straight
24	Provision of height gauges	:	Not Required
25	Type of barriers	:	Coupled Lifting Barriers/Sliding Boom
26	Length of check rails	:	10.4 M
27	Road surface in between level crossing gates.	:	Plain
28	Length of rumble strip/ speed breakers.	:	5.5 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	29210/ OCT.2018
32	Census next due on	:	OCT.2021

33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	3
35	Nearest Railway Medical Assistance	:	VZM
36	Nearest Private Medical Assistance available (if any)	:	VZM
37	List of equipment available (Yes/No)	:	Yes

1.2 EQUIPMENTS:

Sl.No	Description	Quantity	To be used as
1	LED based flashing Tri colour Hand signal lamp	Two	One for use and another for spare
2	Green Hand Signal Flag	One flag mounted on sticks	To hold in furled condition and another for spare
3	Red Hand Signal Flag.	Two flag mounted on sticks	One to hold in furled condition and another for spare
4	Red Banner Flag mounted with sticks.	Single line-2, Double Line-2, Multiple line-3	In case of obstruction, one flag is to be displayed on each line except on single line it is to be placed on either side of the line.
5	Spare chains with padlocks	2 chains with padlocks	For securing gate against road traffic in case of gate boom cannot be closed.
6	Stop Boards	2 retro reflective stop boards.	To display towards road traffic when gate is secured by gate chains due to failure of booms.
7	Padlocks	One	To lock the door of the gate lodge in case of necessity.
8	Detonators	Ten (10) in a tin case	For use in case of obstruction of track.
9	Tommy Bar	1No	For leveling the soil surface or to clean the channels of rails.
10	Bucket	One	To keep water
11	Whistle	One	For alerting road users on approach of train and LP/Guard to call their attention.
12	Wall clock	One	To note down the timings in PN/Log book.
13	A small chain for use in case of failure of gate boom lock	Two	For securing boom in closed condition in case of failure of boom lock.

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 registers.
6. Certificate for working as gateman.
7. Bio-data particulars of Gateman, including date of passing vision test, Initial/refresher course, safety camp etc.,
8. Accident Roster.
9. Records of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.

1.4 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. ROUTINE 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 Permanent Way Inspector 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) **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.

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.

7. Working of LC Gate:

- (i) Before taking off reception / departure signals Station Master 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 by adopting following procedure:-
 - a) Barrier-1 & Barrier-2 switches are provided for individual operation of the barrier if required.
 - b) Red & Green buttons are provided on the panel for closing and opening of LC gate respectively.
 - c) The push button Red pressed till the gate is closed and locked.
 - d) Key 'F' is extracted from EKT-1 after the gate is closed and locked.
 - e) Key 'F' thus extracted from EKT-1, is inserted in EKT-2 and transmitted electrically to SM in conjunction with switch 'GS' reversed to take off concerned signals.
 - f) For opening the gate SM transmits control-30 to extract key 'F' from EKT-2 and inserts in EKT-1. The push button Green is pressed till the gate is opened.
 - g) Switch 'GS' is provided in gate lodge to put back concerned signals to danger in case of emergency.
- (iii) The reception / departure signals will then be taken 'OFF'.
- (iv) In order to ensure that road traffic is not held up for a long time, the Station Master 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.

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 driver 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.
- 9. **Failure of Lifting Barriers :**
 - (i) When the gate cannot be closed due to failure of lifting barriers gateman will immediately inform the Station Master 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 gates 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.
- 10. **Provision of Sliding Boom:**
 - a) Sliding boom is provided at the near end of gate lodge and shall pad locked with chain in open position. Sliding boom at the far end in open position shall be locked by E type lock.
 - b) In case of breakage of normal boom gate man shall release the free sliding boom key 'S' from 'EKT-3' provided on the wall of the gate lodge. This shall put back road signals to danger & sound the hooter.
 - c) With the key 'S' the gate man shall open the far end emergency sliding boom and slide it again road traffic and lock it in closed position & release another key 'SB-1'.
 - d) Then gate man shall unlock the near end sliding boom padlocked & roll it against road traffic. This boom to be locked in closed condition by the 'SB 1' key released by far end boom in closed condition. Finally this shall release key 'SB 2', which has to be transmitted to the SM on the sliding boom EKT marked as 'EKT-2' provided on the wall.
 - e) One sliding boom slot switch (GS) provided on the wall, which need to be made reverse in conjunction with transmission of sliding boom key 'SB-2'. In case of any damage to sliding boom arises while it is closed to road traffic leading to infringement to track, this switch (GS) can be made normal to put back concerned signals to danger.
 - f) After passage of the train SM shall release the Gate key by which sliding boom key 'SB 2' transmitted shall be released & all gears to put back into normal position in the reverse sequence of operation by the Gateman.
 - g) Sliding boom key ward shall be different to that of normal key being transmitted to SM.
 - h) Sliding boom equipments need to be painted red to distinguish it from normal equipments. Red & Black patches of retro reflective tapes may be provided on sliding booms.

11. 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-2 the gateman must immediately inform the SM 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 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 advise 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.

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

- (i) If the gate key cannot be extracted from EKT-1 the gateman must immediately inform the SM on duty on telephone under 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 advise 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.

13. 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 rectifies the defective lifting barriers and issue reconnection / fit memo for the same.

14. 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.

LEVEL CROSSING GATE NO. RV-339

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	:	RV-339
2	Engineering or Traffic gate	:	Traffic Gate
3	Under control of station master or permanent way inspector.	:	SM GRBL
4	Location at Km.	:	KM. 454.329
5	At station	:	GRBL
6	In between station	:	GRBL- GPI
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	:	Electrical Key Transmission.
12	Provision of gate single at Km.	:	i) Up Line : Nil ii) DN Line : Nil
13	Signaling arrangement	:	MACLS Station Signals
14	Means of communication Telephone.	:	Telephone
15	Width of the level crossing gate	:	5.45 M (TMS)
16	Type of road	:	Other
17	Name of road	:	Gorudabilli Village.
18	Metalled /Non-Metalled	:	Non-Metalled
19	Approach road	:	Non-Metalled
20	Width of the road	:	5.2 M

21	Angle of road crossing (in case of the SKEW gates)	:	90 ⁰
22	Road gradients (if any)	:	[a]North/East Side: Level
		:	[b]South/West Side: Level
23	Road alignment (straight/Curve)	:	[a] North/East Side : Curve [b] South/East Side : Straight
24	Provision of height gauges	:	Not Required
25	Type of barriers	:	Coupled Lifting Barriers/Sliding Boom
26	Length of check rails	:	7.45 M
27	Road surface in between level crossing gates.	:	Plain
28	Length of rumble strip/ speed breakers.	:	5.2 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	17004/OCT.2018
32	Census next due on	:	OCT.-2021
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	3
35	Nearest Railway Medical Assistance	:	VZM
36	Nearest Private Medical Assistance available (if any)	:	VZM
37	List of equipment available (Yes/No)	:	Yes

1.2 EQUIPMENTS:

Sl.No	Description	Quantity	To be used as
1	LED based flashing Tri colour Hand signal lamp	Two	One for use and another for spare
2	Green Hand Signal Flag	One flag mounted on sticks	To hold in furled condition and another for spare
3	Red Hand Signal Flag.	Two flag mounted on sticks	One to hold in furled condition and another for spare
4	Red Banner Flag mounted with sticks.	Single line-2, Double Line-2, Multiple line-3	In case of obstruction, one flag is to be displayed on each line except on single line it is to be placed on either side of the line.
5	Spare chains with padlocks	2 chains with padlocks	For securing gate against road traffic in case of gate boom cannot be closed.
6	Stop Boards	2 retro reflective stop boards.	To display towards road traffic when gate is secured by gate chains due to failure of booms.
7	Padlocks	One	To lock the door of the gate lodge in case of necessity.
8	Detonators	Ten (10) in a tin case	For use in case of obstruction of track.
9	Tommy Bar	1No	For leveling the soil surface or to clean the channels of rails.
10	Bucket	One	To keep water

11	Whistle	One	For alerting road users on approach of train and LP/Guard to call their attention.
12	Wall clock	One	To note down the timings in PN/Log book.
13	A small chain for use in case of failure of gate boom lock	Two	For securing boom in closed condition in case of failure of boom lock.

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.
8. Certificate for working as gateman.
9. Bio-data particulars of Gateman, including date of passing vision test, Initial/refresher course, safety camp etc.,
8. Accident Register.
9. Records of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.

1.4 **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. **ROUTINE 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 Permanent Way Inspector 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) **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.

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.

7. Working of LC Gate:

- (i) Before taking off reception / departure signals Station Master 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 by adopting following procedure:-
 - a) Barrier-1 & Barrier-2 switches are provided for individual operation of the barrier if required.
 - b) Red & Green buttons are provided on the panel for closing and opening of LC gate respectively.
 - c) The push button Red pressed till the gate is closed and locked.
 - d) Key 'H' is extracted from EKT-1 after the gate is closed and locked.
 - e) Key 'H' thus extracted from EKT-1, is inserted in EKT-2 and transmitted electrically to SM in conjunction with switch 'GS' reversed to take off concerned signals.
 - f) For opening the gate SM transmits control-29 to extract Key 'H' from EKT-2 and inserts in EKT-1. The push button Green is pressed till the gate is opened.
 - g) Switch 'GS' is provided in gate lodge to put back concerned signals to danger in case of emergency.
- (iii) The reception / departure signals will then be taken 'OFF'.
- (iv) In order to ensure that road traffic is not held up for a long time, the Station Master 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.

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 drive 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.

9. **Failure of Lifting Barriers :**

- (i) When the gate cannot be closed due to failure of lifting barriers gateman will immediately inform the Station Master 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 / leaf gates 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.

10. **Provision of Sliding Boom:**

- i) Sliding boom is provided at the near end of gate lodge and shall pad locked with chain in open position. Sliding boom at the far end in open position shall be locked by E type lock.
- ii) In case of breakage of normal boom gate man shall release the free sliding boom key 'S' from 'EKT-3' provided on the wall of the gate lodge. This shall put back road signals to danger & sound the hooter.
- iii) With the key 'S' the gate man shall open the far end emergency sliding boom and slide it again road traffic and lock it in closed position & release another key 'SB-1'.

- iv) Then gate man shall unlock the near end sliding boom padlocked & roll it against road traffic. This boom to be locked in closed condition by the 'SB 1' key released by far end boom in closed condition. Finally this shall release key 'SB 2', which has to be transmitted to the SM on the sliding boom EKT marked as 'EKT-2' provided on the wall.
- v) One sliding boom slot switch (GS) provided on the wall, which need to be made reverse in conjunction with transmission of sliding boom key 'SB-2'. In case of any damage to sliding boom arises while it is closed to road traffic leading to infringement to track, this switch (GS) can be made normal to put back concerned signals to danger.
- vi) After passage of the train SM shall release the Gate key by which sliding boom key 'SB 2' transmitted shall be released & all gears to put back into normal position in the reverse sequence of operation by the Gateman.
- vii) Sliding boom key ward shall be different to that of normal key being transmitted to SM. Sliding boom equipments need to be painted red to distinguish it from normal equipments. Red & Black patches of retro reflective tapes may be provided on sliding booms.

11. 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-2 the gateman must immediately inform the SM 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) 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.
- (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 will advise 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.

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

- (i) If the gate key cannot be extracted from EKT-1 the gateman must immediately inform the SM on duty on telephone under 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 advise 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.

13. 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.

14. 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.

LEVEL CROSSING GATE NO.RV-335 AT KM 449/24-26**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	:	RV-335
2	Engineering or Traffic gate	:	Engineering Gate
3	Under control of station master or permanent way inspector.	:	SSE/P/GRBL
4	Location at Km.	:	KM. 449/26-28
5	At station	:	GRBL
6	In between station	:	GPI-GRBL
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	:	---
12	Provision of gate single at Km.	:	i) Up Line : Nil ii) DN Line : Nil
13	Signaling arrangement	:	---
14	Means of communication Telephone.	:	Telephone
15	Width of the level crossing gate	:	7.5 M
16	Type of road	:	Other
17	Name of road	:	GRBL approach road Shyamalavalasa.
18	Metalled /Non-Metalled	:	Non-Metalled
19	Approach road	:	Non-Metalled
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: Level
		:	[b]South/West Side: Level
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	:	Coupled Lifting Barriers
26	Length of check rails	:	12 M
27	Road surface in between level crossing gates.	:	CC Block.
28	Length of rumble strip/ speed breakers.	:	10 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	17629/NOV-2018
32	Census next due on	:	NOV-2021
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	2
35	Nearest Railway Medical Assistance	:	VZM
36	Nearest Private Medical Assistance available (if any)	:	GPI
37	List of equipment available (Yes/No)	:	Yes

LEVEL CROSSING GATE NO.RV-336 AT KM. 450/32-34**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	:	RV-336
2	Engineering or Traffic gate		Engineering Gate
3	Under control of station master or permanent way inspector.		SSE/P/GRBL
4	Location at Km.		KM. 450/32-34
5	At station		GRBL
6	In between station		GPI-GRBL
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	:	---
12	Provision of gate single at Km.	:	i) Up Line : Nil ii) DN Line : Nil
13	Signaling arrangement	:	---
14	Means of communication Telephone.	:	Telephone
15	Width of the level crossing gate	:	7.5 M
16	Type of road	:	Other
17	Name of road	:	Station road of GRBL, Bondapalli.
18	Metalled /Non-Metalled	:	Metalled
19	Approach road	:	Metalled
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: Level
		:	[b] South/West Side: Level
23	Road alignment (straight/Curve)	:	[a] North/East Side : Curve [b] South/East Side : Straight
24	Provision of height gauges	:	Provided
25	Type of barriers	:	Coupled Lifting Barriers
26	Length of check rails	:	9.5 M
27	Road surface in between level crossing gates.	:	Level.
28	Length of rumble strip/ speed breakers.	:	5.5 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	1125/OCT-2018
32	Census next due on	:	OCT-2021
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	2
35	Nearest Railway Medical Assistance	:	VZM
36	Nearest Private Medical Assistance available (if any)	:	DNV
37	List of equipment available (Yes/No)	:	Yes

NB: The following Paras from 1.2 to 11 are applicable to both LC gates RV-335 & RV-336

1.2 EQUIPMENT:

	Items	<u>Quantity / Numbers</u>
1.	Hand Signal Lamp Tri Colour	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 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. ROUTINE 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 Permanent Way Inspector 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) 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.

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.

7. Exchange of Private Number:

- (i) SM shall advise the gateman the number, description, direction and expected time of the passage of the train at the gate under exchange of PN.
- (ii) Such advice shall be given before taking OFF departure signals or giving an authority to proceed to the Loco Pilot.
- (iii) The GK on receipt of the advice shall close the gate well in time and confirm the same under exchange of PN.
- (iv) SM will lower the departure signals after getting the PN of the gateman.
- (v) The GK shall be authorized to open the level crossing after complete passage of train from the gate by observing tail board/tail lamp. The GK before opening the gate shall ensure that SM has not advised him to keep the gate closed for any other train from the same direction or from other direction. He shall display a banner flag across the track while the gate is in open condition.

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 at the dispatching end shall issue a caution order to the LP of the departing train.
- (ii) The caution order shall advise the LP to whistle continuously and approach the gate cautiously.
- (iii) The LP shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, LP should be prepared to stop short of the gate and depute his ALP to see the condition of the gate. If the gate is closed, the ALP will give the all right signal and if the gate is not closed the ALP must close the gate and then give all right signal. In the absence of the ALP, the LP may take the assistance of 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 driver before dispatching a train in the block section from his end.
- (vi) Station Master shall also advise the gateman through gangman / patrolman or driver 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.

9. Failure of Lifting Barriers:

- (i) When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that 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, he shall show green hand signal flag by day and green light by night to the LP of the approaching train.
- (v) Station Master on duty shall issue caution order to the driver 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 driver before dispatching a train in the block section from his end.
- (vii) He should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the same at the earliest.
- (viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection / fit memo for the same.

10 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 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) He 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 ensured 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 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 LP of all trains to proceed cautiously, and pass the gate 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 thereafter 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.

11 Obstruction on the Track near Level Crossing:

If there is a rail fracture or obstruction on the track due to falling of 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.5 above. If the obstruction fouls the Level Crossing Gate he must keep the gates closed against road traffic till the track is cleared of the obstruction.

LEVEL CROSSING GATE NO.RV-334 KM 448/17-19**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	:	RV-334
2	Engineering or Traffic gate		Engineering Gate ('A'-CLASS)
3	Under control of station master or permanent way inspector.		SSE(P)/GPI
4	Location at Km.		KM. 448/17-19
5	At station		GRBL
6	In between station		GPI – GRBL
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	:	Panel Interlocked
12	Provision of gate single at Km.	:	i) Up Line :448/4-5 ii) DN Line : 448/14-15
13	Signaling arrangement	:	MACL
14	Means of communication Telephone.	:	Telephone connected with GRBL station
15	Width of the level crossing gate	:	6.5 M
16	Type of road	:	Other Village Road.
17	Name of road	:	Devapalli
18	Metalled /Non-Metalled	:	Metalled
19	Approach road	:	Metalled
20	Width of the road	:	7.5 M
21	Angle of road crossing (in case of the SKEW gates)	:	---
22	Road gradients (if any)	:	[a]North/East Side: Level
		:	[b]South/West Side: Level
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Straight
24	Provision of height gauges	:	Not Required
25	Type of barriers	:	Lifting Barriers
26	Length of check rails	:	9.5 M
27	Road surface in between level crossing gates.	:	Level CC Block
28	Length of rumble strip/ speed breakers.	:	7.0 M
29	Road signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU:	:	57575/ OCT-2018
32	Census next due on	:	OCT-2021
33	Demarcation for placement of detonators.	:	Provided
34	No. of gateman working	:	2
35	Nearest Railway Medical Assistance	:	VZM
36	Nearest Private Medical Assistance available (if any)	:	Gajapatinagaram
37	List of equipment available (Yes/No)	:	Yes

1.2 EQUIPMENTS:

ITEMS		QUANTITY/NUMBERS
1	LED based flashing Tri Colour Hand Signal Lamp.	3Nos.
2	Hand Signal Flag Green.	1 with mounted stick
3	Hand Signal Flag Red.	3 Nos.
4	Banner Flag Red.	3 Nos.
5	Posts for exhibiting red banner flag	2.Nos
6	Spare chains with padlocks	2 with stop mark.
7	Detonators	10 in tin case
8	Gate lamps	1 Nos.
9	Tommy Bar	2 Nos.
10	Mortan Pan	1No
11	Spade/Fowarh	1No
12	Rammer	1No
13	Pick Axe	1No
14	Tin case for flags	1No
15	Can for Oil	1No
16	Water Pot/Bucket	1No
17	Canister for Muster Roll	1No
18	Set of spare spectacles of gateman wearing glasses.	1No
19	Board demarcation protection of level crossing gate diagram in case of obstruction	1No
20	Bucket	1No
21	Whistle	1No
21	Wall Clock	1 No
23	A small size chain for use in case of failure of Gate Boom.	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 registers.
6	Certificate for working as gateman.
7	Bio-data particulars of Gateman, including date of passing vision test, Initial/refresher course, safety camp etc.
8	Accident Register.
9	Records of last census of road traffic at level crossing gate.
10	Inspection Book.
11	Public Complaint Book.
12	S&T Register.

1.4 Mode of operation

Gate shall normally be kept open to 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/dispatch supported by private number. Gate Man on duty shall ensure clearance of road traffic close and lock the gate. There after he will perform the following procedure to take off the Gate home signals as the case may be.

- a) Key 'G' is obtained from winch after closing the L.C.gate releases the Gate lever No.1.
- b) Lever No.1 GF reversed effects the level crossing boom locking and releases key G.
- c) Key G1 extracted after boom locking is to be inserted in RKT and turned.
- d) Key 'IN' contact of RKT along with reversal of switches 1S, 2S, will clear Signal No 1S, 2S respectively.
- e) In case of emergency signals can be put back to normal by normalizing the signal switches.

1.5 DUTIES OF GATEMEN:

[i] **ALERTNESS** : The gate man 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, gate man will stand in the manner indicated below: -

- [i]. Gate man will stand attentively in front of the gate-lodge facing the approaching train.
- [ii] In daytime, 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]. ROUTINE 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 sunshine.
- [ii]. Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if 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 instruments, 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, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- [v] Gateman shall also be prepared to repeat any signal which guard may give to LP on walkie-talkie or in any other way.
- [vi] If lifting barriers get damages or becomes out of order, the gateman shall use the spear chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

- [vii] 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.
- [viii] At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the LP report the defect at the next station.
- [ix] Gateman shall wear badge and prescribed uniform while on duty at level Crossing gate.
- [x] Gateman shall ensure that he is having competency certificate in his possession while on duty.
- [xi] Gateman shall work the gate as per gate working instructions and remain well conversant with this instruction.
- [xii] Gateman shall ensure that equipment supplies at the gate are in good order and ready for immediate use.
- [xiii] Gateman shall ensure that equipment supplies at the gate are 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 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 anything unusual with a passing train, he shall take following action:

- [i] He shall take prompt action to warn the driver/guard of the passing train by showing red flags by day and red light by night.
- [ii] He shall simultaneously try to draw the attention of the driver/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- [iii] If LP/guard fails to take notice, gateman shall not stop immediately inform the station master to take appropriate action under exchange of private number.
- [iv] In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains parting.
- [v] He shall endeavor to attract the attention of the LP/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting then and bringing them together in repeated Up and Dn motion as high and as low as possible.
- [vi] In case of trains does not stop, gate shall immediately inform the station master to take appropriate action under exchange of private number.

(5) ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- [i]. In case of an observation at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.
- [ii] Thereafter, if he is unable to remove the observation, gateman shall immediately advise the station master on duty, if connected on telephone, regarding the defects/observations 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]. In the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duty provided for the purpose. He shall first protect the line on which a train is executive to arrive first.
- [ii] Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of observation.
- [iii] Gateman shall then proceed to protect the gate along with detonators, fuses and red flags by day and red hand signal lamp by night.
- [iv] Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is excepted to arrive first, to a point 600 Mtrs on BG and place on e detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs on BG from the level crossing gate and place 3 detonators on the track 10 Mtrs apart. Having thus protected the line shall return to the level crossing gate picking up the intermediate detonator on this way back.
- [v] Thereafter he shall proceed on the other line, showing red hand signal, similarly place the detonators as described in Para (4) about and return to the site of obstruction, picking up the intermediate detonator on this way back.
- [vi] Having returned to the gate, he must then take steps to remove the obstruction and warn the driver of the approaching train.
- [vii] On those Meter Gauge sections where trains run at more than 75 Km/h, detonators shall be placed at distance to be specified under special instruction by the administration
- [viii] 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 the distance as far away as he can go.

[B] OTHER ACTION TAKEN BY GATE MAN :

- [I]. At night gate man shall light two hand signal lamps and take action to exhibit red light and protect the lines as per described in sub para [A] above.
- [ii] If the gate is broken by the road vehicle which is fouling by track, or if lifting barrier by leaf gates or any other part of the gate found the track, or it there is any other obstruction at the gate, the gate man shall take immediate action.
- [iii] He shall note down, owner and relay these details to the nearest Station or Permanent way inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

(6) ENGINEERING ITEMS.

Please Para 916, 918, 919 of IRPWM for visibility requirement at level crossings, provision of speed breakers on the approach roads of level crossing and senses of traffic at level crossings.

(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 fails at the gate connected with the station at the dispatching end, SM shall issue a caution order to the driver of the departing train.
- [ii] SM shall advise the LP 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 SM shall advise the SM at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- [v] The SM at the dispatching end shall then issue a caution order to the LP before dispatching a train in the block section from his end.
- [vi] SM will also advise the gateman through Gang man/Patrolman /LP of the first train that the telephone has become defective.
- [vii] SM 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.

(8) WORKING OF SLIDING BOOM BARRIER IN CASE OF FAILURE OF LIFTING BARRIERS:

- i. KEY'S' when extracted from lock free EKT-3, makes road signal danger & activates road hooter .Key-S un-locks the sliding barrier-1.
- ii. Sliding barrier-1 to be rolled across the road up to lock post, key (chained with barrier) locks the releases the lock plunger & key SB 1. Key SB 1 when extracted lock the sliding barrier-1.
- iii. Similarly after un-lock the padlock, sliding barrier-2 to be rolled across the road up to lock post key (chained with barrier) along with Key SB-1 inserted releases the lock plunger and key SB-2 when extracted lock the sliding barrier-2 & key SB-1.
- iv. Finally released key SB-2, is transmitted electrically through EKT-2 to clear UP/DN signals after operation of concerned switches (1S & 2S) for UP/DN signals respectively.

(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 or key transmitter than gate man must immediately inform the SM on duty on telephone, under exchange of private number.
- [ii] If Emergency Key is available at the gate lodge, gateman will take it out from the sealed box by braking 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 shell be recorded and signed with reasons.
- [iV] Thereafter, the gate must be treated as non-interlocked and produced for reception / Dispatch of trains as prescribed for non-inter locked gates, should be adopted.
- [V] SM on duty shall issue caution order to the driver before dispatching a train.
- [VI] He shall also advise the Station Master at the dispatching end, exchange of private number, to similarly issue caution order the driver before dispatching a train in block section for his end.
- [vii] SM shall advice 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 re-communication / fit memo for the same.
- [ix] After rectification, the Emergency key shall be replaced in the emergency key box and re sealed by the S&T maintainer.

(10) Failure of the Gate Key with the gate in open condition:

The gate key cannot be extracted from the which, gate signal level or key transmitter then gateman must immediately inform the SM on duty on telephone, under exchange of private number.

Thereafter, the gate must be treated as non-interlocked and procedure for reception /dispatch of train as prescribed for non-interlocked gates, should be adopted.

The gateman shall secures the gate against road traffic by means of chains and padlocks and pass trains on hand signals

SM on duty shall issue a caution order to LP of a departing train.

He shall also advise the SM at the dispatching end, under exchange of pre-cut number, to issues a caution order to the driver before dispatching a train in the block section from his end.

SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

After rectification the, Emergency Key Box and resealed by the S&T maintainer.

Defective Gate Signals:

The gate man shall treat the gate signal as defective and must not lower them under following circumstances:

- [a] If gate signal can be taken 'OFF' without closing the gate
- [b] The key can be extracted from the operating winch when the gate is in open condition

If the gate or the gate signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position.

The gate man will immediately advise the SM on duty, under exchange of private number regarding defective gate signals.

Thereafter, the gate must be treated as non-interlocked and procedure for reception /dispatch as prescribed for non-interlocked gates should be adopted.

He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.

SM on duty will issued a caution order to the driver of a departing train. He shall also advise the station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the driver before dispatching a train in the block section from his end.

SM shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.

Normal working will be resumed only after S&T staff rectifies the defective gate signal and issue reconnection /fit memo for the same

Obstruction at the Gate:

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 order obstruction at the gate, the gate man shall immediately put back gate signals to 'ON' position.

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

Immediately after this, the gateman shall advise the SM on duty regarding the defects /obstruction at the gate, under exchange of private number

If there is no response from the SM after to or three attempts, he shall first protect the gate and then inform the phone.

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 instructions for duties of gateman under item no.1.5(5).

Thereafter he shall protect the gate from the other direction also

He shall note down the particulars of the road vehicle, name of the driver, owner and relay these derails to the SM 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.

The SM shall also inform the SM 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 obstruction

After the track has been cleared of all obstruction the gateman shall inform to the SM accordingly, under exchange of private number

SM shall then issue a caution order to LP 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

Gateman shall secure the gate against road traffic the means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstruction.

SM shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest.

Normally working will be resumed only after maintenance staff rectifies the defective lifting barriers and issue reconnection /fit memo for the same.

Obstruction on the Track near Level Crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of the 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.

APPENDIX 'B'**SYSTEM OF SIGNALLING AND INTERLOCKING AND TELECOMMUNICATIONS GARUDABILLI STATION**

Details of Signalling Interlocking installations, telecommunication instructions for working them normally and in emergencies etc., including the power supply arrangements.

1.1 BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTLLATION:

This is a 'B' Class Station with Standard-III interlocking. The points and signals are power operated from a central panel installed in the SM's office. This station is equipped with panel operated MACLS. The SGE type Double line Lock and Block instruments are provided in the SMs panel room for section GRBL-GTLM and GRBL-GPI adjacent to the panel.

1.2 DESCRIPTION OF PANEL:

The yard layout is depicted in the panel board and is fixed parallel to the track so that when the SM on duty faces this panel, the Yard drawing on the panel corresponds to the actual field lay out in either direction.

1.3 POINT BUTTONS:

Each point is provided with push buttons (Black in colour) for individual operation of points. For operation of point of normal/reverse position, point group push buttons (black with red dot) are provided. Point button and point group button normal/reverse shall be pressed at the same time for operation of point to required position. To indicate the position of point, a white steady strip in Normal direction to indicate normal position of point, and a white steady strip in Reverse direction to indicate Reverse position of point.

1.4 When a point is set and locked correctly in normal position, a white steady strip indication on normal point zone appears suggesting that the point is in normal position and locked in its position.

1.5 When a point is set and locked correctly in reverse position, a white steady strip indication on normal point zone appears suggesting that the point is in reverse position and locked in its position.

1.6 When a point is operated form reverse to normal position, a white strip indication on normal point zone will start flashing till the concerned point is set and locked in normal position. When a point is operated form normal to reverse position, a white strip indication on reverse point zone will start flashing till the concerned point is set and locked in normal position.

1.7 OPERATION OF POINTS:

Points are operated to normal or reverse by pressing individual point button in conjunction with the point group button there by ;the white strip indication on normal point zone or reverse point zone as the case may be flashing till the points are set to normal or reverse position and locked. Then the white steady strip indication or normal point zone and white steady strip indication on reverse point zone will appear as the case may be during the automatic route setting of the train operation, the same indication will glow.

1.8 All running line points are operated by Electrical Point machine.

1.9 The course for non-setting of the point in the desired position has to be checked up by the SM on duty according to G&SR 3.68.01(c) and if there is defect other than obstruction the points has to be considered as defective and action shall be taken for clamping and pad locking these points in the desired position by the SM on duty himself for all trains according to SR 3.69.03(c).

2.0 **DESCRIPTIOIN OF POINTS:**

Sl. No.	Point No.	Button	Colour	Description
1	17		Black	Cross over point between UP & DN main line at Raipur end.
2	19		Black	Cross over point between DN main & Common loop line at Raipur end.
3	21		Black	Cross over point between UP main & UP loop line at Raipur end.
4	18		Black	Cross over point between UP & DN main line at VZM end.
5	20		Black	Cross over point between DN main & Common loop line at VZM end.
6	22		Black	Cross over point between UP main & UP loop line at VZM end.
7	Point group button (normal)		Black with Red dot	Common button for normal position of points.
8	Point group button (reverse)		Black with Red dot	Common button for reverse position of points.
9	23		Black	Cross over point between Common loop and Goods Common loop line at Raipur end.
10	24		Black	Cross over point between Common loop and Goods Common loop line at VZM end.

3.0 **SIGNAL BUTTONS:**

3.1

Sl. No.	Point No.	Button	Colour	Description
1	C1		Red with White dot	UP calling 'ON' signal for Line No. 1,2,4 & 5.
2	S1		Red	UP Home signal for Line No. 1,2,4&5
3	C2		Red with	DN calling 'ON' signal for Line No. 3,4 & 5.

		White dot	
4	S2	Red	DN Home signal for Line No. 3,4 & 5.
5	S5	Red	UP Loop Starter for Line No. 1.
6	S6	Red	DN Goods Common Loop starter signal for Line No. 5.
7	S7	Red	UP Common loop Starter Line No.4.
8	S8	Red	DN Common loop Starter Line No.4.
9	S9	Red	UP Goods Common Loop starter signal for Line No. 5
10	S10	Red	DN Main starter for Line No. 3.
11	S11	Red	UP Main starter for Line No. 2
12	S12	Red	DN Advanced starter.
13	S13	Red	UP Advanced starter
14	SH3	Yellow	Shunt signal for Line No. 3, 4 & 5.
15	SH4	Yellow	Shunt signal for Line No. 1,2,3, 4 & 5.

3.2 **SIGNAL INDICATION:**

The aspect of signal as obtained at any time is shown on the panel on the Signal indication (along side of the track)

3.3 **CALLING ON SIGNAL:**

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). To take 'OFF' Calling-on-signal the train must come to a stop at the foot of the Home Signal, occupying the track circuit in rear of the signal. The time release for Calling-On signal for both UP & DN Home signals is 60 seconds.

3.4 **PROVISION OF SHUNT SIGNALS:** Shunt signal SH-4 & SH-3 are provided for shunting purpose.

3.5 **OVER LAP TIME RELEASE (WHITE LIGHT):**

Shunt signal SH-4 & SH-3 are provided for shunting purpose.

Separate indications (white light) for each overlap is provided near the starter signal to indicate the free or locked condition of the overlap. This indication light will glow when overlap is locked by any Home signal route and there will be no light when the 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 lapse of 120 sec the white flashing light will disappear indicating concerned over lap is free.

4.0 **ROUTE BUTTONS:**

Route buttons are provided separately on each running line on the panel for indication of route (viz.L1UN, L1UN1, L2UN, L3UN, L4UN, L4UN1, L5UN and L5UN1). Common route buttons are also provided for taking off starters 13 AT UN, 12 AT UN. An individual route buttons is provided for taking off advance starter 13 UN, 12 UN. For clearing the signal, it is

necessary to operate the signal button and the concerned route buttons concurrently.

4.1 **DESCRIPTIONS OF ROUTE BUTTONS:**

1.	L1 UN	White	Route button for Up Home signal for Line No.1 setting overlap on UP main Line.
2.	L1 UN1	White with black dot.	Common route button for Up Home signal and UP Calling-On signal for Line No.1 setting overlap to over run line and route button for shunt signal No. 4 for Line No.1.
3.	L2 UN	White	Common route button for UP Home signal and Up Calling-On signal for Line No.2 setting overlap on UP main line and route button for shunt signal No. 4 for Line No.2.
4.	L3 UN	White.	Common route button for DN Home signal and Down Calling-On signal for Line No.3 setting overlap on DN main line and common route button for UP & DN shunt signal No. 3 & 4 respectively for Line NO.3
5.	L4 UN	White	Common route button for UP & DN Home signal and UP & DN Calling-On signal for Line No.4 setting overlap on UP & DN main line respectively.
6.	L4 UN1	White with black dot	Common route button for UP & DN Home signal for Line No.4 setting overlap on sand/hump over run line and common route button for UP & DN shunt signal No.3 & 4 respectively for line No. 4.
7.	L5 UN	White	Common route button for UP & DN Home signal for Line No.5 setting overlap on UP & DN main line respectively.
8.	L5 UN1	White with Black Dot	Common route button for UP & DN Home signal and UP & DN Calling-On signal setting overlap to over run line and also common route button for UP & DN shunt signals 3 & 4 respectively for line No. 5.
9.	12 UN	White	Route button for DN advance Starter.
10.	13 UN	White	Route button for UP advance Starter.
11.	12 AT UN	White	Route button for DN Starter 6,8, and 10.
12.	13 AT UN	White	Common route button for UP starters 5,7, 9 & 11.
13.	Group (Tans)	White with black dot	Common Trans button for crank handles and siding control.
14.	Group (Release)	White with black dot	Common release button for crank handles and siding control.
15.	CH-1	Blue	Points No. 19 and 23.
16.	CH-2	Blue	Points No. 21 and 22.

17.	CH-3	Blue	Points No. 17.
18.	CH-4	Blue	Points No. 18.
19.	CH-5	Blue	Points No. 20, 24.
20.	29 LXN	Chocolate	LC Gate No. 29 control.
21.	30 LXN	Chocolate	LC Gate No. 30 control.
22.	Emergency gate release ELXN	Chocolate with Red Dot.	Emergency release of LC Gate No. 29
23.	Emergency gate release ELXN	Chocolate with Red Dot.	Emergency release of LC Gate No. 30.
24.	Signal lamp failure Ack.	Red with white dot.	For acknowledge the signal lamp failure/point failure.
25.	Button Held ACK.	White with Red dot	To be pressed to stop the buzzer in case of any button held.
26.	Signal Cancellation	Red.	For cancellation of signal this is a common button to be pressed in conjunction with the intended signal button for which cancellation is required.
27.	Emergency of Point operation button.	Black with Red dot.	For operation of points in the event of failure of Track circuit/Axle counter.
28.	Goods Siding Control 26		For release of key from RKT for siding point No.26.
29.	Sleeper Factory Siding Control 27		For release of key from RKT for siding point No.27.

5.0 **POWER SUPPLY ARRANGEMENT FOR THE SIGNALLING INSTALLATION**

Same as para 4.3 of general portion of SWR.

5.1 **SIGNAL LAMP FAILURE INDICATION RED-SIGNAL LAMP MUTING BUTTOM RED WITH WHITE DOT:**

Whenever LED of a signal Aspect is failed, a miniature flashing Red light indication appears along with an audible buzzer indicates Signal lamp failure. Then Station Master on duty shall press the Signal failure/point failure Ack. Button thereby the buzzer stops but the Red indication lamp becomes steady which continues till either the signal lamp is replaced or signal assumes other aspect. Whenever filament is fuses, Station Master on duty shall immediately send message to SSE(Sig) for rectification.

5.2 **BUTTON HELD BUZZER WHITE WITH RED DOT:**

Whenever any button remains held up in pressed condition, 'Button Held' whiter indications starts flashing along with an audible buzzer. The Station Master on duty then acknowledge it by pressing 'Button Held' push button (white with Red dot) the buzzer stop

but the white indication continues to flash till the same is rectified.

6.0 TRACK CIRCUIT/AXLE COUNTER:

At this station all the berthing lines loop line and main lines and point zones are provided with track circuits/Axle counter 1AT, 1T, 1T1, 12T, 21T, 2AT, 17AT, 17BT, 19AT, 19BT, 23AT, 23BT, 2AT, 2T, 2T1, 13T, 13AT, 18/22AT, 18BT, 22BT, 20AT, 20/24AT, 24BT, L1T1, L1T2, L1T3, UMT1, UMT2, UMT3, DMT1, DMT2, DMT3, L4T1, L4T2, L4T3, L5T1, L5T2 & L5T3 to indicate the occupation/clearance of berth/point zone portion. Point zone Track circuits will automatically replace starters. Last Vehicle Track (LVT) and first Vehicle Rack (FVT) are provided near Home and advance starter signals for their automatic replacement release of block instruments. In addition 90 Mtrs. Rail length track circuits are provided near Up and Down home signal for control of calling on signal indication panel is installed in station to indicate the occupation/clearance of track circuits/Axle counter.

- 6.1** When a train is to be dispatched from the station yard on signals the Station Master on duty must ensure that the route between the starter signal and the block section limits demarcated by the Advance Starter is clear of any obstruction (which includes point zones track circuits) before he takes off departure signals.

6.2 CRANK HANDLE FOR EMERGENCY OPERATION OF POINTS CRANK:

Crank handle is inter locked with the signaling and interlocking system at this station and the crank handle which is normally locked up in the RKT instrument at the East and West gate lodge can be taken out when the signals, given for the connected route, are in the normal position and the route is not locked for any reason.

Even though the route is locked the crank handle can be extracted from the RKT through emergency operation by pressing crank handle button along with Group Trans button. After the lapse of 120 secs. The concern crank handle keys get released for emergency alteration of the locked route.

- 6.3** On account of the doubtful operation of any track circuit by light vehicle/vehicle including self propelled vehicles such as motor trolley or a diesel shunting engine or a tower wagon, in indication of the occupancy of the track it is necessary that the station Master on duty satisfied himself that the said vehicle/Vehicles has/have cleared the point zone track circuits by observing the track indication of the tracks on either side of the cross over by positively checking of the ENTRANCE and EXIT track circuit are showing occupancy and clearance in accordance with the train movement.

6.4 GOODS SIDING:

The goods siding takes off from the line No.1 at East end of the yard and is isolated by derailing switch of the siding and are operated by an Arc lever provided at site, at either end of siding. Hand plunger lock is fitted at the entrance points which can be unlocked by the 2 keys released from 2 RKTs of the same ward. 2 RKTs are provided in SMs office one each for East end and West end of the siding point. The keys/keys are released from 2 RKTs by pressing goods siding point button number 26 in conjunction with the group Trans button. When the key is extracted from the RKT and the despatch signals of UP loop Line No. 1 and SH4E route will be held locked in their normal position till such time the key IN

indication appears on the panel board.

The Goods siding is provided with T.C over both end point zones only. Goods vehicle with engine should be placed perfectly in the clear space (CSL) available in the goods siding i.e., clearing the T.C zone from either end of the goods siding then only the T.C zone where such movement has taken place will show clear. After detaching of hot axle vehicle, the engine departs from the goods siding to line No.1.

Successive locking of point No.26: The hand operated points are operated individually by arc levers in succession. When control No.26 is transmitted from panel a key R1 and Q1 will be released. Key R1 will be inserted in pint and releases key R2, this key R2 will be inserted on the other end of the point and point will be operated to reverse. Then key Q1 will be inserted on other side of siding pint and releases Q2 and Q2 will be inserted on the other end of point, then the point is operated to reverse and set to goods siding. After the movement is completed with key Q2 point will be normalized and key Q2 will be inserted in the other end and releases key Q1. This key Q1 will be transferred back to SM with control 26. The same process will be followed on the other end of the siding to make points normal.

7.0 STATION MASTER'S KEY:

The panel is also fitted with Station Master's lock up key to prevent unauthorized operation of this panel but with the arrangement to put back the signal to the ON positioning the case of emergency without altering the route when the panel is locked position.

8.0 EMERGENCY OPERATION:

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

8.1 CANCELLATION BUTTON OR VEEDER COUNTER:

For the purpose of the emergencies operations there is an emergency Route cancellation and also there is a veeder counter for counting emergency operations involving the concurrent operation of the emergency route cancellation button. Initially the SM on duty has to cancel the signal by pressing concerned signal button conjunction with signal cancellation button and again the SM on duty must press the emergency route release button along with concerned signal button for which emergency route release is required. An yellow indication will appear below the signal indicating that the timer has started operation and after lapse of 120 seconds. The desired route will be released provided all other conditions are favourable for the route release.

9.0 EMERGENCY OPERATIONS OF POINTS IN CASE OF POINT ZONE TRACK CIRCUIT FAILURE:

The station Master on duty can operate points from panel in case of point zone track circuit failure. Station Master on duty first press emergency point operation button and simultaneously then the individual point button is to be pressed. He shall then release the emergency point operation button only and press the point group Normal or reverse button as per requirement keeping the individual point button in pressed condition. Points will be set to Normal or Reverse position as pre operation button. During the initiation RED indication will appear above the emergency point operation counter placed about the

emergency point operation button will increase in number by one.

10.0 INTERLOCKING OF SIGNALS:

- 10.1** All running line points are fitted with point machine and are electrically detected by the relevant Home signals. Calling on signals, shunt signals and starter.
- 10.2** Advanced starters are interlocked with respective double line block instrument in LINE CLEAR position.
- 10.3** Home signals are interlocked with respective Double line lock and block instrument. The Block instruments cannot be made to normal unless the respective Home signals and calling on signals are in Normal position.
- 10.4** Signals once taken OFF can be put back to Danger in Case of emergency by pressing the concerned signal button in conjunction with signal cancellation button even when the panel is locked up with Station Master.

11.0 LOCKING OF RELAY ROOM:

The Relay Room at the station is provided with double locks (two independent locks) as necessary vide Optg. Manual 13.16. One key shall be kept with the signal maintainer of the station and the other key shall be with SM on duty. The Relay room cannot be opened unless both keys are used.

SM on duty shall ensure that the Relay room key is given to S&T maintenance staff under clear signature as and when required for normal maintenance and for special works and that the key should be returned by the S&T staff immediately after completion of the work and documentation shall be made in the Relay Room key register maintained at the station according to SR 3.51.05 and OM 13.16.

12.0 MAINTANANCE OF S&T INSTALLATION AND ADHERENCE TO MAINTENANCE SCHEDULES:

- 12.1** The regular maintenance of the S&T installation and adherence to the schedules of Maintenance as also to the mandatory schedules of testing of Points, Track Circuits, Signals, Ground Frames, Level Crossing Gates, the associated interlocking apparatus i.e., Cables and finally the interlocking functional tests is a must for the safe and satisfactory working these installations at the Station.
- 12.2** The tests, checks and re-placement etc., including overhauling shall confirm to the Schedules of the maintenance as indicated in the Signal Engineering Manual as also in the current and extent instructions/Circulars on the subject.

13.0 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNAL INTERLOCKING INSTALLATION:

- 13.1** Whenever there is failure of Points, Track Circuits, Signals, Axle-counter or any other interlocking gear at the Station, the failure report should be communicated by the Station Master on duty through a Memo to the sectional Maintainer and the Signal inspector of the section along with others as per G&SR 3.51.04 and 3.68.04 and document all such transactions.

14.0 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

However, before declaring a point 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 switches on the Panel in terms of SR 3.68.04(c).

14.1 RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

It is only after receipt of this information the Sectional Maintainer shall attend to the failure after giving a disconnection Memo. After rectification of the fault, the sectional maintainer shall give a re-connection memo detailing the rectification and it is only after the Station Master on duty has personally checked this defective gear and it satisfied that is in good and proper working order. He shall resume the normal working of the said defective gear in terms of SR 3.68.04(c) and (d).

15.0 PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORKS:

However any normal maintenance or special works for heavy renewals etc., are involved, these works should be pre planned by the Signal and Telecom field staff and the inspector of the section should give to the Station Master in writing 'Advance intimation' about this planned work in terms of G&SR 15.08.01.

16.0 EMERGENCIES:

Note with standing anything contained in the afore-said Para Nos. 14.1., 14.2 and 14.3 when a Gear is found to be defective an un-safe for passage or trains, the Signal & Telecom staff must at once suspend the working of that gear and the associated installations and issue as 'Suspense Memo' explaining the seriousness of the defect or Damage to the interlocking installation to the Station Master and take disconnection memo ad re-connection Memo can follow and the Station Master must promptly act on such messages and take adequate precautions treating the S&T installation as defective and pass trains over the effected interlocking gears according to extent instructions are contained in GR 3.77 and SR thereon.

17.0 EMERGENCY GATE RELEASE:

As per Para 4.1 Sl.No.12 of the main body of this SWR.

18.0 CORRECTING TIME IN THE STATION CLOCKS:

The Station Master shall set the time on his clock according to the time signal given by the Section Controller on duty at 16.00 Hours. Every day according to G&SR 4.01.01 and 4.01.02.

19.0 CRANK HANDLE FOR EMERGENCY OPERATION OF POINTS CRANK:

Crank handle is inter locked with the signaling and inter locking system at this station and the crank handle which is normally locked up in the RKT instrument in the location boxes at the both End of the yards can be taken out when the signals on the connected route are in normal position and the route is not locked for any reason.

Even when the route is locked the crank handle key can be extracted from the RKT through emergency operation by pressing the concerned crank handle button along with group Trans button concurrently. When this operation is resorted, the crank handle 'Key in' indication(white) and locked indication (Red) both start flashing. After 120 Second of flashing of both, the locked indication (Red) disappears. Similarly such red indication appears at the crank handle location at site near corresponding RKT and now the crank

handle key can be taken out from the RKT at site, After key extracted at site from the RKT, the key in indication (white) on panel, board will extinguish. After completion of work, crank handle key shall be restored to RKT which will be indicated by flashing key in (white) indication on panel board, which comes steady only after pressing of concerned crank handle button along with group release button concurrently.

On account of the doubtful operation of any track circuit by light vehicle/ vehicle including self propelled vehicles such as motor trolley or a diesel shunting engine or a tower wagon, in indication of the occupancy of the track it is necessary that the SM on duty satisfied himself that the said vehicle/ vehicles has/have cleared the point zone track circuits by observing the track indication of the tracks on either side of the cross over by positively checking of the ENTRANCE and EXIT track circuit are showing occupancy and clearance in accordance with the train movement.

20.0 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 facing and trailing before permitting any movement.

21.0 INTERLOCKING OF SIGNALS WITH BLOCK INSTRUMENTS:

22.0 INTERLOCKING WITH HOME SIGNALS:

All the UP and DOWN HOME Signals are Electrically Interlocked with the respective Double Line lock and Block instrument (DLBI) so that before the handle of DLBI instrument can be turned from train on line to line closed position, the controlling home signals of UP or DN direction as the case may be must be in their normal position.

22.1 The UP and DOWN Advanced Starter Signals are Electrically Interlocked with respective DLBI so that these signals can not be taken OFF until the Handle of the concerned Block Instrument is in Line clear Position.

22.2 SUSPENSION OF LAST STOP SIGNALS:

When the Double line block Instrument 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.

23.0 TELECOMMUNICATIONS:

Please refer Para No.5 in general portion of this SWR.

24.0 AXLE COUNTER:

Entire Block section between GRBL-GTLM and GRBL-GPI are provided with Digital Axle Counter.

For Section GRBL-GTLM:

A pair of Digital Axle Counter is provided between GRBL-GTLM one just beyond UP Advance Starter signal No.13 of GRBL and another on 1T1 Track circuit of GTLM. Similarly one just beyond DN Advance Starter signal No.12 of GTLM and another on 2T1 Track Circuit of GRBL.

For Section GRBL-GPI:

A pair of Digital Axle Counter is provided between GRBL-GPI one just beyond DN Advance Starter signal No.12 of GRBL and another on 2T1 Track circuit of GPI. Similarly one just beyond UP Advance Starter signal No.11 of GPI and another on 1T1 Track Circuit of GRBL.

Clearance of LV Axle Counter section is proved in the respective Block Control Circuit as well as in block release circuit. In case of failure of LV Axle Counter line clear can not be granted through Block Instrument. Also in case of such failure on arrival of train, block instrument cannot be normalized.

25.0 RESETTING OF LVV DIGITAL AXLE COUNTER:

- i) After complete arrival of train, the LVV axle counter continue to show 'RED' on the panel board, the on duty SM at both ends of the section shall resort to reset the axle counter. For this purpose SM at receiving end shall first verify that Block section is clear of trains. If the failure has occurred after arrival of train, SM shall obtain signature from the guard of stopping train on the train intact register (vide GR &SR 4.17, 4.17.01) or by exchanging signal with the guard of through train, so that he can ensure that the train has arrived completely before resorting the LVV axle counter. SM of receiving end shall inform the failure of axle counter to on duty SM of dispatching end for UP/DN section.
- ii) SM at receiving end then sends an operating person to verify that the last vehicle is clear of Block section. After verifying the clearance of last vehicle of concerned block section, the operating person exchanges private number.
- iii) On exchanging private number the SM at both ends will insert the reset key for corresponding section and shall press the nominated reset button. By this operation LVV axle counter will reset and associated counter will change to next higher number at both ends.
- iv) SM at both ends shall record the counter number so changer due to reset of axle counter in the reset register and also in the Train signal register mentioning the purpose of reset. After the reset operation is completed preparatory reset indication will appear on reset box at both ends which suggests that the reset operation is successfully completed and the first train has to be piloted out. On arrival of the piloted train the axle counter track cct zone of the section shows clear and normal working shall be resumed. Even after arrival of piloted train, If LVV axle counter zone does not show clear indication, S&T staff to be informed for getting rectified the failure of axle counter.
- v) It is mandatory that every reset operation of LVV axle counter first train after reset process shall have to be piloted out.

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 n'e 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 telephones as assigned to the all concerned.

APPENDIX 'C'

ANTI COLLISION DEVICE [RAKSHA KAVACH]

NIL

APPENDIX-'D'.

The following staff are concerned with the movement of the trains whose duties are given below:

1. 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 (c) 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. STATION MASTER:

- 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.I and OM Chapter-2.
- 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. 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. TRAFFIC GATE KEEPER:

- 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 Sr. DPO/WAT from time to time.

APPENDIX 'E'**ESSENTIAL EQUIPMENTS**

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

Sl. No	Description	Quantity
i)	Detonators	20
ii)	LED based Tri Colour flashing torch.	3(1 Spare)
iii)	Hand Signal Flags	3(1 Spare)
iv)	Safety chains with Pad locks	6
v)	Clamps with Padlocks	8
vi)	Skids	6
vii)	Wedges	4
viii)	Fire & Sand buckets	6
ix)	Fire Extinguishers	2
x)	Line blocking collars	6
xi)	Motor trolley on line board	2
xii)	Block suspension board	2

APPENDIX “F”**RULES FOR WORKING OF DK STATIONS. HALTS, IBH AND OUTLYING SIDINGS.**

SL NO.	PROVISIONS	DESCRIPTIONS
1	DK STATIONS	NIL
2	HALTS	NIL
3	IBH	NIL
4	OUTLYING SIDINGS:	<p><u>SLEEPER FACTORY SIDINGS (L.No.6 & 7):-</u></p> <p>The sleeper factory siding are takes off from line No.5 at GPI end of the yard and is isolated by a hand point lever provided at site. The sidings as Line No.6 & Line No.7 are terminates at dead end. The both lines (Line No.6 & 7) are further isolated by hand points separately. The entrance and exist of these sidings are controlled by 27. The KEY-S thus provided for setting and locking of the points. While extracting the KEY-S from HKT, no signal shall be taken OFF for line No.5. While performing shunting in the siding 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 followed.</p>

STATION WORKING RULES FOR 25KV AC ELECTRIC TRACTION GARUDABILLI STATION

1. **GENERAL & SUBSIDIARY RULES:**

- a) The rules applicable to electrified section have been given in chapter-XVII of the General Rules and in the subsidiary Rules made here under for electric traction. The General principles governing operation and maintenance of Traction Overhead Equipment, Electric locomotives, Signal & Telecommunications installations have been given in the A.C. traction manual. These rule books and an extract of the relevant paras of A.C.Traction Manual, shall be kept in each station/yard office and all the staff dealing with safe working shall make themselves thoroughly familiar with the same GR. 17.01 SRs there under.
- b) Brief reference to important rules required to be followed by Station/ Yard staff in their day-to-day work has been given in this Appendix. These are, however, illustrative and not exhaustive.

2. **GENERAL SAFETY PRECAUTIONS:**

- a) All staff are warned that contact with or very near (within 2 meters, unless protected by a screen as per rules) to live portion of the 25 KV Traction Overhead Equipment is dangerous and shall be strictly avoided.
- b) No work on overhead lines or in the zones within 2 meters of any live equipment shall be carried out unless a regular 'PERMIT TO WORK' has been obtained from the authorized Traction staff and the line has been made dead and earthed as per rules (GR & SR 17.04) and ACTM para No.20600 to 20619 Vol.II Part. I.

3. **SECTIONING DIAGRAM (Station Working Rules Diagram for Electric Traction)**

- a) A sectioning diagram No.VTRE/OHE/RE/GRBL/02 indicating schematically the lines, which have been equipped, for electric traction, is exhibited. The diagram also indicates different electrical sections (Sectors, Sub-Sectors and Elementary Sections). The Controlling Switches (Isolators or interrupters), insulated overlaps and section insulators, where the overhead equipment is electrically separated. The limits of an electrical section (Sub-Sector or Elementary section) are indicated at the relevant structural location at insulated overlaps for the electrical section. A copy of this diagram is also enclosed with these special working rules and will form part of the same.
- b) For all-purpose connected with Train movements and Power Blocks, this diagram is the only authorized document to be referred to the normal position of various switches is indicating on the diagram.

4. **UNWIRED TRACKS:**

No electric locomotive with pantograph raised shall under any circumstances be taken to an unwired section.

5. **OPERATING OF SWITCHES:**

- a) All switching operations shall be carried out in accordance with the instructions of the Traction Power Controller except in respect of switching operations for local blocks, which may be carried out by authorized traction staff, after they have been granted local blocks by the Station Master in accordance with S.R. 17.04.09 and ACTM para No. 20600,20601 of Vol.II, Part.I.
- b) In case of emergency, authorized and trained station Master may open Isolator switches under specific instructions of the Traction Power Controller (S.R. 17.04.14(b)) with exchanging of Private Nos. to perform the operations of the following isolator switches as well as any other isolators within the station limit.

Sl.No.	Isolator No.	Loc. No.	Sl.No.	Isolator No.	Loc. No.
1.	SM – 407	455/23	6.	SS – 504A	GRBL/1040
2.	SM – 408	455/20	7.	SS - 505	GRBL/1041
3.	SM – 409	454/7	8.	SS – 505A	GRBL/1045
4.	SM – 410	454/4	9.	SS - 506	GRBL/1024A
5.	SS - 504	GRBL/1026A			

6. **POSITION OF SWITCH HANDLES (ISOLATORS):**

When a switch is in the closed position, the operating handle of the switch is at the top.

7. **LOCATION OF KEYS OF SWITCHES:**

The keys for the padlocks of various isolator Switches are kept in the Station Master's Office in a glass fronted sealed box in the custody of Station Master (17.04.13). In the event of breaking of glass box, the procedure stipulated in SR 17.04.13 (b) has to be strictly followed.

8. **PROCEDURE AND PRECAUTIONS FOR OPERATING ISOLATORS:**

The procedure for operation isolator switches have been given in G and S.R. 17.04.15 and S.R. 17.04.14 (b) which must be rigidly observed.

Isolator switches may be opened only after ensuring :-

- A) If the Isolator switch is on the main line then the adjacent interrupters on either end of isolators switch have been opened.
- B) Isolator switches provided for isolating sidings and yards and also to feed OHE inside running sheds may be opened provided the official concerned makes it absolutely certain that -
- The entire section is visible, and
 - There is no locomotive with raised pantograph in the section.

9. **POWER BLOCK:**

- a) The detailed procedure for obtaining power block has been given in S.R. 17.04.02, 17.03.03, 17.04.04 and 17.04.05 and ACTM Para 20603,20604,20611,20612 & 20613 which must be rigidly followed except in case of emergency.
- b) The sequence of switching operations for granting and canceling the Power Block for a particular section, are included in the Annexure. These shall be strictly followed by all staff. Failure to follow the sequence indicated is likely to lead to dangerous consequences. When any Isolator switch is changed from its normal position, for staff to work in overhead equipment, a danger board shall be exhibited on the switch with the caption "DANGER MEN WORKING". An adequate number or such Danger Boards have been provided at each station.

10. **PROTECTION AT THE TIME OF POWER BLOCK:**

- a) All sections over which the Power Block has been granted shall be protected against entry of Electric Locomotive with pantograph raised from either end during the period of the Power Block (S.R. 17.04) and ACTM 20620,20621 to 20627 of Vol.II, Part.I strict enforcement of longitudinal and transverse protection as per the Annexure attached shall be ensured before imposing power block. If there is/are locomotive/s on the section over which the power block is to be given, the Loco Pilot of such locomotive/s shall be given a memo by the Station Master on duty or authorized Traction Staff to lower the pantograph and not to raise the pantograph until further instructions and acknowledgement shall be obtained. The Loco Pilots shall not be given instruction to raise the pantograph till the power block is cancelled.
- b) Station Master or station staff conducting shunting operation with electric locomotive shall ensure that under no circumstances, any electric locomotive approaches near the traction structure limiting elementary sections over which the power block has been granted. Limits of each electrical section at a station are shown in the Station Sectioning Diagram.

11. **SECTION INSULATORS:**

In order to isolate main and loop lines on different grids in the yard. Crossover/Turn-out connecting main and loop lines of different grids of the yard, are provided with section insulators, so that, when one line/or grid is made electrically dead and thereby any fault on the same, the other line/grid is not affected. The speed of the electric locomotives with pantograph raised over such section insulators shall not exceed 50 KMPH subject to other speed restriction which may be in force. When one of the two sections separated by a Section Insulator is dead, the pantograph of the electric locomotive on the live section shall not proceed closer than 30 Ft.(10 Meters) towards the section insulator marking the end of the dead section.

12. BREAKDOWN OF TRACTION OVERHEAD EQUIPMENT:

All breakdown or defects noted or reported on the Traction overhead equipment or any other traction equipment including bonding shall immediately be reported to the Traction Power controller (S.R. 17.03.02) and ACTM Para 20605 of Vol.II Part I. Necessary Caution Order should be issued to the Driver concerned as directed by the Traction Power Controller observing the existing rules regarding issue of caution orders.

13. REGISTER OF MESSAGES:

All message relating to faults on the traction Overhead equipment, operation of switches custody of keys of out-door switches and other important communication in connection with the operation and maintenance of Traction Overhead equipment shall be recorded serially in a register by both the sender and the receiver indicating the time at which the message are received or exchanged (G & S.R. 17.04.12) and ACTM Para 20610 of Vol II Part I.

14. MOVEMENT OF OTHER THAN ELECTRIC TRAINS:

Goods or passenger trains by other than electric locomotives may be allowed to pass through the dead section subject to the following conditions :-

- a) This has not been prohibited specifically in the power block message.
- b) Other than Electric trains hauled by such engines shall be brought to a stand at the station preceding the station/section at which power block is granted and the Station Master or this station shall satisfy himself by personal inspection that there is no electric locomotive in the track.
- c) He shall also give a Caution Order to the Loco pilot of such engine or train, warning him of the power block ahead and instructing him to watch for hand signals and observe them.
- d) No Station Master shall give line clear or lower signals for a train to run over a section under power block unless he has received an assurance (supported by Private Number) from the Station Master of the preceding station that there is no electric locomotive or Inspection Car with pantograph raised in the train.(ACTM 20627 Vol.II Part I.)

Note: For purpose of this Rule a Dead Electric Engine dispatched as a vehicle shall not be considered as an Electric Locomotive.

15. ELECTRIC LOCOMOTIVES :

Provisions included in A.C. traction Manual must be completed with in case of double heading or banking by electric locomotive and precautions indicated therein must be complied with when dispatching locomotive ACTM 30636 Vol.III.

16. **ESM :**
Any direct contact or close proximity to 25 KV line conductors is dangerous, the station ESM climbing up the Signal post for removing or fixing or cleaning the signal should not carry any long article which may accidentally touch or come in close proximity to live conductors. The ESM shall also be warned against bringing any part or body near live conductors.
17. **CRANES :**
No crane shall be worked on or near Traction Overhead equipment, unless such equipment is first made dead and earthed and an authorized representative of the OHE section is present (S.R. 17.04.17 (a) & (b)).
18. **WORK ON ROOF OF ROLLING STOCK:**
No person shall climb on the top of the Engine or Tenders or on the roofs of carriages, or wagons, when those vehicles are located beneath Overhead equipment except, when a regular 'Permit to work' has been obtained from authorized Traction Staff and the overhead equipment has been made dead and earthed (GR & SR 17.05(02)) and ACTM Para 10402 & 10403 of Vol.I.
19. **BLOCK INSTRUMENT OR ANY OTHER ELECTRICAL SIGNALLING EQUIPMENT:**
The Station Master/Cabin master on duty must always watch for any unusual working in the Block instrument or any other signaling equipment, which may arise due to voltage, induced from traction system. The Block instrument or the signaling Equipment must be suspended whenever there are any signs of unusual working and the nearest signal and Telecom, maintenance Inspector may be contacted to inspect and certify the same. In the event of a break of the catenary, the Station Master Master must immediately check up whether all Block and signaling equipment are working normal before permitting any train movement (ACTM 10430 of Vol.II).
20. **TELECOMMUNICATION CIRCUITS:**
The details of the Telecommunication facilities available on the electrified sections and the use of the same have been given at ACTM Para 10213, 10429 of Vol. I and Para 20703 of Vol. II part I.
21. **ELECTRIC SHOCK:**
The Station Master shall exhibit prominently the instructions issued regarding the treatment to persons suffering from electric shock in the Station/Yard Office and shall ensure that all Class-III staff are familiar with those instructions (shock treatment) chart provided in SM's office.

22. **FIRE:**
Regarding fire on or adjacent to any electrical equipment refer G & SR (6:10).
23. Nothing in these rules amends or supersedes any General subsidiary rules or instructions included in AC Traction Manual. These working rules shall be read as supplement to the aforesaid Rules Books and also to the existing Station Working Rules of the Station.
24. **AMENDMENTS OR SUPPLEMENTARY CORRECTION SLIPS:**
Any amendment to these Working Rules or any of the Annexure will be notified by a correction slip to the Station Working Rules. All corrections to the Station Working Rules shall on receipt be immediately carried out in the "Recipients" copies. The correction slips will be serially numbered and it will be responsibility of each member of the staff to whom working rules are supplied to call for the missing correction slips and bring the contents thereof to the notice of all staff concerned and take their acknowledgement.
25. **CONTINUOUS WATCH BY INSPECTING STAFF:**
The Inspecting staff of Operating, telecommunication and Traction Departments shall carry out regular checks at all points to which these special working rules are supplied to ensure that the rules are corrected up-to-date and the staff concerned are fully conversant with the rules and abide by them.
- NOTE:** Whenever the codes 'G' & 'SR' appear in these special working rules, please refer to the General and Subsidiary Rules for 25 KV AC Electric Traction, chapter- XIX.

SAFETY PRECAUTIONS AND ESSENTIAL INSTRUCTIONS FOR RUNNING OPERATION STAFF WORKING ON AC TRACTION AREA

DO(s) and DON'T(s)

A. FOR ALL STAFF

a) DO(s)

1. In case of fire on Electric Traction Equipment of Wires.
 - i. Inform traction Power Controller.
 - ii. Extinguish fire by special extinguishers, if available.
 - iii. Ensure no water jet is used under any circumstances.
2. Anything unusual on Traction Wires or Electric Locomotive inform traction Power Controller or nearest Station Master.
3. In emergency Traction Power Controller can be contacted on emergency telephone system. (Sockets for connecting emergency telephone are provided at intervals of approximately every kilometer and direction to nearest socket is indicated on OHE masts).

b) DON'T(s)

1. Do not approach within a range of 2 meters (approximately 7 ft.) of any traction wires or live equipment.
2. Do not work on or near traction wires or any live equipment unless they have been made dead, earthed and permit-to-work obtained from an authorized traction staff.
3. Do not permit unauthorized persons to operate any equipment even if it be for making it dead.
4. Do not disturb any Earthing, Bonding or Traction Wires.
5. Do not enter any switching station or remote control centre unless specially permitted and accompanied by authorized traction staff.
6. Do not attempt to turn the person in contact with live traction wire either by touching him or with the help of wooden bamboo pole or by grabbing his clothing or with the help of rubber gloves if or any other means. Under such conditions, contact the TPC, switch off power supply and remove the person in contact with the live traction wire by using wooden bamboo pole or by grabbing his clothes or with rubber gloves if available only after ensuring from TPC that the power supply has been switched off.
7. Do not forget to give artificial respiration to the victim.

B. FOR RUNNING STAFF:**a) DO(s)**

1. Avoid slipping of wheels.
2. Load coal or oil in locos outside the electrified/area only.
3. Keep a safe distance of 2 meters(7 feet) from traction wires while working on the locomotives.

b) DON'T(s)

1. Do not lift or raise your tools towards traction wires (keep the tools in their respective position immediately after use).
2. Do not load coal on the engine tender to a height more than 4 meters above rail level.
3. Do not take electric locomotive with raised pantograph to any unwired line, beyond power block working limit board or near the section insulators at the end of section under power block.
4. Do not climb on the locomotive (of any type) on the engine tender for any purpose, while under traction wire unless power is cut-off and permit to work obtained(for watering, use the water column from the ground with the special device provided for this purpose and open tank over by the special device provided).
5. Do not allow long articles like fixing rod, shovel or any other thing to protrude above the engine while on electrified tracks.
6. Do not direct any jet or spray towards the traction wires (jets or water, if necessary, may be used horizontally outside the safety zone of 2 meters (7 feet).

C) FOR OPERATING STAFF**a) DO(s)**

1. Ensure all staff is conversant with safety precautions.
2. Ensure that no electric loco is standing with its panto-raised position in the power block section.
3. Report defects in traction wires of any electric locomotive or electric Multiple Unit Promptly to the traction Power controller.
4. Keep sufficient number of 'Caution Reminder Collars' and ensure safety understand their use.
5. Ensure fitting of Caution Reminder Collars to the points, & signal levers which give access to section under power block.
6. Observe procedures given in station working rules of 25 KV AC Electric Traction while operating isolator switches.
7. Ensure safe custody of isolator switch keys.
8. Ensure that traction power staffs protect sections from all directions by banner flag during power block.
9. Suspend working of block and signals if signals of unusual working are noticed. Always checkup block instruments at signaling equipment when any breakdown in traction wires occurs.

b) DON'T(s)

1. Do not permit an electric locomotive or multiple units with raised pantograph to approach any section under power block beyond Power Block working Limit Board or near section insulators.
2. Do not permit any crane to work adjacent to live traction wires.
3. Do not permit your staff to approach live traction wires within the danger zone of 2 meters (approximately 7 feet).
4. Do not permit electric locomotive with raised pantograph to enter any unwired section.

LIST OF SWITCHING STATION AND TRACTION SUB-STATION IN THE SECTION VZM-SPRD.

<u>Sl.No.</u>	<u>SWS/TSS</u>	<u>Location</u>
1.	Gotlam/SP	KM.CH: 462/55.50
2.	Gajapatinagaram/SSP	KM.CH: 445/20.50
3.	Komatipalli/TSS	KM.CH: 435/100.00
4.	Bobilli/SP	KM.CH: 415/835.50
5.	Sitanagaram/SSP	KM.CH: 402/365.50
6.	Parvatipuram/TSS	KM.CH: 388/707.00
7.	Gumuda/SSP	KM.CH: 375/854.00
8.	Kuneru/SP	KM.CH: 368/285.50
9.	Ladda/SSP	KM.CH: 350/978.00
10.	Rayagada/TSS	KM.CH: 341/305.00
11.	Singapur Road/SSP	KM.CH: 332/09.50

STATION WORKING RULES FOR GARUDABILLI FOR 25 KV AC TRACTION**These Rules shall be read along with existing Station Working Rules and Annexures**

These rules apply only to Electric Trains or Electric Engines considered as such & indicated the protection required to prevent them from entering a Sector, Sub-sector OR an elementary section, over which a POWER BLOCK exist.

Sl./ No.	Description of electrified section under P/B	Steps for precautions to be taken during Power Block in respect of Electric Locos, Hauling Trains or running Light or Standing with Pantograph raised		Sequence of Switching Operation for granting power block.	Sequence of Switching Operation for restoring OHE power.
		longitudinal protection	Transverse protection		
A) Sector:					
1.	Sector between Gotlam/SP-Komatipalli/TSS on both UP & DN line between Gotlam – Garudabilli section. (UP E/S No. 27309,27307,X-501, X-503,27305, 27303, X-505,27301,27505, X-507,27503,27501 and DN E/S No. 27208,X-502, 27206,27204,X-504, X-506,27202,27406, 27404,27402)	i) Movement of Electric Trains/Locos shall not be permitted into section Gotlam-Garudabilli, Garudabilli-Gajapatinagaram on UP & DN line. ii) Line clear shall not be obtained/granted from/to Gotlam & Gajapatinagaram for Electric Trains/Locos on UP/DN line. iii) All reception and dispatch signals shall be kept at 'ON'.	NIL	i) Ensure BX-276 is in open condition at Komatipalli/TSS. ii) Ensure BM-268 & BM-269 are in open condition at Gotlam/SP. i) Open CB-114 at Komatipalli/TSS.	i) Close CB-114 at Komatipalli/TSS.

B)	Sub-Sector:				
2.	DN sub-sector between section Vizianagaram - Gotlam – Garudabilli and Garudabilli - Gajapatinagaram on DN line. Location from Gotlam/SP to Gajapatinagaram/SSP . (DN E/S No. 27208, X-502,27206,27204, X-504,X-506,27202)	i) Movement of Electric Trains/Locos shall not be permitted into Gotlam-Garudabilli and Garudabilli-Gajapatinagaram on DN line. ii) Line clear shall not be granted to Gotlam for Electric Trains/Locos on the DN line. iii) Line clear shall not be obtained from Gajapatinagaram for Electric Trains/Locos on the DN line. iv) DN reception and dispatch signals shall be kept at 'ON'.	Crossover point No.18 at Gotlam end and crossover point No.17 at Gajapatinagaram end shall be kept at normal position only.	i) Open BM-270 at Gotlam/SP. ii) Open BM-271 and BM-272 at Gajapatinagaram / SSP.	i) Close BM-270 at Gotlam/SP. ii) Close BM-271 and BM-272 at Gajapatinagaram/ SSP.
3.	UP sub-sector between section Vizianagaram - Gajapatinagaram - Garudabilli and Garudabilli-Gotlam on UP line. Location from Gotlam/SP to Gajapatinagaram/SSP . (UP E/S No. 27309,27307,X-501, X-503,27305, 27303, X-505,27301,27505, X-507,27503,27501)	i) Movement of Electric Trains/Locos shall not be permitted into GPI-GRBL and Garudabilli-Gotlam on UP line. ii) Line clear shall not be granted to Gajapatinagaram for Electric Trains/Locos on the UP line. iii) Line clear shall not be obtained from Gotlam for Electric Trains/Locos on the UP line. iv) UP reception and dispatch signals shall be kept at 'ON'.	Crossover point No.18 at Gotlam end and crossover point No.17 at Gajapatinagaram end shall be kept at normal position only.	i) Ensure BM-269 at Gotlam/SP is in open position. ii) Open BM-270 at Gotlam/SP. ii) Open BM-271 and BM-273 at Gajapatinagaram / SSP.	i) Close BM-271 and BM-273 at Gajapatinagaram/ SSP. ii) Close BM-270 at Gotlam/SP.

C)	ELEMENTARY SECTION				
1.	E/S No. E/S No. 27206, 27204, 27202, X-502, X-504, X-506 on DN line between section Gotlam- Garudabilli, on Common Loop, Goods Loop & Sleeper Factory siding at Garudabilli. Location from SM-402 of Gotlam at Loc. No. 460/4 to SM-408 of Garudabilli at Loc. No. 455/20.	i) Movement of Electric Trains/Locos shall not be permitted into section Gotlam - Garudabilli on DN line. ii) Line clear shall not be granted to/obtained from Gotlam for Electric Trains/Locos on DN line. iii) DN reception and dispatch signals shall be kept at 'ON'.	Nil	i) Open BM-270 and BM-268 at Gotlam/SP. ii) Open SM-402 of Gotlam at Loc.No.460/4. iii) Close BM-270 and BM-268 at Gotlam/SP.	i) Close SM-402 of Gotlam at Loc.No.460/4.

2.	E/S No.27204 ,X-504 and X-506 on DN Main line , Common loop line (L-4) , Goods Common Loop and Sleeper factory siding at Garudabilli.	<ul style="list-style-type: none"> i) Movement of Electric Trains/Locos shall not be permitted on DN Main, Common loop line including Goods Common Loop (L-5) & Sleeper Factory Siding(L-6 & L-7) at GRBL. ii) Line clear shall not be obtained from GPI for Electric Trains/Locos on DN line. iii) Ensure no Electric Trains/Locos is standing with its Panto raised position on Line No. 4,5,6 & 7. iv) DN Electric Trains/Locos from GTLM may be taken upto DN Home signal of GRBL. v) DN dispatch signal shall be kept at 'ON'. vi) Reception and dispatch signal of Common loop line shall be kept at 'ON'. vii) Shunting of Electric Trains/Locos shall be prohibited on Sleeper factory siding. 	Crossove r point No.18 & at GTLM end and crossover point No.17 at GPI end shall be kept at normal position only.	<ul style="list-style-type: none"> i) Open BM-270 and BM-268 at Gotlam/SP. ii) Open SM-408 of Garudabilli at Loc. No.455/20. iii) Close BM-270 and BM-268 at Gotlam/SP. 	i) Close SM-408 of Garudabilli at Loc. No.455/20.
----	---	---	---	--	---

3.	E/S No.27202 on DN line between section Garudabilli - Gajapatinagaram. Location from SM-410 of Garudabilli at Loc.No.454/4 to IOL at Loc. No. 452/24.	i) Movement of Electric Trains/Locos shall not be permitted into section Garudabilli – Gajapatinagaram on DN line. ii) Line clear shall not be obtained from Gajapatinagaram for Electric Trains/Locos on DN line. iii) Any stabled Electric Trains/Locos may be admitted/dispatched into/from common loop line at Gotlam end. iv) DN dispatch signal shall be kept at 'ON'.	Nil	i) Open BM-270 and BM-268 at Gotlam/SP. ii) Open SM-410 of Garudabilli at Loc.No.454/4. iii) Close BM-270 and BM-268 at Gotlam/SP.	i) Close SM-410 of Garudabilli at Loc.No.454/4.
4.	E/S No. E/S No. 27305,27303,X-505,27301 on UP line between section Gotlam- Garudabilli, on UP Loop, Goods siding at Garudabilli.	i) Movement of Electric Trains/Locos shall not be permitted into section Garudabilli - Gotlam on UP line. ii) Line clear shall not be obtained from Gotlam for Electric Trains/Locos on UP line. iii) UP reception signal shall be kept at 'ON'.	Nil	i) Open BM-270 and BM-269 at Gotlam/SP. ii) Open SM-403 of GTLM at Loc. No. 460/1. iii) Open SM-407 of GRBL at Loc.No.455/23. iv) Close BM-270 and BM-269 at Gotlam/SP.	i) Close SM-403 of Gotlam at Loc. No. 460/1. ii) Close SM-407 of Garudabilli at Loc.No.455/23.

5.	E/S No.27303,27301, X-505 on UP line between section Garudabilli - Gotlam, UP Main line and UP loop line at Garudabilli. Location from SM-407 of Garudabilli at Loc.No.455/23 to SM-409 of Garudabilli at Loc. No. 454/7.	<p>i) Movement of Electric Trains/Locos shall not be permitted into section Garudabilli - Gotlam on UP line including UP Main, UP loop line and Goods siding at Garudabilli.</p> <p>ii) Ensure that no Electric Loco is standing with its Panto raised position on Line No. 1, 2 & UP line side Goods siding.</p> <p>iii) Line clear shall not be obtained from Gotlam for Electric Trains/Locos on UP line.</p> <p>iv) UP Electric Trains/Locos from Gajapatinagaram can be admitted on Common loop line (Line No.4).</p> <p>v) Shunting of Electric Trains/Locos shall be prohibited at Goods siding.</p> <p>vi) UP dispatch signals of UP Main line and UP loop line shall be kept at 'ON'.</p>	Crossover point No.18 & point No. 20 at Gotlam end shall be kept at normal position only.	<p>i) Open BM-270 and BM-269 at Gotlam/SP.</p> <p>ii) Open SM-407 of GRBL at Loc.No.455/23.</p> <p>iii) Open SM-409 of GRBL at Loc. No. 454/7.</p> <p>iv) Close BM-270 and BM-269 at Gotlam/SP.</p>	<p>i) Close SM-407 of Garudabilli at Loc.No.455/23.</p> <p>ii) Close SM-409 of Garudabilli at Loc. No. 454/7.</p>
----	---	--	---	---	---

6.	E/S No.27301 on UP line between section Gajapatinagaram - Garudabilli. SM-409 of Garudabilli at Loc. No. 454/7 to IOL at Loc. No.452/23.	<ul style="list-style-type: none"> i) Movement of Electric Trains/Locos shall not be permitted into section Gajapatinagaram - Garudabilli on UP line. ii) Line clear shall not be granted to Gajapatinagaram for Electric Trains/Locos on UP line. iii) Any stabled Electric Trains/Locos at UP loop line (Line No.1) can be dispatched towards Gotlam. iv) UP reception signal shall be kept at 'ON'. 	Crossover point No.17 at Gajapatinagaram end shall be kept at normal position only.	<ul style="list-style-type: none"> i) Open BM-270 and BM-269 at Gotlam/SP. ii) Open SM-409 of GRBL at Loc. No. 454/7. iii) Close BM-270 and BM-269 at Gotlam/SP. 	<ul style="list-style-type: none"> i) Close SM-409 of Garudabilli at Loc. No. 454/7.
----	--	--	---	---	---

7.	E/S No. X-504 on Goods Common loop line (L-5) at Garudabilli.	<p>i) Movement of Electric Trains/Locos shall not be permitted into Goods Common loop line (Line No.5) at GRBL.</p> <p>ii) No Electric Trains/Locos can be admitted/dispatched into/from Goods Common loop line (Line No.5) from/towards both the directions.</p> <p>iii) Ensure that no Electric Loco is standing with its Panto raised position on Line No.5 i.e. Goods Common Loop.</p> <p>iv) Loading work can be performed on Goods Common loop line (Line No.5) only after elementary section made dead.</p> <p>v) Reception & dispatch signals for Goods Common loop line (Line No.5) at both ends shall be kept at 'ON'.</p>	Crossover point No.24 at Gotlam end and point No. 23 at Gajapatinagara m end shall be kept at normal position only.	<p>i) Open SS-504 of Garudabilli at Loc. No. GRBL/1026A first.</p> <p>ii) Then open SS-504A of Garudabilli at Loc. No.GRBL/1040.</p>	<p>i) Close SS-504A of Garudabilli at Loc. No.GRBL/1040 first.</p> <p>ii) Then close SS-504 of Garudabilli at Loc. No. GRBL/1026A.</p>
----	---	--	---	--	--

8.	E/S No.X-506 on Line No.6 and Line No.7 (Sleeper factory siding) at Garudabilli.	<p>i) Movement of Electric Trains/Locos shall not be permitted into Sleeper factory siding at Garudabilli.</p> <p>ii) Shunting movement Sleeper factory siding at shall be prohibited.</p>	Hand point lever of Sleeper factory siding shall not be operated.	i) Open SS/506 of Garudabilli at Loc.No.GRBL/1024A.	i) Close SS/506 of Garudabilli at Loc.No. GRBL/1024A.
9.	E/S No. X-505 on Goods siding (connected to UP Loop) at Garudabilli.	<p>i) Movement of Electric Trains/Locos shall not be permitted into Goods siding (connected to UP Loop) at Garudabilli.</p> <p>ii) No Electric Trains/Locos can be admitted/dispatched into/from Goods siding from/towards both the directions.</p> <p>iii) Ensure that no Electric Loco is standing with its Panto raised positions on Goods siding connected to UP Loop.</p> <p>iv) Loading work can be performed on Goods siding only after elementary section made dead.</p> <p>v) Reception & dispatch signals for Goods siding at both ends shall be kept at 'ON'.</p>	Hand point lever of Goods siding shall not be operated.	<p>i) Open SS-505 of Garudabilli at Loc. No. GRBL/1041 first.</p> <p>ii) Then open SS-505A of Garudabilli at Loc. No.GRBL/1045.</p>	<p>i) Close SS-505A of Garudabilli at Loc. No.GRBL/1045 first.</p> <p>ii) Then close SS-505 of Garudabilli at Loc. No. GRBL/1041.</p>

NOTE:

- i) For any unusual movement of Electric Locos, the Station Master on duty must refer to the working rule diagram from 25kV AC traction of his station and ensured that there is no chance of energizing the section where power block has been granted.
- ii) Points leading to unwired tracks shall not be used for the movement of Electric Loco with pantograph raised.
- iii) Refer drawing No. VTRE/OHE/RE/GRBL/02.