

EAST COAST RAILWAY
SAMBALPUR DIVISION

STATION WORKING RULES OF SASON STATION (CODE:SSN)

BG/MG/NG : Broad Gauge

Date of issue:07.04.2021

Date brought into force:

NOTE: -

The Station Working Rule (SWR) must be read in conjunction with General and Subsidiary Rules and Block Working Manual. These rules do not in any way supersede any rule in the above books.30

1. STATION WORKING RULE; -

1.1 **STATION WORKING RULE DIAGRAM NO.** SI/WRD – 22086, Alt-E.

1.2 **SIGNAL INTERLOCKING PLAN NO.:** - S.I – 22086,Alt-E.

The Station Working Rule diagram and Signal Interlocking Plan shows the complete lay out of the yard, siding, normal position of points, the signaling and Interlocking arrangements, Gradients and Level Crossings within the station limits. This must be referred to for giving details of the points number and signals when reporting accidents.

2. DESCRIPTION OF STATION: -

SASON is a four-line station situated in Jharsuguda - Sambalpur section at KM 548.948(548/35-37(UP),548/36-38(DN) from HWH & 34.343KM from JSG. It is Standard – II (R) interlocked Class 'B' station with central panel and having Absolute Block System of Working. Block proving Axle counters have been provided at either end of the station.

2.1 GENERAL LOCATION:-

2.1.1	NAME OF STATION	: SASON (Code-SSN)
2.1.2	CLASSIFICATION OF STATION	: 'B' class
2.1.3	NAME OF THE SECTION	: SBP-JSG (Double line), BG section
2.1.4	ROUTE	: "D" Spl.
2.1.5	LOCATION	: KM 548.948 from HWH & 34.343 KM from JSG.
2.1.6	ELECTRIFIED/NON-ELECTRIFIED	: Electrified

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

- i) SAMBALPUR end - SARLA (Code: SLRA) inter distance 6.457 K.M.
- ii) JHARSUGUDA end - RENGALI (Code: RGL) inter distance 8.593 K.M.
- iii) Passenger Halt: - Nil
- iv) Flag station: - Nil
- v) Outlying siding: - Nil

- vi) D.K. station: - Nil.
- vii) IBH: - NIL
- viii) IBS: - NIL

2.3 **BLOCK SECTION LIMITS: -**

Between stations	The point from which 'Block section' commences.	The point at which 'Block section' ends.
Between SSN-SRLA UP Line	UP Advanced starter cum Gate distant signal No.15 of SSN Station	BSLB of SLRA Station on UP Line.
Between SSN-SRLA DN Line	BSLB of SSN Station on DN Line.	DN Advanced Starter Signal of SLRA.
Between SSN -RGL UP Line	BSLB of SSN Station on UP Line.	UP Advanced Starter Signal of RGL.
Between SSN-RGL DN Line	DN Advanced starter cum Gate Distant signal No.16 of SSN Station.	BSLB of RGL Station on DN Line.

2.3.1 **STATION SECTION:**

The portion from UP Advanced starter cum gate Distant signal No 15 to BSLB on UP line and DN Advanced starter cum gate distant signal No 16 to BSLB on DN Line is the station section of SASON station.

2.3.2 **STATION LIMIT:**

The portion between DN Gate Distant signal to DN Advanced starter signal No.16 and UP Gate Distant signal on to UP Advanced starter signal No.15 is the station limit of SASON station.

2.4 **GRADIENT: -**

(a) **FROM THE CENTER OF STATION BUILDING TOWARDS RENGALI (UP LINE)**

CHAINAGE IN METER		INTER DISTANCE	GRADIENT
FROM	TO		
0	604.00	604.00M	1 in 400 R
604.00	1223.00	619.00M	1 in 150 R
1223.00	1669.00	446.00M	1 in 160 R
1669.00	1865.00	196.00M	LEVEL
1865.00	4143	2240.00M	1 in 172 R.

(b) **FROM THE CENTER OF STATION BUILDING TOWARDS RENGALI (DN LINE)**

CHAINAGE IN METER		INTER DISTANCE	GRADIENT
FROM	TO		
0	604.00	604.00M	1 in 400 R
604.00	1223.00	619.00M	1 in 150 R
1223.00	1669.00	446.00M	1 in 160 R
1669.00	1903.00	234.00M	LEVEL
1865.00	4143	2240.00M	1 in 170 R.

(c) **FROM THE CENTER OF STATION BUILDING TOWARDS SARLA (UP LINE)**

CHAINAGE IN METER		INTER DISTANCE	GRADIENT
FROM	TO		
0	766.00	766.00M	1 in 400 F
766.00	1124.00	358.00M	1 in 150 F
1124.00	1544.00	420.00M	1 in 600 R
1544.00	2409.00	865.00M	1 in 190 F
2409.00	3269.00	860.00M	LEVEL

(d) **FROM THE CENTER OF STATION BUILDING TOWARDS SARLA (DN LINE)**

CHAINAGE IN METER		INTER DISTANCE	GRADIENT
FROM	TO		
0	766.00	766.00M	1 in 400 F
766.00	1124.00	358.00M	1 in 150 F
1124.00	1437.00	313.00M	1 in 760 R
1437.00	1617.00	180.00M	1 in 215 F
1617.00	2117.00	500.00M	1 in 123 F
2117.00	2277.00	160.00M	1 in 160 F
2277.00	2337.00	60.00M	1 in 260 F
2337.00	2537.00	200.00M	1 in 570 F

2.5 **LAY OUT: -**

- i) No. of running lines :- 4 (Four)
- ii) No. of sidings :- 1 (One). One ballast siding (CSL-395 M) taking off line No-4 at RGL end.
- iii) No. of Passenger platform :- 02, (Two High level Passenger Platforms beside Line No.-1 (400 m X 9.60m) and Line No-4 (400m X 6.10m)
- iii) No. of goods shed platform :- NIL
- iv) FOB :- 1, One FOB at CH 25 M.

2.5.1 **RUNNING LINES, DIRECTION OF MOVEMENTS AND HOLDING CAPACITY IN CSL:**

DESCRIPTION	CSL	ISOLATION PROVIDED	
		TOWARDS SARLA	TOWARDS RGL
Line No.1 (Common Loop)	738 mtrs. (Str. To Str)	ORL	ORL
Line No.2 (UP Main Line)	762 mtrs. (Str. To SH)	---	---
Line No.3 (DN Main Line)	763 mtrs. (Str to SH)	---	---
Line No.4 (DN Loop)	719 mtrs. (Str. To SH)	DS	ORL

(II) **DIRECTION OF MOVEMENTS: -**

- a. Trains arriving from RENGALI end are UP trains.
- b. Trains arriving from SARLA end are DN trains.

2.5.2 NON-RUNNING LINES AND CSL.

Sl. No.	Description	CAL/CSL	Takes off	Exit	Operation
1.	Ballast Siding	395 M (DE to GJ)	Line No. 4 (RGL end)	One way	Key Transmission, Panel control button N0-29.

2.5.2 ANY SPECIAL FEATURES IN THE LAYOUT: - NIL**2.6 LEVEL CROSSINGS: (STATION SECTION) - NIL****2.7 LEVEL CROSSINGS: (IN BLOCK SECTION)-**

Sl. No	Location	K.M.& No.	Normal Position	Class	Type	Operation	Communication
1.	Between DN Gate Home and DN Home signal	550/11-13(up),550/12-14(dn) (JT-22)	Open to road traffic	'Spl'	Inter locked	Winch operated	Magneto telephone with SM/SSN
2.	Between UP home signal and UP gate Home signal	547/27-29(up),547/28-30(dn) (JT-19)	Open to road traffic	'B1'	Inter locked	Winch operated	Magneto telephone with SM/SSN
3.	Between SSN-RGL stations	543/21-23(up),543/22-24(dn) (JT-16)	Open to road traffic	'C'	Non-Interlocked	Winch operated	Magneto telephone with SM/RGL
4.	Between SSN-RGL stations	547/5-7(up),547/6-8(up) (JT-18)	Closed to road traffic	'C'	Non-Interlocked	Winch operated	Magneto telephone with SM/SSN

Train Actuated Warning Device has been provided at LC No. JT-19 & JT-22.

(Working of the Level crossing gates is detailed in Appendix - 'A').

3. SYSTEM AND MEANS OF WORKING:-

(Rule No. Chapter XIV of GR & SR, Chapters III & VI of BWM)

- i) **System of working:** - Absolute block System of working on double line.
- ii) **Type of block instruments:-**SGE type Double Line lock & Block Instrument with adjacent station.
- iii) **Instruments:** - Non Co-operative type.
- iv) **Block Telephone:-** Connected with adjacent stations RGL & SLRA station.
- v) **Staff responsible for their operation:** - SM on duty.
- vi) **Custodian of keys:** - SM on duty

4. SYSTEM OF SIGNALLING AND INTERLOCKING: -**4.1.1 STANDARD OF INTERLOCKING AND TYPE OF SIGNALLING: -**

The station is provided with Standard II (R) interlocking, central panel with Multiple Aspect Colour Light Signalling and LVCD Axle Counters. All the points are centrally operated from central panel by on duty Station Master. The Home signals and Advanced Starter signals are interlocked with respective block instruments. The station has no end cabins. GR 3.08(4) (b) governs the aspect and indications of the signals respectively. UP gate distant signal at KM 550/5 is combined with UP Adv. Starter signal No-15. Similarly, DN gate Distant signal of L.C.gate at KM 547/27-29(UP),547/28-30(DN) has been combined with DN Adv. Starter signal

No-16. (CRS's dispensation for combining the signals obtained vide letter No.1570 of Date 01.03.2011.

Maximum equipment of signal – Distant, Home, Starter and Advanced starter in either direction.

4.1.2 STATION MASTER'S CONTROL PANEL: -

- (i) A push button type electrical control apparatus (operation cum indication panel) is provided in the Station Master's office to operate electrically the UP and DN points and signals. The control apparatus is provided with a lock up key named (SM's Key) which shall always remain in the personal custody of the SS/SM/ASM on duty in terms of GR 5.08. The position of all points, signals and running lines are available in the Station Master's illuminated panel diagram. Reminder collars are provided for use on push buttons, which will be placed on point button, route button, signal button or on any other button to prevent operation of the button in case of concerned line is blocked; or to prevent inadvertent operation of a particular button as and when required.
- (ii) **SEALING OF EMERGENCY OPERATION BUTTONS/KEYS:-** All emergency operation buttons' on the Station Master's control panel shall be kept sealed in normal condition by S&T staff. Whenever any emergency operation is initiated. SS/SM on duty shall break open the seal of the concerned button to make the button operative. Immediately after completion of emergency operation SS/SM on duty shall inform concerned S&T staff for resealing of the concerned button.

4.1.3 TRACK CIRCUIT: -

All the lines including point zone between Home and Advanced starter signal on either direction is track circuited. The position of the running lines including point zones i.e. occupied/clear is indicated in the illuminated diagram at the Station Master's office. Normally there will be no indication of track circuits. It shows 'RED' when the line is occupied and 'WHITE' when the line is clear provided the route is set.

4.1.3.1 AXLE COUNTER:

Both side block sections are monitored by axle counter system, digital axle counters are provided at both end of the station. A pair of digital axle counter is provided between SASON and SARLA (beyond advanced starter of SASON & in advance of home signal of SARLA on UP Line), another pair of digital axle counter is provided for DN line of SASON-SARLA (beyond advanced starter of SARLA & in advance of home signal of SASON on DN Line), for counting the axles 'IN' and for counting the axles 'OUT' to indicate whether the block section is clear of trains as well as to verify the last vehicle of the incoming train.

Similarly, a pair of digital axle counter is provided between SASON and RENGALI (beyond advanced starter of SASON & in advance of home signal of RENGALI on DN Line), another pair of digital axle counter is provided for UP line of SASON -RENGALI (beyond advanced starter of RENGALI & in advance of home signal of SASON on UP Line), for counting the axles 'IN' and for counting the axles 'OUT' to indicate whether the block section is clear of trains as well as to verify the last vehicle of the incoming train.

The position of block section i.e. clear/occupied is reflected on the reset box panel provided in the Station Master's office which shows 'GREEN' when the block section is clear and 'RED' when the block section is occupied.

A reset box consisting of a counter and one resetting key with a push switch and three indications i.e. 'RED', 'GREEN', 'YELLOW' miniature, GREEN miniature and locking arrangement for each pair of axle counter is kept at the station masters office. 'RED' and 'GREEN' indicates occupations and clearance of Block section respectively 'YELLOW' miniature indication glows when power is ON and GREEN miniature glows when resetting operation is

initiated and after passage of a train the Axle counter will clear. The resetting key of this panel is kept locked and sealed in a separate box.

Whenever a train enters into the block section, block section clear indication 'GREEN' disappears and occupied indication 'RED' appears. If after the complete arrival of the train, 'RED' indication does not change to 'GREEN', it should be assumed as block instrument failure and necessary action as per GR 14.13 to be followed. The axle counter is interlocked with Block instruments at either side.

4.1.4 POSITION AND OPERATION OF POINTS: -

The positions of all points are shown in station Working Rule Diagram and also on operating panel. All points are power operated through Station Master's control panel apparatus. All cross over points on running line are independently worked by electric point machine and have built in locking and detection arrangement

4.1.5 ELECTRICAL KEY TRANSMITTER (EKT):-

EKTs with crank handle keys are provided at both end locations for the operation of points in case of failure of point motors, The keys for the crank handles are transmitted electrically to the crank handle locations for operating the points by crank handles.

4.1.6 IBS : NIL

4.1.6 .POINTS AND TRAP INDICATOR: NIL

4.1.8 REPEATER (BANNER TYPE): NIL

4.1.7 CALLING ON SIGNALS:-

'Calling on' signals have been provided below UP and DN home signals. It shows no light when 'ON' and 'YELLOW' light when taken off.

4.1.7 SHUNT SIGNALS:-

Independent shunt signals are provided on line No 3 & 4 at SLRA end and on line No2 at RGL end for forward shunting and at top point at either end for back shunting movement.

4.1.8 ANTI COLLOSION DEVICE: - NIL

4.1.9 EMERGENCY CROSSOVER:- Cross-Over No. 20A/B at SBP end is provided as emergency cross-over.

4.1.10 LC GATE OPERATION:- Given in Appendix 'A'

4.12 CRANK HANDLE

When any point fails to operate normally by the route setting operation or individual 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 handle keys 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.

The crank handle key in RKT in the end goomties can be released from the RKT. The SM has to press concerned crank handle button and Trans button. This will enable SM/TP to extract crank handle key CH-1/CH-2/CH-3/CH-4 from RKT at end goomty. SS/SM/TPM on duty after extracting the crank handle key from RKT at end-goomty shall insert it in the space/groove provided in the point machine and turn it to open the slot for insertion of crank handle in the point machine. After

inserting the crank handle in the point machine he shall operate it to set the point to desired position. After completion of point work the crank handle key is to be inserted in the RKT at end goomty and transmitted to station. Station Master on getting 'Key IN' flashing indication that will appear on panel, shall press relevant CH button & Group Release button to get the steady key "IN" indication. SS/SM on duty shall personally ensure clamping and padlocking of all facing and trailing points en-route. The cases of failure of motor operated points should be promptly reported to the concerned ESM/Signal Inspector for immediate rectification. SS/SM on duty as per OM 2.19 shall maintain an emergency crank handle register. The procedure for use of crank handle for motor operated points shall be followed in terms of operating Manual 2.19.

4.13 **EMERGENCY POINT OPERATION (BLACK WITH RED DOT):**

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit and SM's emergency point key is 'IN' shall press emergency point operation button by breaking the seal along with relevant point button simultaneously. Then retaining point button pressed, emergency point operation button to be released and the point group button normal / reverse button is to be pressed for operating the point to 'NORMAL' or 'REVERSE'. All such operations will be registered in the emergency point operation counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose. S&T staff should be advised immediately to get the emergency point operation button resealed after rectification of fault, if any.

4.14 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE BUTTON (WHITE WITH RED DOT):**

The panel interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and the concerned signal button. After this the emergency route release button (white with red dot) positioned in the top of panel to be pressed first by breaking the seal and subsequently the concerned signal button is to be pressed releasing the emergency route release button. A white flashing light will glow indicating that the timer is working. After 120 seconds, the white flashing light along with the white strip of light will disappear suggesting the route has been released.

In case the route illumination (white strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to get the emergency route release button resealed after rectification of fault, if any.

Each operation of emergency cancellation of route is recorded in the emergency route release counter by registering the next higher number. All such operations and the new number should be recorded in the station diary and in the train signal register.

4, 15 **EMERGENCY ROUTE RELEASE COUNTER:**

This counter is provided to register the number of operations made for emergency cancellation of route. The Station Master must record the last number registered on the counter while taking over/handing over duty.

4.16 **CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF: -**

As per JPO/02/2012 of 29.08.2012, the following procedure shall be adopted for opening of Relay Room:-

The Relay room of station shall have double locking system of operating and S&T Locks. One Godrej Lock shall be provided on the door of Relay Room by the Station Master. This lock is named as

operating lock. The key shall be kept in the safe custody in the key- box with the SM on duty. Likewise, one Godrej lock shall be provided on the door of Relay Room by the Signal Maintainer/ Signal Supervisor of the Station /Section.

Names of the S&T staff authorized for opening of Relay Room is to be entered in the first page of Relay Room Key Register and jointly certified by SSE /Signal In-Charge and TI In- Charge of the Section. In emergency, if any S&T staff other than authorized wants to open Relay room, he must inform DSTE through Signal Fault Control. Signal Fault Control shall convey the permission of DSTE to SS/SM by giving Signal Fault Control order number.

Whenever relay room is to be opened either for scheduled maintenance or during failures or for other maintenance activities/construction works. The concerned Maintainer/Signal Supervisor will inform SM on duty for opening of Relay Room with reason. SM on duty will verify his identity from the list of authorized S & T Staff recorded in the first page of Relay Room Key register or as advised by Signal Fault Control in emergency. SM shall give the key of operating lock to S&T staff, after the entry is made in the Relay Room and also with Red Ink in TSR. Relay Room key shall not be handed over by SM on duty to any Group D staff of S&T department. On completion of work, the concerned Signal Maintainer/ Signal Supervisor shall properly close Relay Room door and lock it with both the locks and then return the key of operating lock to the SM on duty making the entry in the relay room register.

When the key of Operating Lock is returned by S& T staff to SM on duty, he shall first verify the Relay Room for proper locking and then keep the key in safe custody and acknowledge it on the Relay-Room key register. If the relay room key is handed over to the Signal staff regarding the interference in safety gears the train shall be piloted in and out.

For attending Failures of S& T gears within relay Rooms, the following steps shall be taken :

Entry to be made in S& T failure register by SM on duty and failure Memo has to be issued to S& T staff. S& T staff shall not take the Relay Room Key for attending failures and open the Relay Room unless the failure is recorded in Signal failure register. If disconnection is required, Disconnection Memo has to be given by S& T staff to SM on duty. Failure Memo should be acknowledged and entry in relay room key register to be made by S& T staff before obtaining Station Master's key. Relay Room key for Schedule maintenance shall be taken once in a calendar Month during monthly inspection by Sectional Supervisor. Relay room can be opened by following above procedure for special maintenance activities like cable insulation testing, block/ disconnection memos, selection/ locking table testing, maintenance work inside relay room by Electrical and Engineering staff, during failures, data logger resetting and inspection by Divisional and Headquarter officials, Track Circuit adjustments & voltage monitoring during monsoon and whenever required during rains. Works required by S& T Construction & open line staff for preparatory works and during commissioning. In each such case, the Construction Staff Shall follow the detailed guidelines issued regarding working on signaling gears under the charge of open line.

In case of emergencies such as fire, flood, earthquake etc., Open Line Section Engineer (Signal) / Signal Maintainer & SS/SM shall jointly decide the need for opening the Relay Room. Section Engineer Signal HQ at Divisional Control Office and Section controller shall be advised respectively. In case of communication failure during such emergencies, Open Line Signal Maintainers/ Supervisors and SS/SM on duty shall jointly decide the need for opening the Relay Room and communicate later on to respective controls. In case key is lost /misplaced, it shall be reported to S&T control as well as section control for either lock. In normal course the spare key with respective

custodians shall be used. In emergency situation lock may be broken under advice to Section Control as well as S&T control. New lock shall be procured and provided.

In case SS/SM on duty comes to know of relay Room opening by unauthorized means or by unauthorized person or by any Group-D' Staff, the signaling system shall be suspended by him and matter immediately reported to Section Controller for necessary action. Senior section Engineer/ Signal & TI of the respective section will check the station records of relay room opening during their inspections and cross check it with data logger/counter reading if provided. Discrepancy, if any, shall be immediately inquired into and advised to Sr DSTE & Sr DOM by numbered control message from the station immediately for further action.

POWER SUPPLY: -

- i) CLS power panel with rotary change over switch is provided in the SM's office with the three power supplies viz UP AT, DN AT and local power supply for changing the switch to the required supply position. Luminous indicator's are provided above the circuit breaker for each supply to indicate the availability of the supplies.
- ii) Normally the rotary switch will be kept towards UP AT or DN AT position. Whenever the power block is to be given on the line, the on duty SM must ascertain the power is available on the other AT e.g if power block is to be given on the UP line, DN AT must be available and vice versa.
- iii) During the non-availability of both the AT supplies SM on duty shall keep the rotary change over switch towards the local supply to feed available local supply to the Installation.
- iv) In case of failure of one of the AT supply without any power block, on duty SM has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is UP and when tripped, it goes DN). In case of failure of both AT supplies, the local supplies shall be utilized by operating the switch. If the circuit breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and a message shall be given to the AEEE/GEN and CTFO/PSI/TRD/GEN for prompt rectification.
- v) For IPS system that provides to PI, auto-change over has been provided.
- vi) There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

REMOTE MONITORING ASM BOX:

Remote monitoring ASM box gives alarm to the ASM for the following fault conditions:-

- a) 50% DOD (Depth of Discharge) of Battery. In this condition Audio/Visual alarm comes which can be acknowledged with audio cut off.
- b) 60% DOD (Depth of Discharge), which warns for emergency. The Alarm for this condition is same as for condition 1.
- c) 70% DOD (Depth of Discharge), which signals system, shut down. In this condition Signal feed cut off and all DC-DC converters continue working. Audio alarm will continue till power supply restored.
- d) Any of the Module fails, which calls for "Call S&T".
- e) 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 station diary duly initiating action for rectification of failure, if any.

5.0 **TELECOMMUNICATION FACILITIES: -**

1. Telephone attached with Double line Lock & Block Instrument for either side Block Section.
2. Station to Station fixed telephone (hot line) is provided
3. Station is provided with Auto telephone connected with Railway Exchange
4. BSNL telephone has been provided
5. The station is connected to BLGR-JSG control circuit by a control telephone.
6. Station to station 25 Watt VHF communication is provided.
7. Telephone is provided between Station and both end crank handle locations.
8. Telephone is provided between Station and L.C. gates at Km 550/11-13(UP),550/12-14(DN), KM 547/5-7(UP),547/6-8(DN) & Km 547/27-29(UP),547/28-30(DN).
9. Telephone is provided for communication with TPC.

NOTE: -

1. For obtaining Line Clear, VHF should be used as a last alternative and not as a sole means of communication.
2. VHF and Walkie-Talkie sets should not be used for unnecessary discussions with Loco Pilots, Guards or any other staff.
3. The on duty SM shall use the above electrical communication instruments stated in Para-5.0 from item No. (1) to (6) strictly in order of preference for obtaining/granting line clear vide SR 14.01.01. In case of failure of any of the above means of communication the SM on duty shall work vide SR 6.02.06

(Details are mentioned in Appendix 'B' of the SWR.)

6.0 **SYSTEM OF TRAIN WORKING: -**

The movement of trains is controlled by Section Controller on duty whose orders shall be complied with, provided they do not contravene any General Rules, Subsidiary Rules, Station Working Rules, Block Working Manual and other safe working instructions issued from time to time. In the event of suspension of control working, the Station Master on duty shall work independently in conjunction with the Station Master of adjoining block station and shall be responsible to ensure that there is no undue delay to train operation in general.

6.1 **DUTIES OF TRAIN WORKING STAFF: -**

Details of duties of operating staff are mentioned in Appendix 'D' of the SWR.

6.1.1 **TRAIN WORKING STAFF: -**

The following are the complement of train working and operating staff provided at this station to work in each shift.

Sl. No	Designation	Roster	No. of staff in each shift	Hrs. of Duty.
1.	Station Manager-II ----	Continuous	01	-----09 hrs.
2.	Dy. SS/SM/ASM-----			-----08 hrs.
3.	TP/Sr. TP/TPM-A/TPM-B	E.I.	01	12 hrs.

The above staff shall work as per the rosters issued by DPO/SBP from time to time and these rosters shall be displayed in the SM office.

6.1.2 **RESPONSIBILITY OF ASCERTAINING CLEARANCE OF THE LINE: -**

The SS/SM on duty is responsible to ascertain the clearance of the nominated line between outer most facing points of concerned line as per GR.14.10.

6.1.3 **ASSURANCE OF STAFF IN ASSURANCE REGISTER: -**

All staff before taking up independent charge of their duties at this station, shall make a written declaration in the assurance register that they have read and thoroughly understood the system in force and must sign in such declaration.

No Railway servant shall be entrusted with any duty involving safety of the public unless the station in-charge is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS is responsible to see that all the staff are conversant with the Station Working Rules and their signatures obtained in the Assurance register after he is satisfied that they have thoroughly understood the working rules of the station. In case of Group 'D' staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibilities.

The station superintendent is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance Register must be maintained in two parts, one for Group 'C' and the other for Group 'D' staff. A duplicate copy of the Assurance Register must be maintained and kept in personal custody of the Station Superintendent.

The declaration shall be renewed in the following cases: -

- (i) Whenever there is a change in the Station Working Rules.
- (iii) For any staff who have not worked at the station or were away from the station for a period of 15 days or more.

6.2 (A) CONDITION FOR GRANTING LINE CLEAR: -

The conditions laid down in GR 8.01 (1) (a), (b), 8.01 (2) (b), 8.03 (1) (a), (b), (c) (ii) shall be complied with before the line is considered clear and 'Line Clear' is granted for a train by on duty SS/SM. The line shall not be considered clear and 'Line Clear shall not be given unless:

- (i) The whole of the last preceding train has arrived complete inside the BSLB.
- (ii) All necessary signals are put back to 'ON' behind the said train.
- (iii) The line is clear up to the BSLB on DN line for DN trains and BSLB on UP line for UP trains.

NOTE-If the light of the reception signal is found not burning, line clear shall not be granted for train till such time it is ensured that concerned driver is notified of the fact in writing by the SM of the station to which such line clear is to be granted.[Ref GR:3.49(4) ,8.01(1)(a),(b)(c), 8.01(2)(b),8.03(2),(a),(b),C(ii),8.03(1))(a),(b)(c)(ii)

6.2.1 ANY SPECIAL CONDITION TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN: - NIL

6.2.1.1 SETTING OF POINTS AGAINST BLOCKED LINE: -

All Points shall normally be set for the straight except when authorized by special instruction. When a running line is blocked by stable load, wagon, vehicle or by train which is to cross or give precedence to another train or immediately after arrival of a train at the station, the points at rear should immediately be set against the blocked line except when shunting or for any other movement towards the blocked line is required to be done vide 3.51.06(a). if all the lines at the station happen to be blocked, then SR.3.51.06(b) will be followed.

6.2.1.2 RECEPTION OF TRAIN ON BLOCKED LINE:-

In case reception of a train on a obstructed line to the SMs shall follow GR 5.09 & SR 5.09.01.

6.2.2 OUTLYING SIDING: - NIL.

6.2.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE Not Applicable

6.2.4 DESPATCH OF TRAINS ON NON-SIGNALLED LINE Not applicable.

6.2.5. **DESPATCH OF TRAINS FROM LINE PROVIDED WITH COMMON STARTER SIGNAL**

Not applicable.

6.2.6 **SPECIAL RESTRICTIONS:**

- (I) Shunting shall not be permitted at both end of the yard unless the engine is leading towards the falling gradient.
- (II) GR 5.20 and SR's thereto apply at this station.

6.3 **CONDITIONS FOR TAKING 'OFF' APPROACH SIGNAL: -**

Reception of trains is governed by General Rules 3.36, 3.38, 3.40, and SRs 3.40(1),(a), (2)(a) and Subsidiary Rule 3.40.01 and other relevant provisions of General and Subsidiary Rules, Block Working Manual and Station Working Rules of the station to be followed.

Adequate distances to be kept clear vide General Rule 3.40(3) (a) for reception of trains

A. CLEARANCE OF ADEQUATE DISTANCE:-

To take off the home signal for admission of a train the adequate distance (signal overlap) as mentioned below shall be kept clear: -

Sl. No.	UP TRAIN			DN TRAIN	
		FROM	TO	FROM	TO
1	Line No. 1	Foot of the UP starter signal No.9	UP advanced starter signal No.15 or up to the end of ORL	Foot of the DN starter signal No. 8	Up to the end of ORL or DN advanced starter signal No.16.
2	Line No. 2	Foot of the UP starter Signal No.11	UP Advanced starter signal No.15	----	-----
3	Line No. 3	----	-----	Foot of the DN starter signal No.12	DN advanced starter signal No.16
4	Line No.4	----	-----	Foot of the DN starter signal No.6	DN advanced starter signal No.16 or up to the end of ORL.

Before admitting a train on any line, it must be ensured that the track indication for the respective line indicates 'WHITE' indication in the illuminated panel diagram. To receive a train, for which line clear is granted, the SS/SM on duty shall nominate a clear line in consultation with the Section Controller on duty. SS/SM shall personally satisfy himself that the nominated line is clear and free from all obstruction by seeing the track circuit indication on panel or by physical verification of the nominated route in case of failure of track circuit. He shall suspend all non-isolated shunting and thereafter set the points of the nominated route by means of push button switch provided on the control panel. He shall then verify from the visual indication available in the panel that points are set to the desired route.

In case any of the track circuit on the concerned route shows occupied by RED indication even though the other conditions are satisfied, the operation of panel control buttons by the SS/SM

on duty will not permit the concerned signal to be taken off. However, reception of train will be possible in such cases with the “ Calling On” signal fixed below Home signal at either end provided the first track circuit in advance of home signal does not show ‘RED’ indication.

Miniature colour light calling on signal is provided below the home signals in terms of GR 3.13(6)(b). A calling-on signal shows no light in the ‘ON’ position. The calling on signal is taken off for reception of a train when the home signal above it cannot be taken off due to failure of track circuit or any other reason or for admission of a train on blocked line.

B. TAKING OFF CALLING ON SIGNAL

To take off calling on signal, the train must come to a stop at the foot of the Home signal, occupying track circuit in rear of the signal. When train occupies the track circuit, RED light strip will appear on the panel. The particular route on which the train is intended to be received shall be set by individual point operation by operating point button & point group buttons or by setting route by pressing route button & signal button or by crank handling in the event of failure of operation of point through panel. After the route is set, the calling-on signal button C1 / C2 (Red with white dot), as the case may be, shall be pressed simultaneously along with concerned route button for 2-3 seconds and released after a lapse of 60 sec. The calling-on signal clears and a yellow light indication appears on the panel for the concerned calling-on signal.

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO ‘ON’: -

If for any reason after taking off signals, it is required to put back the signal and alter the route, in terms of Subsidiary Rules 3.36.02(b)(ii), a time delay of 2 minutes shall be observed before the points can be altered.

6.3.2 SIMULTANEOUS RECEPTION, DESPATCH, CROSSING & PRECEDENCE OF TRAINS:

(i)	While receiving a DN train on Line No.1 setting overlap to over run line.	Despatching of a DN train from the Line No.3. or Line No 4.
(ii)	While receiving a DN train on Line No.4 setting overlap to over run line.	Reception of an UP train on Line No.1 setting overlap up to ORL or Line No.2 setting overlap to Adv. Str or dispatching of a DN train from the Line No.1 or Line No. 3.
(iii)	While receiving an UP train on Line No.1 setting overlap to over run line.	Dispatching of an UP train from the Line No.2 Reception of a DN train on Line No.3 or 4.

Rules laid down in GR3.47 and GR 3.47.01 shall be followed.

6.5 COMPLETE ARRIVAL OF TRAINS: -

(Rule no. GR 4.16 & SR 4.17.01(a)(b)(c)(iii) (iv), GR 4.17.02, GR 14.10)

a) STAFF RESPONSIBLE TO VERIFY COMPLETE ARRIVAL: -

SM on duty.

b) MODE OF VERIFICATION:

Through AXLE COUNTER.

6.5.1 **L.V. VERIFICATION THROUGH AXLE COUNTER: -**

Entire block section at both sides of the station is monitored by axle counter system and the position of block section whether clear or occupied is indicated in the panel. As soon as a train enters in to the block section, the 'RED' indication appears in the axle counter indication panel. After the whole train clears the block section, 'GREEN' indication appears on the axle counter indication panel. This confirms the complete arrival of train and the SS/SM on duty shall give train out of section report on seeing the section clear (GREEN) indication at the panel.

6.5.2 **L.V. VERIFICATION WHEN AXLE COUNTER FAILS:-**

In case of failure of axle counter, the Station Master on duty shall obtain complete arrival certificate from the Guard of the train in the complete arrival register (T/1410) maintained at the station for stopping train. For through passing train the station master on duty shall satisfy himself about complete arrival of train by verification of the last vehicle indicator vide Subsidiary Rule 4.16.05 that the train is complete. In case a train arrives/passes incomplete, action shall be taken as per Subsidiary Rules 4.17.02. 'The train out of block section signal' shall be withheld to the station in rear until complete arrival certificate is received from the station in advance supported by a Private Number.

6.5.3 **L.V. VERIFICATION WHEN MOTOR TROLLEY FOLLOWING:-**

On occasions when motor trolley follows a train, the points shall not be altered until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the Station Master on duty shall take action in terms of Subsidiary Rule 15.25.03 (b)(vi).

6.5.4 **RECEPTION OF TRAIN ON BLOCKED LINE: -**

For admission of a train on a blocked line the SM on duty shall comply with the instruction laid down in GR 5.09 and SRs thereto.

6.5.4 **DESPATCHING OF TRAINS: -**

Dispatch of trains are governed by General Rules 3.36, 3.38, 3.39, 3.42, 5.11 & 8.01 Subsidiary Rule 3.36.04(b), 3.42.04, SR 14.08 and Block Working Manual 2.07(5)(a)(b), BWM 4.03 and other provision of General Rules, Subsidiary Rules, Block Working Manual and Station Working Rules of the station.

To despatch a train, the SS/SM on duty, having obtained line clear for that train, shall set the route for the out going train correctly and satisfy himself by observing the visual indication on the panel board. He shall suspend all non-isolated shunting, ensure closure of L.C.Gates and then shall take off the concerned route starter and Advanced starter signal by operating concerned push button. After observing the 'OFF' aspect of the route starter and advanced starter signals the Driver shall start his train.

The Station Master on duty shall watch the safe passage of the train with its last vehicle indicator. After the train passes the Advanced starter complete, he shall send the train entering block section signal to the station in advance

If a train worked without Guard or Brake Van the instruction laid down in Subsidiary Rules 4.23.02 and 4.25.02 shall be followed

6.6.1 **PUTTING BACK SIGNALS TO 'ON' IN CASE OF EMERGENCY: -**

If a signal once taken 'Off' for reception/despatch of a train has to be, in an emergency, put back to 'ON', the procedure laid down in Subsidiary Rules 3.36.02 shall be followed. In case of reception of train, route shall not be altered until the train has come to a stand outside Home signal. In case of departure signal before changing route, the SM shall take action as per SR 3.36.02(b)(i).

6.5.5 **TRAINS RUNNING THROUGH:** -

The procedure detailed in Para 6.6, 6.6.1 above and General Rules 4.17, 4.42 and Subsidiary Rules 3.36.04(b)(i) 3.42.02(a)(iv), shall be observed. The SS/SM is responsible to observe/watch the condition of the vehicles on a train and shall wave green hand signal horizontally as per Subsidiary Rule 4.42.02(b)(i) until anything wrong is noticed on train. For this purpose the SS/SM on duty shall stand in such a position that a clear view of the passing train is seen by him and that his hand signals can clearly be seen by the Driver and Guard of the train. He shall depute his point's man with hand signal to the other side of the passing train who shall exhibit hand danger signal to draw the attention of the guard/driver of the train in case of observing any unsafe condition/abnormalities of the train. He shall also report to the SS/SM on duty for taking further suitable action in terms of SR 4.42.02(d).

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General Rules 4.17 and Subsidiary Rules 4.17.02.

6.8 **WORKING IN CASE OF FAILURE OF POINTS AND SIGNAL:** -

In case of failure of S&T equipments on duty Station Master shall work in accordance to GR 3.68, 3.69 and 3.70 and SRs thereto.

- 6.8.1 **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF A SIGNAL & INTERLOCKING INSTALLATION:** -Whenever there is a failure of points, signals, track circuits or any other interlocking gear at the station that includes level crossing gate (s). if any etc. the SM on duty shall follow the procedure detailed in GR 3.68, 3.72, 3.74 and SR thereto. In case of defective approach signals, the trains will be piloted in vide SR 3.69.02, 3.69.03 & 3.69.05. In case of defective departure signals, trains will be piloted out vide GR 3.70 & SR 3.70.01. & 3.70.02.

6.8.2 **TRACK CIRCUIT**

In the event of failure of track circuit on any route, the clearance of the route must be physically checked before permitting any movement over the route either for reception or despatch of train or any shunting operations

6.8.3 **AXLE COUNTER**

In the event of failure of axle counter of concerned block section SM on duty shall initiate resetting of axle counter after ensuring the complete arrival of the train by SM of other end Station. After resetting the first train will be piloted 'OUT' to the concerned Block section for normalising the system of working. Details of operations involved in resetting of axle counter is given in Appendix-'B'.

6.8.4 **DEFECTIVE SIGNALS:**

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for which it applies and if it is found impossible to take OFF a signal, the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.46, 3.52 to 3.56, 3.71, 3.80 and SR 3.68.01 (c)].

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 light, 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]

6.8.5 BLOCK INSTRUMENT

In the event of partial interruption/ failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer GR 6.02.03, 6.02.04 and SR 6.02.06].

At the time of failure of Block Instrument between SSN-RGL & SASON-SARLA the authority will be Paper Line Clear Ticket with Identification number & Private Number issued from the Station in advance written both in figure and words.

6.8.6 DEFFECTIVE INTERLOCKING

In the event of interlocking becoming defective, the points will be treated as defective. The SM on duty on receipt of this information will immediately introduce non-interlocking system of working at the station. Trains will be Piloted In or Out as the case may be. The SM on duty shall be responsible for correct setting, clamping and padlocking of both facing and trailing points for admission of train.

6.8.7 DEFFECTIVE/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 for motor operated points shall be followed as per operating manual para-20.06.

NOTE: -

1. The SM on duty shall personally supervise the correct setting, clamping and padlocking of the facing & trailing points, if any, and ensure clearance on the nominated route vide SR [Ref-SR3.69.03(c)]
2. The Key of padlock of the clamps put ON to the points on the route for piloting In or piloting OUT shall be in the personal custody of the SM on duty or any other authorized operating officials till such time the train/engine/vehicle has utilized the route or alternatively such movement is cancelled.
3. The SS/SM on duty should ensure closer of the Interlocked LC gate before piloting In the train under exchange of Private Number with the gateman on duty.

6.8.8 RECEPTION OF A TRAIN ON BLOCKED LINE

Whenever trains are to be admitted on an obstructed line the Calling-on signal may be taken-off. If calling-on signal failed then the SM on duty shall authorize the on duty TPM with form T/509 indicating the reason for such admission the line number and the nature of obstruction on that line. Before handing over the authority the SM on duty shall ensure the correct setting clamping and padlocking of both facing and trailing points of the concerned route vide SR 3.69.03. A stop hand signal shall be exhibited by the SM on duty at a distance of not less 45 mts. from the point of obstruction to indicate to the Driver as to where the train shall be brought to a stand.

6.8.9 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

However, before declaring a signal is defective, the setting of the point on the route to which it applies shall be inspected by the Station Superintendent/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]

6.8.10. **ISSUE OF CAUTION ORDER:** - Whenever in consequence of the line being under repair or for any other reason special precautions are necessary, a caution order detailing the kilometers and speed at which a train shall travel and the reasons for taking such precautions shall be handed over to the driver in terms of GR 4.09 and SR thereto.

6.9 **WORKING OF MOTOR TROLLEY, MATERIAL LORRIES ETC:** -

(a) Motor Trolleys are run in accordance with Subsidiary Rules 15.25.03 to 15.25.07.

(b) Material Trolleys will work in accordance with Subsidiary Rules 15.27.05 to 15.27.08

The following precautions must be taken:

- i) The section where axle counters are provided in lieu of track circuits, trolleys, motor trolleys, Lorries etc which are not insulated, shall not be allowed to run except on line clear.
- ii) Motor trolleys / tower wagons / material Lorries are not likely to actuate the axle counter correctly. When they are to run over the sections split by axle counters, the whole section to be treated as one and next train to be started after the first train has arrived complete.
- iii) In all other respects, the working of a light Motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley.

7. **BLOCKING OF LINES:** -

Whenever a running line is blocked either by loose vehicles or by stabling train 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 etc, the points in rear on double line section should immediately be set against the blocked line except during shunting movement and reminder collars shall be placed on the concerned point push button and route button(s) for the blocked lines vide SR 3.36.03(b). A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained. The stable load or loose vehicles are to be secured as per General Rules 5.23 and Subsidiary Rules 5.23.01 to prevent rolling down of vehicles.

7.1 **STABLING OF VEHICLES ON RUNNING LINES :-**

- a) Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points in rear on double line section and at either end in single line should immediately be set against the blocked line except during shunting movement. Whenever a running line is blocked a clear mark in 'RED' ink shall be made immediately in Train Signal register. The time and number of running line on which vehicles are stabled are to be recorded in stable load register. A record thereof shall be rule in lie station diary vide SR 5.23.01(a), (c) &(2).

7.2 **USE OF REMINDER COLLARS :-**

Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train even for a short while or during shunting operations the reminder collars must be placed on concerned point push button, signal and route button(s) for the blocked lines on the operating panel by SS/SM on duty.

7.3 **SECURING OF VEHICLES :-**

As far as practicable loose vehicles shall not be allowed to stand on the running line. However, under unavoidable circumstances, if it is necessary to detach vehicles from a train or to stable

a train and leave them standing on running line, SS/SM on duty shall be responsible to secure vehicles/stable loads in accordance with GR 5.23 and SR 5.23.01 to prevent rolling down of vehicles and arrest obstruction & fouling of line.

NOTE: Special care shall be taken to secure special type vehicles fitted with roller bearings while standing in siding or on running lines A stabled load register to be maintained shift wise as per the format in Operating manual.

7.4 **ALTERING OF POINTS TO A CLEAR LINE WHEN RUNNING LINE IS BLOCKED:-**

- a) When a running line is blocked by stable load e.g, wagons, vehicles or by a train which is to cross or give precedence to another train or immediately after arrival of a train at the station etc. the points in rear on double line section and at either end in single line should immediately be set against the blocked line except when shunting or another movement is required to be performed in that direction on the same line.
- b) If all the lines at a station happens to be blocked when line clear has been granted to a train, the points should be set for the line occupied by a stable load or a goods train in that order so that in a case of mishap, the chances of casualties are minimized.
- c) In case all the lines are occupied by passenger carrying trains points should be set for a loop line, to negotiate which the speed of the incoming train would be reduced, which in turn would minimize the consequences of casualties. While doing so, points shall be set for a loop, occupied by a train if any, whose engine is facing the direction of approach of the incoming train rather than a loop line, occupied by a train whose passenger coach will, in case of collision, receive the impact.

7.5 **LOADING AND UNLOADING OF VEHICLES ON RUNNING LINE:-**

Loading and unloading from vehicles on running line is prohibited unless permitted by Sr. DOM / SBP vide SR 5.19.01.

At stations where loading and unloading of goods is permitted whether full rake or part there of, the station master shall ensure that no goods are left fouling any line before and after clearance of the rake from the line. The railway servant supervising loading and unloading shall also ensure that consignment does not foul any line vide SR 5.19.001: (a).

If the stations are on gradients, the rake should be properly secured as detailed in SR 5.23.01.

During the time of loading / unloading, the station master shall ensure isolation of the lines(s) as detailed in SR 3.51.06.

8.0 **SHUNTING: -**

- 8.1 **GENERAL PRECAUTIONS: -** Shunting shall be performed in terms of General Rules 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17, 5.19, 5.20 to 5.23, 8.09, 8.10, 8.12, 8.13, 8.14, 8.15 and Subsidiary Rules thereto. The Guard/Asst. Guard/SS/SM/TPM on duty is authorized to supervise shunting operation as per SR 5.13.03. The authority for shunting is a shunting order (T-806) to be issued by the SS/SM on duty, which shall be withdrawn after completion of shunting, or in need when train movement is involved to receive/despatch trains on the adjacent line. The same shall be cancelled and pasted to its record foil. The staff supervising shunting shall ensure correct setting of points, clamping and pad locking of points, if necessary. Normally back shunt signals shall be used for shunting operation.

8.2 **PROHIBITION OF SHUNTING, SPECIAL FEATURES IF ANY:**

- i) Shunting in face of on approaching train is prohibited.
- ii) Hand shunting is prohibited at both end of the yard.
- iii) Fly shunting is prohibited.

8.3 **SHUNTING WITHIN STATION SECTION:**

If the necessary signals are kept at 'ON' shunting may be carried on within the station section provided the block section at that end is clear of approaching train.

8.4 **SHUNTING OUTSIDE STATION SECTION:**

The line outside the station section and up to the Home Signal shall not be obstructed unless a Railway Servant specially appointed on his behalf by the Station Superintendent on duty who is the in-charge of the operations and unless the block section into which the shunting is to take place is clear of approaching train and all relevant & necessary signals are kept at "ON" position.

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

When shunting in the station yard and sidings, relevant GR 5.14 and SRs thereto to be followed. In case of failure of shunt signals all facing and trailing points of the route shall be clamped and padlocked.

8.7 **DURING FAILURE OF BLOCK INSTRUMENT ON DOUBLE LINE: -** the SM on duty shall ensure that there is no train in the block section and the last train has arrived complete clearing the fouling mark while conducting shunting at that end of the block section of which block instrument has been suspended and all necessary precautions have been taken as per rules laid down in GR.

9.0 **ABNORMAL CONDITIONS:**

(a) **THE RULES TO BE OBSERVED IN THE EVENT OF ABNORMAL CONDITION: -**

[I] **PARTIAL FAILURE OF COMMUNICATION: -**

In the event of suspension of Block Instrument and during partial failure of other available means of communication, the procedures detailed below shall be followed for working of trains in different situations.

- A. Failure/Suspension of Block Instrument or Track Circuit or Axle counters-
Line Clear shall be obtained on the Telephone attached to the Block Instrument or station telephone exchanged ID number and supported by Private Number.
- B. Failure/Suspension of Block Instrument or Track Circuit or Axle Counters or telephone attached to the Block Instruments or station fixed telephones-
'Line Clear' shall be obtained on Railway auto phone or BSNL phone by exchanging Identification Number supported by a Private Number.
- C. Failure/Suspension of Block Instrument or Track Circuit or Axle counters or telephone attached to the Block Instruments or station-to-station fixed telephone or Railway auto phone or BSNL phone.
'Line Clear' shall be obtained on control phone by exchanging Identification Number supported by a Private Number.
- D. Failure / suspension of block instrument or block telephone attached to the block instrument, or station to station fixed telephone or Railway auto telephone or BSNL phone or control telephone line clear shall be obtained on the VHF set exchanging ID number supported by Private Number provided that the instructions contained in SR 14.01.02 are followed vide GR 6.02.06(i)(d), Chapter-III part-I of Block Working Manual.

The authority to proceed for the Driver is T/369 (3b) bearing identification Number and Private Number received from the station in advance written both in figure and words for block section SSN-SLRA. [Refer SR 6.02.06 & Chapter – IV & V of BWM]

[II] **DESPATCHING OF TRAINS ON AN AUTHORITY OF BLOCK TICKET: -**

In case, it is necessary to allow a train into an obstructed block section due to engine failure, obstruction or accident, a block ticket shall be issued in terms of SR 6.02.05. Absolute Block System on the affected block section shall be suspended and concurrence of the SS/SM at other end shall be obtained and recorded in caution order register and train signal register SM's diary.

On the block ticket (T/A 602) it shall be mentioned in detail the place of obstruction i.e. Engine at Km., B/Van Km., whether the train is to return or to wait at the place of obstruction for the arrival of another following train(s) or to proceed to next station and to obey the site officer instructions.

A caution order shall be issued restricting the speed to 15 KMPH. in day light hours when the visibility is clear and 10 KMPH at night or whenever clear view of 800 Mtrs. is not clear.

On arrival at the station the block ticket shall be collected with necessary endorsement from Driver/Guard and cancelled and pasted to its record foil shall be sent to the issuing station for cancellation.

In case of accident/engineering block assurance from SE/P.WAY concerned shall be obtained that the line is safe for movement of trains before resumption of normal working. When the obstruction is removed and assurance in writing is obtained from SE/P.WAY concerned or Guard/Driver the SS/SM on duty may resume normal working after exchanging proper messages supported by Private Number.

[III] **TRAINS DELAYED IN BLOCK SECTION :-**

In case of train delayed in the block section the station master will take action as per GR 6.04 and SRs thereto.

[IV] **FAILURE/PASSING OF INTERMEDIATE BLOCK STOP SIGNAL AT ON: - NIL**

[V] **FAILURE OF LV AXLE COUNTER: -**

Details of the operation are given in Appendix 'B' of SWR.

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

Details of the operation are given in Appendix 'B' of SWR.

(c) **CERTIFICATION OF CLEARANCE OF TRACK BEFORE CALLING-ON SIGNAL IS OPERATED**

To take 'OFF' a calling on signal during failure of track circuit on the route, the clearance of the track over which the train would pass must be physically checked by the SS/SM on duty. After satisfying himself SS/SM on duty shall initiate the calling on signal operation. The procedure shall be strictly followed.

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

In case of failure of any interlocking gear at the station, the failure report should be communicated by the SS/SM on duty to the sectional Maintainer, the JE/SE/SSE (SIG) of the Section and others through a memo as per SR 3.68.04 and document all such transactions.

9.1 **TOTAL FAILURE OF COMMUNICATION (DOUBLE LINE): -**

In the event of total failure of communications between SSN-SLRA or SSN-RGL i.e. when line clear cannot be obtained by any one of the following means stated in order of preference viz.

- (a) Block Instruments, Track Circuits or Axle counters,
- (b) Telephone attached to the Block Instruments,
- (c) Station to station fixed telephones wherever available,

- (d) Fixed telephones such as Railway auto phones & BSNL phones,
- (e) Control telephone, and
- (f) VHF sets.

The trains shall be worked in terms of GR.6.02.03, which is summarized in brief as follows:

- (i) Each train before being allowed to enter into the Block Section should be stopped and the Guard and Driver of the train apprised of the situation.
- (ii) The SM will hand over an authority for working of train during total interruption of communication to the driver of each train which shall include-
 - a) Authority to proceed without 'Line Clear'. [T/C 602]
 - b) Authority to pass the Last Stop Signal at its "ON" position, i.e. T/369(3b).
 - c) A caution order restricting the speed to 25KMPH by day when view ahead is clear and 10KMPH by night or when view ahead is not clear.
- (iii) No train shall be allowed to enter the Block Section until there is a clear interval of 30minutes between the train about to leave and the train, which has immediately proceeded.
- (iv) Fixed signals except the last stop signal may be taken "OFF" for the dispatch of the train and for the reception of the train at the next block station, reception signals may be taken only after the train has been brought to a stand out side it.
- (v) On arrival at the next block station the driver shall hand over the authority to proceed with out line clear to the SM on duty who will preserve the same for further inspection.
- (vi) Before resuming normal working when any means of communication is established. SM of either end must satisfy that there is no train in the block section. [Refer SR 6.02.03].

9.2 **TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:**

During temporary single line working, when one line is clear and the other line is obstructed between SASON-SARLA or SASON-RENGALI the trains shall be worked as per the procedure, which is summarized as follows:

- (a) Before introducing single line working the SM on duty must satisfy that the line on which single line working will be introduced is clear and free from all obstructions.
- (b) The Lock and Block instrument will be suspended. The Commutators of Lock & Block Instrument will be kept on "Train on line position".
- (c) SM proposing single line working must issue a message with
 - (i) The cause of introduction of single line working,
 - (ii) Line on which the single line will be introduced,
 - (iii) Source of information about the clearance of the line on which single line will be introduced,
 - (iv) Place of obstruction,
 - (v) Restriction of speed, If any,
- (vi) Assurance about keeping the last stop signal at 'ON' position if the train runs on right line and in case of wrong line all signals are to be kept at 'ON' position etc under the exchange of Private Number.
- (d) Dy.SS/SM on duty at the other end of the block section will acknowledge the message and confirm the same by a Private Number.
- (e) After obtaining line clear for the train from the Advance station the Driver must be given as-.
 - (i) Authority for Temporary Single Line (TSL) working on double line (T-D/602) indicating there in
 - o Caution order
 - o The line on which single line working is introduced.
 - o The chainage kilometer of obstruction.
 - o Any other speed restriction, if any existing.
 - o Endorsement to inform all Gang man and Gateman about the single line working (for the first train only).
 - o The speed of the first train to be restricted to 25 KMPH subject to other speed restriction.
 - o Authority to pass Signal in "ON" position

- (ii) A pilot memo T/369(3b) to pass the last stop signal at its 'ON' position. The approach stop signals at the station in advance may be taken "OFF". In case a train proceeding on wrong line, the train shall be piloted out and at the receiving station, the train shall be piloted 'IN', on the authority of T/369(3b).

On being ensured that the obstructed line is clear and free from all obstructions, the Dy.SS/SM will resume normal working after exchanging message with the SS/SM of the other concerned end supported by private number in consultation with the Section Controller on duty when there is no train in the block section.

A goods train or an engine may be allowed on wrong line by blocking back the section without introducing single line working. [Refer SR. 6.02.05(g)(i)]

Whenever total interruption of all communication occurs during single line working on double line, the procedure detailed in GR should be followed. [Refer SR 6.02.02]

9.3 **THE AUTHORITY TO PROCEED IN OCCUPIED BLOCK SECTION IN CASE OF OBSTRUCTION ON LINE OR ACCIDENT:**

Rules and Regulations for working of trains on an obstructed line in case of obstruction or accident on the authority of Block Ticket (T/A-602) when communications are available shall be followed in accordance with the provisions which is summarized as follows [Refer SR 6.02.05]

After sending a train on block ticket, a following train shall not be dispatched in the same direction unless:

- a) The previous Block Ticket is collected and Cancelled or
- b) Necessary endorsement is given on the previous block ticket with the advise to wait at the site for a next train to follow or
- c) The previous train has met with an accident or has been disabled or
- d) The Block ticket has been cancelled from the driver of the previous train by the official –in-charge at the site and kept in the personal custody & shall be kept until the arrival of the next train and such assurance is given over the telephone installed at the site quoting the serial number of the Block Ticket so collected.
- e) SM will suspend the Absolute Block System of Working and both SMs concerned should arrange for running of trains on the authority of Block Ticket
- f) SM at the dispatching end will hand over to the driver the block Ticket as the authority which shall include:
 - i. Caution Order: Existing Speed Restriction/s shall be indicated in the Caution Order portion. The Speed Restriction to 15 KMPH during clear visibility and 10 KMPH when visibility is obstructed shall be clearly indicated.
 - ii. An authority to pass the Stop Signal at "ON" position
- g) Before resumption of normal working a message between the SMs of the concerned stations shall be exchanged with private number.[Ref SR 6.02.05(d)(vi)]
The Block Ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstructions from Driver/Guard of the train and cancelled.

9.4 **TRAINS DELAYED IN BLOCK SECTIONS**

If a train carrying passenger does not arrive within 10 minutes or if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control this fact. There after SMs at either end of the Block section shall immediately stop all trains proceeding in to the block section on adjacent line in either direction and warn the Drivers and Guards of such trains by issue of suitable Caution Orders. [Refer GR 6.04 & SRs thereto]

10 **VISIBILITY TEST OBJECT: -**

The lights of loop Line No.1 starters on both ends are nominated as visibility test object. SM/SS on duty will test the visibility during thick and foggy weather and if visibility is impaired, he will work as per GR 3.61 and relevant SRs.

11 **ESSENTIAL EQUIPMENTS AT THE STATION: -**

This is mentioned in the Appendix 'E' of the SWR. Essential equipment shall be kept ready on hand in good condition with necessary relief stock.

12 **FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG: -**

In order to indicate to the Drivers of approaching trains the location of signal during thick, foggy and tempestuous weather or during dust storm, the SS/SM on duty shall arrange for fog signalling in terms of General Rule 3.61 and Subsidiary Rules thereto. Assurance of the staff shall be taken in the Fog Signal Register in the month of October every year as token of their having knowledge of Fog Signalling Rules and their use.

Fog signalmen shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gang man and must not be substitutes or casual labour but regular employees of the railway

CERTIFICATE:-

NOTHING IN THESE RULES SHALL BE READ AS CANCELLING, AMENDING AND MODIFYING ANY OF THE GENERAL RULES, SUBSIDIARY RULES, BLOCK WORKING MANUAL AND OPERATING MANUAL. THESE RULES HENCEFORTH CANCEL ALL PREVIOUS STATION WORKING RULES OF SASON STATION.

APPENDICES

APPENDIX 'A'	--	WORKING OF L.C. GATE.
APPENDIX 'B'	--	SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.
APPENDIX 'C'	--	ANTI COLLOSION DEVICE (RAKSHA KAVACH).
APPENDIX 'D'	--	DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT.
APPENDIX 'E'	--	ESSENTIAL EQUIPMENTS OF STATION.
APPENDIX 'F'	--	RULES FOR WORKING OF DK STATIONS, PASSENGER HALTS, IBH, IBS AND OUTLYING SIDINGS.
APPENDIX 'G'	--	WORKING OF TRAINS IN ELECTRIFIED SECTIONS.

APPENDIX – ‘A’

DETAILS OF LEVEL CROSSING GATES TOGETHER WITH INSTRUCTIONS TO THE OPERATING STAFF (INCLUDING LEVEL CROSSING GATE MEN) ABOUT THEIR NORMAL WORKING, THEIR MAINTENANCE AND THEIR WORKING INCASE OF FAILURES EMERGENCIES WITH SPECIAL PROVISIONS, IF ANY.

1 WORKING INSTRUCTIONS FOR ‘SPL’ CLASS LEVEL CROSSING GATE AT KM 550/11-13(UP),550/12-14(DN) (NO-JT-22) LOCATED IN REAR OF DN HOME SIGNAL OF SASON:-

1.1. DESCRIPTION OF THE LEVEL CROSSING GATE: -

1	Number of level crossing gate	:	JT-22
2	Engineering or Traffic Gate	:	Engineering
3	Under control of Station Master or Permanent Way Inspector	:	SE (P-way)
4	Location at KM	:	550/11-13(UP),550/12-14(DN)
5	At station	:	SASON
6	In between station	:	SSN-SLRA
7	BG/MG/NG	:	BG
8	Single line/Doubling Line/Multiple Line	:	Double Line
9	Normal position	:	Open to road traffic
10	Interlocked/Non-interlocked	:	Interlocked
11	Means of interlocking	:	Gate signals
12	Provision of gate Signal at Kms	:	DN gate Stop signal at Km. 550/20-22 & Up gate Stop at Km. 550/1-3
13	Signalling arrangement	:	MACLS
14	Means of communications Telephone/Bell etc.	:	Telephone connection with SM/SSN
15	Width of Level Crossing Gate	:	7.5 MTRS
16	Type of Road	:	Others (ODR)
17	Name of Road	:	SSN gate
18	Metaled/Non Metaled	:	METALED
19	Approach Road	:	METALED
20	Width of the Road	:	5.50 MTRS.
21	Angle of Road Crossing (incase of the SKEW gates)	:	-----
22	Road Gradient (if any)	:	(a) North-East side--- 1 in 60 (b) South/West side--- 1 in 60
23	Road alignment (straight/curve)	:	(a) North-East side--- Curve (b) South/Westside--- Curve
24	Provision of height gauge	:	Provided
25	Type of Barrier	:	Winch operated lifting barrier
26	Length of check Rail	:	9.5M
27	Road surface in between level crossing gates.	:	Leveled with hexagonal concrete Blocks
28	Length of Rumble strip/speed breakers.	:	7.5mtrs
29	Road Signs	:	Provided
30	Speed breakers indication board	:	Provided
31	TVU	:	66857 on 04/2021
32	Census next due on	:	04/2024
33.	Demarcation for placement of detonators.	:	Provided

34	No.of gateman working	:	02
35	Nearest Railway Medical Assistance	:	Sambalpur
36	Nearest Private Medical Assistance available (if any)	:	SSN
37	List of equipment available Yes / No.	:	Yes

1.2 EQUIPMENTS TO BE AVAILABLE AT THE GATE

<u>SL. NO.</u>	<u>ITEMS</u>	<u>QUANTITY</u>
1.	Hand signal lamp Tri Colour Torch	: 03 (5 on Quadruple/Line or twin single line)
2.	Hand Signal Flag Green	: 01(Mounted on stick)
3.	Hand Signal Flag Red	: 03 (6 on Quadruple/line or Twin single line and 7 in case Hexable section mounted on sticks)
4.	Banner Flag Red	: 03 (5 on Quadruple/Line or twin single line)
5.	Posts for exhibiting red banner flag	: 02 (4 on Q/Twin single line and 5 on Hexable section.
6.	Spare chains with padlocks	: 02(with stop mark)
7.	Detonators	: In tin case 10
8.	Gate lamps	: 02
9.	Tommy bar	: 01
10.	Motor pan	: 01
11.	Spade/Fowrah	: 01
12.	Rammer	: 01(in case of asphalted road this may not be provided)
13.	Pick axe	: 01(in case of asphalted road this may not be provided)
14.	Tin case for flag	: 01
15.	Cane for oil	: 01
16.	Water pot/Bucket	: 01
17.	Canister for Muster Roll	: 01
18.	Set of spare spectacles of gateman wearing glasses	: 01
19.	Board demarcating protection of level crossing Gate diagram in case of obstruction on gate	: 01
20.	Basket	: 01
21.	Whistle	: 01
22.	Wall clock	: 01
23.	Small size chain with padlocks to be used in case of failure of gate boom lock.	: 02

1.3 The gateman shall be provided with following registers: -

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) General Rules Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as gateman.

- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refreshers course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.
- xii) S&T register

1.4 **DUTIES OF GATEMAN:**

1. **ALERTNESS:** The Gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the Gate shall be in his personal custody.
2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**
During passage of trains, Gateman will stand in the manner indicated below:
 - i) Gateman 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 nighttime, 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 and blow the whistle to draw the attention of Driver & Guard of the passing train.
3. **ROUTINE DUTIES OF GATEMAN:**
 - i) Gateman shall ensure that red banner flag by day and red lamp by night is placed across the track whenever the Gate is kept in open condition for passage of road vehicles during emergency and obstruction on the track.
 - ii) Gateman shall ensure that all Gate lamps and hand signal lamps 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 his reliever arrives and takes over charge from him. 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.
 - 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, any vehicle/wagons /trains/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 be prepared to repeat any signal which guard may give to the Loco Pilot on walkie-talkie or 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 the SM or PWI any defect in his Gate or apparatus pertaining to it, as soon as possible.
 - 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 these instructions.
 - xii) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
 - xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
 - xiv) Gateman must keep the road surface well-watered and rammed in case of un-metalled roads.

- xv) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
- xvi) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4 **ACTION IN CASE OF UNUSUAL OCCURRENCE OF 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 flag 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, and throwing ballast on the brake van or by any other means.
 - iii) If driver/guard fails to take notice, Gateman shall immediately inform the SM on duty 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 endeavor to attract the attention of the Driver/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 LP/Guard fails to respond, Gateman shall immediately inform the SM to take appropriate action, under exchange of private number.

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

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if at, in the 'ON' position.
- ii) Therefore, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, 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.

B . Electrified Section:

- (i) On noticing that, the whole or part of the OHE or a feeder or a cable falling down, the gate keeper shall ensure that, as far as possible, human beings, animals or vehicles etc are kept away in order to avoid any contact with the live equipment.
- (ii) As soon as it is noticed that, Pantograph of an electric rolling stock getting damaged and/or entanglement of the same with the OHE, he shall make every possible effort to stop the train and immediately inform SM on duty.
- (iii) Any damage to the track or structures of the OHE comes to the notice of on duty GK, he shall immediately inform SM on duty and take all necessary measure for protection of the line as under.
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) The he will similarly plant the other red banner flag by day and 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 on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track in 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 driver of the approaching train.
- (vi) 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.
- (vii) Thereafter, he shall warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- (b) **Other actions 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 SM regarding the particulars and obstructions at the LC Gate, through messenger or other means available.

1.5 ENGINEERING ITEMS:

- (i) Visibility:-

Direction	Side	Visibility Distance
UP	Right	600 M
	Left	800 M
DN	Right	600 M
	Left	800 M

- (ii) Speed Breaker:- Speed Breakers of approved design are provided on either side of this Level Crossing Gate.
- (iii) Periodical Census of traffic has been taken TVU is 66857 on 04/2021.

1.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION: - LC NO. JT - 22

This is a Manned, interlocked L.C. Gate situated in between DN Home signal and DN gate Home Signal of SSN station at Km 550/11-13(UP),550/12-14(DN). This gate is interlocked with Gate stop signals. Telephone communication is provided between the L C. gate lodge with SM on duty of SSN Station. The level crossing gate is of lifting barrier type operated by means of winch provided at the gate lodge. The normal position of the gate is open to road traffic. A Four-lever ground frame is provided at the gate lodge. The key of the LC remains in the winch when the gate is opened condition. When it is necessary to close the gate, for taking OFF signals or for train passing or shunting operations. The SM on duty shall inform the gate man to close and lock the gate. The gate man on duty shall then close the barriers of the LC gate by operating winch. Then key 'P' is to be extracted from the winch after closing the level crossing gate, which releases 2GF will be inserted in the lever of 2GF. When 2GF is reversed, it locks the booms of the gate and releases Key 'R'. Then Gateman shall insert Key 'R' in EKT-1 with reverse the 3GF or 4GF for taking OFF concerned UP or DN Gate Home signals respectively. 3GF or 4GF can be used to put back the concerned Gate home signal to normal in case of emergency. Key 'R' can be extracted from EKT after putting back Lever 3GF & 4GF to normal. Since the back lock Track cct. is not provided, the sole responsibility of the gate man to ensure physical clearance of the gate before opening the gate. Lever No.1 is provided in the Gate lodge as spare lever.

Approach warning has been provided which will be effective from "DN AT" track circuit for DN direction. Whenever a DN train is approaching and actuates DN AT No. 4GFAT an audio alarm will start at the gate lodge. Gateman on duty shall acknowledge the same by pressing a push button provided in the gate lodge. He shall then close and lock the gate if not closed. Dead approach locking with time delay of 60 second is provided. After passage of DN train LC NO. JT-22 will be released automatically after sequential occupation and clearance of 2AT & 2T.

After passage of the Train or completion of shunting, the SM on duty shall inform the gateman, the gate man shall normalize the concerned 3GF or 4GF, which will unlock the gate boom and releases Key 'P'. The gate man shall extract the control key 'P' from the GF-2 and open the gate by inserting the Key 'P' into the winch for normal passage of road

traffic. The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

In the event of failure of any DN Home signal or UP Adv. Starter signal or during Non-Interlocking working the Gateman shall be informed and the Train shall be passed in terms of SR 3.69.03 and 3.69.06 after ensuring correct closing and locking of L.C Gate.

INSTRUCTIONS FOR OPERATION OF SLIDING BOOM:

Sliding boom provided at the near end of gate lodge has been padlocked with chain in open position and sliding boom at far end in open position has been locked by E-type lock.

- a. In case of breakage of normal boom or LC gate cannot be closed due to failure, the gate man shall release electro-mechanically free Key "SB1" (Sliding Barrier-1) from " EKT- 2 " provided in the gate lodge. Extraction of Key "SB1" from the EKT-2 will put back the road signals to danger and the hooter will sound simultaneously.
- b. The gate man shall insert the Key "SB1" in E type lock provided at far end sliding boom and unlock the emergency sliding boom. He will slide the boom against the road traffic and lock it in closed position by pushing the locking plunger. The locking plunger initially in locked condition can be released by unlocking the E-type lock with the key attached to the chain of the boom. This will also release key "SB2" (Sliding Barrier-2) attached to the lock post. Key SB -2 when released locks the far end sliding boom.
- c. The near end sliding boom is normally in padlocked condition and the Key "SB2" is in the custody of gateman. The gateman shall unlock the sliding boom by this Key and slide it against the road traffic and lock it in closed position by pushing the locking plunger. The locking plunger is initially in locked condition. This can be freed by unlocking the E-type lock with the help of Key attached to the chain of the boom and "SB2" concurrently. This will also release key "Z" attached to the near end lock post. Key "Z" when extracted locks the near end sliding boom and Key SB-2. This key "Z" is to be transmitted to SM by inserting it in "EKT- 3" provided in the gate lodge in conjunction with the GS (Gate Slot) switch provided in the gate lodge to enable the SM on duty to take off concerned signals.
- d. In case of any damage to sliding boom when it is in closed condition to road traffic, leading to infringement or obstruction on track, the gateman shall normalize the switch GS to put back the concerned signals to danger.
- e. After passage of train, SM on duty shall transmit the gate Key. The gateman shall extract Key "Z" from EKT- 3, normalize the switch GS, unlock the sliding boom and operate the gears in reverse sequence of operation to normalize the sliding boom.

The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

2. INTIMATION TO GATEMAN-

- i) Before taking off departure signals in UP direction, Station Master/SSN shall inform the gateman, the number , description of the train, approximate time with advice to close the gate.
- ii) The gateman shall then close the gate and take-off UP Gate Home Signal which in turn will release UP Advance starter.
- iii) In case of DN train, immediately after it left the rear station the SM shall advise the Gateman the number, description of the train and approximate time of passage at the gate.
- iv) If the actual running time of the train from either end is less than 10 minutes SM/SSN will convey the advise to the gateman before obtaining/granting line clear.
- v) It should be the duty of the gateman to ensure that, the Gate is closed in time, so that there is no detention to train or excessive detention to road traffic.

- vi) In order to ensure that road traffic is not held up for a long time, the Station Master/ SSN must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.

3. **FAILURE OF TELEPHONIC COMMUNICATIONS:**

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, Station Master/SSN shall issue a caution order to the driver of the departing train.
- (ii) SM/SSN shall advise the driver to whistle continuously and proceed cautiously while approaching the gate.
- (iii) In case of an approaching train, the Station Master/SSN shall advise the Station Master/SLRA under exchange of private number, that the telephone at the gate has failed.
- (iv) The Station Master/SLRA shall then issue a caution order to the driver before dispatching a train in the block section from his end along with T/369(3b) to pass departure stop signals at 'ON'.
- (v) Station Master/SSN will also advise the gateman through Gangman/Patrolman/Driver of the first train that the telephone has become defective.
- (vi) Station Master/SSN should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (vii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

4. **FAILURE OF LIFTING BARRIERS:**

- i) When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform, the SM on duty, under exchange private number, and ensure the lifting barriers of gate 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) The Gateman shall then resort to sliding boom operation.
- iv) Gateman shall secure the gate against road traffic by means of safety chains and padlocks during failure of both lifting barriers & sliding boom.
- v) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light by night to the driver of the approaching train.
- vi) Station Master on duty/ SSN shall issue a caution order to the driver of a departing train.
- vii) He shall also advise the station Master /SLRA, under exchange of private number, to similarly issue a caution order to the driver before despatching a train into the block section from his end.
- viii) Station Master/ SSN will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.
- ix) Normal working will be resumed only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

Note: Authority to pass signals at 'ON' position as per rules shall also be issued to the drivers of both departing and arriving trains.

5. **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 gate winch, gate lever or the key transmitter, then gateman must immediately inform the Station Master / SSN on duty on telephone, under exchange of private number.

- ii) Thereafter, the gate must be treated as non – interlocked and procedure for reception/ despatch of trains as prescribed for non – interlocked gates, should be adopted.
 - iii) Station Master on duty / SSN shall issue a caution order to the driver of a departing train.
 - iv) He shall also advise the station Master/SLRA at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching a train into the block section from his end.
 - v) Station Master / SSN will advise S&T staff responsible for maintenance of winch/key transmitter to rectify the defect at the earliest.
 - vi) Normal working will resumed only after S&T staff repairs the winch/key transmitter and issue reconnection/fit memo for the same.
- Note:** Authority to pass signals at 'ON' position as per rules shall also be issued to the drivers of both departing and arriving trains.

6. FAILURE OF THE GATE KEY WITH THE GATE IN OPEN CONDITION:

- i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty/ SSN on telephone, under exchange of private number.
 - ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/despatch of trains as prescribed for non-interlocked gates should be adopted.
 - iii) 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/ SSN shall issue caution order to the driver of a departing train.
 - v) He shall also advise the station Master /SLRA at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching a train into the block section from his end.
 - vi) Station Master/ SSN will advise S&T staff responsible for maintenance of winch//key transmitter to rectify the defect at the earliest.
 - vii) Normal working will resumed only after S&T staff repairs the winch/key transmitter and issue reconnection/fit memo for the same.
- Note:** Authority to pass signals at 'ON' position as per rules shall also be issued to the drivers of both departing and arriving trains.

7. DEFECTIVE GATE SIGNALS:

- (i) The gateman shall treat the gate signal as defective and must not take off them under following circumstances:
 - (a) If gate signals can be taken 'OFF' without closing the gate, or
 - (b) The key can be extracted from the operating winch when the gate is in open condition, or
 - (c) The key can be extracted from the gate lever when the gate is in open condition.
- (ii) If the Gate or the Gate Signal or Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wires/power, if necessary.
- (iii) The gateman will immediately advise the Station Master/SSN on duty, under exchange of private number, regarding defective gate signals.
- (iv) Thereafter, the gate must be treated as non – interlocked and procedure for reception/dispatch as prescribed for non-interlocked gates should be adopted.
- (v) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- (vi) Station Master on duty/SSN will issue a caution order to the driver of departing train.
- (vii) He shall also advise the Station Master/SLRA, under exchange of private number, to similarly issue a caution order to the driver before dispatching a train into the block section from his end.
- (viii) Station Master/SSN shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- (ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection/fit memo for the same.

Note: Authority to pass signals at 'ON' position as per rules shall also be issued to the drivers of both departing and arriving trains.

8. 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 put back the gate signal to 'ON' position and thereafter 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/ SSN on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Stationmaster/ SSN 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 / SSN 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 Instructions for duties of gateman under item No.1.4. (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 reply these details to the station Master who shall not start the trains 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/ SSN shall also inform the station Master /SLRA at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been clear 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/ SSN shall then issue a caution order to drivers 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. T/369(3b) to be issued to pass stop signal at 'ON'.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and thereafter after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master/ SSN shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

9. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture on 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/SSN will adopt the procedure given under item no. 8 above. If the obstruction fouls the level Crossing gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

10. DUTIES OF GATEMAN IN CASE OF ACCIDENTAL ROLLING DOWN OF TRAIN:-

When the Gateman seen that a train is rolling down or immediately after receipt of the information about accidental rolling down of the train the Gateman shall:

- (i) First close the gate against the road traffic.
- (ii) Then immediately inform the SM on Duty.
- (iii) He shall not open the gate till he ensured that the train has completely stopped.

2.0 WORKING INSTRUCTIONS FOR 'B1' CLASS ENGG. LEVEL CROSSING GATE AT KM 547/27-29(UP),547/28-30(DN) (JT-19) LOCATED IN BETWEEN SSN-RGL.

2.1 DESCRIPTION OF THE LEVEL CROSSING GATE:-

1.	Number of level crossing gate	:	JT-19
2.	Engineering or Traffic Gate	:	Engineering
3.	Under control of Station Master or Permanent Way Inspector	:	SE (P-way)
4.	Location at KM	:	547/27-29(UP),547/28-30(DN)
5.	At station	:	SASON
6.	In between station	:	SSN-RGL
7.	BG/MG/NG	:	BG
8.	Single line/Doubling Line/Multiple Line	:	Double line
9.	Normal position	:	Open to road traffic
10.	Interlocked/Non-interlocked	:	Interlocked
11.	Means of interlocking	:	Gate signals
12.	Provision of gate Signal at Kms	:	547/17-19(UP Gate Home signal), 547/36-38 (DN Gate Home signal)
13.	Signalling arrangement	:	MACLS
14.	Means of communications Telephone / Bell etc.	:	Telephone connection with SS/SSN
15.	Width of Level Crossing Gate	:	7.5 MTRS
16.	Type of Road	:	OTHERS (ODR)
17.	Name of Road	:	SSN gate Road.
18.	Metaled/Non Metaled	:	METALED
19.	Approach Road	:	METALED
20.	Width of the Road	:	5.5 MTRS.
21.	Angle of Road Crossing (incase of the SKEW gates)	:	-----
22.	Road Gradient (if any)	:	(a) North-East side--- 1 in 40 (b) South/West side---1 in 40
23.	Road alignment (straight/curve)	:	(a) North-East side--- Straight (b) South/Westside--- Straight
24.	Provision of height gauge	:	Provided
25.	Type of Barrier	:	Winch operated lifting barrier
26.	Length of check Rail	:	9.5mtrs
27.	Road surface in between level crossing gates.	:	Leveled with hexagonal concrete blocks
28.	Length of Rumble strip/speed breakers.	:	7.5mtrs.
29.	Road Signs	:	Provided
30.	Speed breakers indication board	:	Provided
31.	TVU	:	28755 on 04/2021
32.	Census next due on	:	04/2024
33.	Demarcation for placement of detonators.	:	Provided
34.	No. of gateman working	:	02(12 Hours shift)
35.	Nearest Railway Medical Assistance	:	Sambalpur
36.	Nearest Private Medical Assistance available (if any)	:	SSN
37.	List of equipment available Yes / No.	:	Yes

2.2 **EQUIPMENT:**

<u>SL. NO.</u>	<u>ITEMS</u>		<u>QUANTITY</u>
1.	Hand signal lamp Tri colour Torch	:	03
2.	Hand Signal Flag Green	:	01(Mounted on stick)
3.	Hand Signal Flag Red	:	03
4.	Banner Flag Red	:	03
5.	Posts for exhibiting red banner flag	:	02
6.	Spare chains with padlocks	:	02 (with stop mark)
7.	Detonators	:	In tin case 10
8.	Gate lamps	:	02
9.	Tommy bar	:	01
10.	Motor pan	:	01
11.	Spade/Phowrah	:	01
12.	Rammer	:	01
13.	Pick axe	:	01
14.	Tin case for flag	:	01
15.	Cane for oil	:	01
16.	Water pot/Bucket	:	01
17.	Canister for Muster Roll	:	01
18.	Set of spare spectacles of gateman wearing glasses	:	01
19.	Board demarcating protection of level crossing Gate diagram in case of obstruction on gate	:	01
20.	Basket	:	01
21.	Whistle	:	01
22.	Wall clock	:	01
23.	Small size chain with pad locks to be used in case failure of boom lock.	:	02

2.3 **The gateman shall be provided with following registers: -**

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) General Rules Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as gateman.
- vii) Bio-Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.
- xii) S & T Register

2.4 **DUTIES OF GATEMAN:**

1. **ALERTNESS:** The Gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the Gate shall be in his personal custody.

2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

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

- I. Gateman 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 nighttime, 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 and blow the whistle to draw the attention of Driver & Guard of the passing train.

3. **ROUTINE DUTIES OF GATEMAN:**

- I. Gateman shall ensure that red banner flag by day & red lamp by night is placed across the track whenever the Gate is kept in open condition for passage of road vehicles during emergency and obstruction on the track.
- II. Gateman shall ensure that all Gate lamps and hand signal lamps 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 his reliever arrives and takes over charge from him. 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.
- 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, any vehicle/wagons /trains/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 be prepared to repeat any signal which guard may give to the Loco pilot on Walkie-talkie or 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 the SM or PWI any defect in his Gate or apparatus pertaining to it, as soon as possible.
- 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 these instructions.
- XII. Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
- XIII. Gateman shall see that the channel for the flange of the wheel is kept clear.
- XIV. Gateman must keep the road surface well-watered and rammed in case of un-metalled roads.
- XV. Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
- XVI. Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURRENCE OF 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 flag 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, and throwing ballast on the brake van or by any other means.
- III. If driver/guard fails to take notice, Gateman shall immediately inform the SM on duty 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 Driver/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 Loco Pilot/Guard fails to respond Gateman shall immediately inform the SM to take appropriate action, under exchange of private number.

5 ACTION IN EMERGENCY AT THE LEVEL CROSSING:

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

B) Electrified Section:

- (i) On noticing that, the whole or part of the OHE or a feeder or a cable falling down, the gate keeper shall ensure that, as far as possible, human beings, animals or vehicles etc are kept away in order to avoid any contact with the live equipment.
- (ii) As soon as it is noticed that, Pantograph of an electric rolling stock getting damaged and/or entanglement of the same with the OHE, he shall make every possible effort to stop the train and immediately inform SM on duty.
- (iii) Any damage to the track or structures of the OHE comes to the notice of on duty GK, he shall immediately inform SM on duty and take all necessary measure for protection of the line as under.

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 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 on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track in 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 driver 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 warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

(c) **Other actions 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 SM regarding the particulars and obstructions at the level crossing Gate, through messenger or other means available.

2.5 SPECIAL INSTRUCTION-**1. MODE OF OPERATION:****LC No. JT- 19**

This is a Manned, interlocked L.C. Gate situated in between Up Home signal and Up Gate home Signal of SSN station at Km 547/27-29(UP), 547/28-30(DN). This gate is interlocked with Station stop signals and provided with gate home signals. Telephone communication is provided between the L C. gate lodge with SM on duty of SSN Station. The level crossing gate is of lifting barrier type operated by means of winch provided at the gate lodge. The normal position of the gate is opened to road traffic. A Four-lever ground frame is provided at the gate lodge. The key of the LC remains in the winch when the gate is opened condition. When it is necessary to close the gate, for taking OFF signals or for train passing or shunting operations the SM on duty shall inform the gate man to close and lock the gate. The gate man on duty shall then close the barriers of the LC gate by operating winch. Then key 'N' is to be extracted from the winch after closing the gate and inserted in lever 2 GF, which releases the lever of 2-GF. When 2-GF is reversed it locks the booms of the gate and releases key 'Q'. Then after the gateman shall insert Key 'Q' in EKT-1 with reverse the lever 3-GF or 4-GF for taking OFF concerned DN Gate Home signal interlocked with DN advanced starter of SSN station and UP Gate Home signal respectively 3-GF can be used to put back the UP Gate home signal to normal and 4-GF to put back the DN Gate home signal to normal in case of emergency. Key 'Q' can be extracted from EKT after putting back Lever 3F & 4F to normal. Since the back lock Track cct. is not provided, the sole responsibility of the gate man to ensure physical clearance of the gate before opening the gate. . Lever No.1 is provided in the Gate lodge as spare lever.

Approach warning has been provided which will be effective from "UP AT" track circuit for UP direction. Whenever a UP train is approaching and actuates UP AT No. 3GFAT an audio alarm will start at the gate lodge. Gateman on duty shall acknowledge the same by pressing a push button provided in the gate lodge. He shall then close and lock the gate if not closed. Dead approach locking with time delay of 60 second is provided. After passage of UP train LC NO. JT-19 will be released automatically after sequential occupation and clearance of 1AT & 1T.

After passage of the Train or completion of shunting, the gateman shall normalize the concerned 3GF and 4 GF lever. He shall extract the key 'N' from 2 GF after normalizing the 2GF and open the LC gate by inserting the Key 'N' into the winch for normal passage of road traffic. The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

In the event of failure of any UP Home signal or DN Adv. Starter signal or during Non Interlocking working the Gateman shall be informed and the Train shall be passed in terms of SR 3.69.02, 3.69.03 and 3.70.01 after ensuring correct closing and locking of L.C Gate.

In case of failure of lifting barriers of level crossing gate due to failure/damage of gate boom etc., emergency sliding boom can be used as auxiliary gate without piloting IN and OUT of train. This emergency sliding boom cannot be used during normal working condition of main boom.

INSTRUCTIONS FOR OPERATION OF SLIDING BOOM:

Sliding boom provided at the far end of gate lodge has been padlocked with chain in open position and sliding boom at near end in open position has been locked by E-type lock.

- a. In case of breakage of normal boom or LC gate cannot be closed due to failure, the gate man shall release electro-mechanically free Key "SB1" (Sliding Barrier-1) from " EKT-2 " provided in the gate lodge. Extraction of Key "SB1" from the EKT-2 will put back the road signals to danger and the hooter will sound simultaneously.
- b. The gate man shall insert the Key "SB1" in E type lock provided at near end sliding boom and unlock the emergency sliding boom. He will slide the boom against the road traffic and lock it in closed position by pushing the locking plunger. The locking plunger initially in locked condition can be released by unlocking the E-type lock with the key attached to the chain of the boom. This will also release key "SB2" (Sliding Barrier-2) attached to the lock post. Key "SB2" when released locks the near end sliding boom.
- c. The far end sliding boom is normally in padlocked condition and the Key "SB2" is in the custody of gateman. The gateman shall unlock the sliding boom by this Key and slide it against the road traffic and lock it in closed position by pushing the locking plunger. The locking plunger is initially in locked condition. This can be freed by unlocking the E-type lock with the help of Key attached to the chain of the boom and "SB2" concurrently. This will also release key "Y" attached to the far end lock post. Key "Y" when extracted locks the far end sliding boom and Key SB2. This key "Y" is to be transmitted to SM by inserting it in "EKT-3" provided in the gate lodge in conjunction with the GS (Gate Slot) switch provided in the gate lodge to enable the SM on duty to take off concerned signals.
- d. In case of any damage to sliding boom when it is in closed condition to road traffic, leading to infringement or obstruction on track, the gateman shall normalize the switch GS to put back the concerned signals to danger.
- e. After passage of train, SM on duty shall transmit the gate Key. The gateman shall extract Key "Y" from EKT-3, normalize the switch GS, unlock the sliding boom and operate the gears in reverse sequence of operation to normalize the sliding boom.

In the event of failure of reception and dispatch signals or during Non Interlocking working the Traffic Gateman shall be informed and the Train shall be passed in terms of SR 3.69.02, 3.69.03 and 3.70.01 after ensuring correct closing and locking of L.C Gate. During this period the L.C Gate shall be opened only when necessary and safe to do so.

The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

2. INTIMATION TO GATEMAN-

- i) Before taking off departure signals in DN direction, Station Master/SSN shall inform the gateman, the number , description of the train, approximate time with advice to close the gate.
- ii) The gateman shall then close the gate and take-off DN Gate Home Signal which in turn will release DN Advance starter.
- iii) In case of UP train, immediately after it left the rear station the SM shall advise the Gateman the number, description of the train and approximate time of passage at the gate.
- iv) If the actual running time of the train from either end is less than 10 minutes SM/SSN will convey the advise to the gateman before obtaining/granting line clear.
- v) It should be the duty of the gateman to ensure that, the Gate is closed in time, so that there is no detention to train or excessive detention to road traffic.
- vi) In order to ensure that road traffic is not held up for a long time, the Station Master/ SSN must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.

3. 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, Station Master/SSN shall issue a caution order to the driver of the departing train along with T/369(3b) to pass departure signal at 'ON'.
- (II) Station Master/SSN shall advise the driver to whistle continuously and proceed cautiously while approaching the gate.
- (III) In case the gate signal is 'ON' he should stop at the signal and follow the procedure laid down under GR3.73.
- (IV) In case of an approaching train, the Station Master/SSN shall advise the SM/RGL under exchange of private number, that the telephone at the gate has failed.
- (V) The SM/RGL shall then issue a caution order to the driver before dispatching a train in the block section from his end .
- (VI) Station Master/SSN will also advise the gateman through Gangman/Patrolman/Driver of the first train that the telephone has become defective.
- (VII) Station Master/SSN 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 after S&T staff rectify the telephone and issue reconnection/fit memo for the ame.

4. FAILURE OF LIFTING BARRIERS:

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman shall immediately inform the SM on duty/SSN 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 that end first from which the train is approaching and then at the other end.
- (iii) Thereafter, the Gateman shall then resort to sliding boom operation.
- (iv) Gateman shall secure the gate against road traffic by means of safety chains and padlocks during failure of both lifting barriers & sliding boom.
- (v) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the driver of the approaching train.
- (vi) Station Master on duty/SSN shall issue caution order to the driver of a departing train.
- (vii) He shall also advise the Station Master/RGL under exchange of private number; to similarly issue a caution order to the driver before dispatching a train in the block section.
- (viii) Station Master/SSN shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- (ix) Normal working will be resumed only after maintenance staff repair the lifting barrier and issue reconnection/fit memo for the same.

5. FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE.

- (I) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master/SSN 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) Station Master/SSN on duty shall issue caution order to the driver of a departing train.
- (IV) He shall also advise the Station Master/RGL under exchange of private number, to similarly issue a caution order to the driver before dispatching a train in the block section his end.
- (V) Station Master/SSN shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

- (VI) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/fit memo for the same.

6. FAILURE OF THE GATE KEY WITH THE GATE IN OPEN CONDITION:

- (I) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master/SSN 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) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- (IV) Station Master on duty/SSN shall issue a caution order to the driver of a departing train.
- (V) He shall also advise the Station Master/RGL 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.
- (VI) Station Master/SSN shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- (VII) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/fit memo for the same.

7. DEFECTIVE GATE SIGNALS:

The gateman shall treat the gate signal as defective and must not take off them under following circumstances:

- (a) If gate signals can be taken 'OFF' without closing the gate, or
- (b) The key can be extracted from the operating winch when the gate is in open condition, or
- (c) The key can be extracted from the lever when the gate home signal lever is in reversed condition.
- (II) If the Gate or the Gate Signal or Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wires/power, if necessary.
- (III) The gateman will immediately advise the Station Master on duty/SSN, under exchange of private number, regarding defective gate signals.
- (IV) Thereafter, the gate must be treated as non – interlocked and procedure for reception/dispatch as prescribed for non interlocked gate should be adopted.
- (V) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- (VI) Station Master on duty/SSN will issue a caution order to the driver of departing train.
- (VII) He shall also advise the Station Master/RGL under exchange of private number, to similarly issue a caution order to the driver before despatching train into the block section from his end.
- (VIII) Station Master/SSN shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- (IX) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection/fit memo for the same.

8. OBSTRUCTION AT THE GATE:

- (i) If the gate is broken by a road vehicle, which is fouling the track or if lifting barrier or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- (ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate.
- (iii) Immediately after this, the gateman shall advise the station Master/SSN on duty regarding the defects /obstructions at the gate, under exchange of private number.
- (iv) If there is no response from the Station Master /SSN 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.2.4. (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 reply these details to the station Master/SSN who shall not start the trains 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/SSN shall also inform the station Master/RGL under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been clear 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/SSN shall then issue a caution order to drivers of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master/SSN shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- (xiii) Normally working will be resumed only after maintenance staffs rectify the defective lifting barriers gates and issue reconnection/fit memo for the same.

9. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE.

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/SSN will adopt the procedure given under item no. 8. above. If the obstruction fouls the level Crossing gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

10. DUTIES OF GATEMAN IN CASE OF ACCIDENTAL ROLLING DOWN OF TRAIN:-

When the Gateman seen that a train is rolling down or immediately after receipt of the information about accidental rolling down of the train the Gateman shall:

- (i) First close the gate against the road traffic.
- (ii) Then immediately inform the SM on Duty.
- (iii) He shall not open the gate till he ensured that the train has completely stopped.

CERTIFICATE:- NOTHING IN THESE RULE SHALL BE READ AS CANCELLING AMENDING OR MODFYING ANY GR & SR'S ANY OTHER RELEVANT RULES.

3.0 GATE WORKING INSTRUCTIONS OF “C” CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE (NO-JT-18) AT KM-547/5-7(UP),547/6-8(DN)BETWEEN RENGALI-SASON STATIONS.

3.1 GENERAL INSTRUCTIONS:

3.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

1.	Number of Level Crossing Gate: -	JT-18.
2.	Engineering or Traffic Gate: -	Engineering.
3.	Under control of Station Master/PWL:	PWL.
4.	Location KM	547/5-7(UP),547/6-8(DN)
5.	At. Station: -	---
6.	In between stations: -	RGL-SSN.
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: -	NIL.
12.	Provision of Gate signal at Kms.	i) Up line NIL ii) Dn line NIL
13.	Signalling arrangement: -	NIL.
14.	Means of Communication:	Telephone Communication from Gate Goomty with SM office/ SSN
15.	Width of level crossing Gate: -	7.5 Meters.
16.	Type of road. (NH/SH/Others): -	Others
17.	Name of Road: -	Canal Gate.
18.	Metaled/Non Metaled:	Metaled.
19.	Approach Road: -	Metaled
20.	Width of the road: -	5.50 M.
21.	Angle of road crossing (In case of the skew Gates) --.	--.
22.	Road gradient (If any)	i) North/East side- Level. ii) South/West side- Level.
23.	Road alignment (Straight/Curve): -	i) North/East side.- Straight. ii) South/West side. -Straight
24.	Provision of height gauges: -	Provided
25.	Type of Barriers: -	Winch operated Lifting barriers.
26.	Length of checkrails: -	9.5 Meter.
27.	Road surface in between Level Xings Gates	C.C Block
28.	Length of speed breakers: -	5.5 Meters.
29.	Road signs: -	Provided
30.	Speed breaker indication board: -	Available
31.	TVU: -	14678 on 02/2022.
32.	Census next due on: -	02/2025.
33.	Demarcation for placement of Detonators: -	Provided.
34.	No. of Gateman working: -	02(12 Hours shift).
35.	Nearest Railway Medical Assistance: -	Sambalpur
36.	Nearest Private Medical Assistance available (if any)	Sason
37.	List of equipment available Yes/No: -	Yes.

3.2. **EQUIPMENT:**

ITEMS	QUANTITY/NUMBERS
1. Tri Colour Torch	3 (5 on Quadruple/Line or twin single line)
2. Hand signal Flag Green:	1 mounted on sticks
3. Hand Signal Flag Red:	3 (6 on Quadruple/line or Twin single line & 7 in case Hexaple section mounted on sticks)
4. Banner Flag Red:	3 (5 on Quadruple/Line or twin single line)
5. Posts for exhibiting red banner flag:	2 (4 on Q/Twin single line and 5 on Hexaple section).
6. Spare chains with padlocks:	2 with stop mark
7. Detonators:	10 in tin case
8. Gate Lamps:	2
9. Tommy Bar:	1
10. Motor Pan:	1
11. Spade/Fowrah:	1
12. Rammer:	1 (in case of asphalted road this may not be provided)
13. Pick Axe:	1 (in case of asphalted road this may not be provided)
14. Tin case for flags:	1
15. Can for oil:	1
16. Water pot/Bucket:	1
17. Canister for Muster Roll:	1
18. Set of spare spectacles of Gateman Wearing glasses.	1
19. Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate:	1
20. Basket :	1
21. Whistle :	1
22. Wall clock :	1
23. Small size chains with padlocks to be used in case of failure of boom lock.	2

3.3 **THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS:**

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) Gateman Rule Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.

3.4 **DUTIES OF GATEMAN:**

1. **ALERTNESS:**

The gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the gate shall be in his personal custody.

2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

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

- i) Gateman 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 nighttime, 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 banner flag by day and red light by night is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that all gate lamps and hand signal lamps 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 his reliever arrives and takes over charge from him. 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.
- 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, any vehicle/wagons /trains/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 be 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) 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 these instructions.
- xii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gateman must keep the road surface well-watered and rammed in case of unmetalled roads.
- xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN:**

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

- i) He shall take prompt action to warn the Loco pilot/guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, and 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/ SSN 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 endeavor 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/ SSN, to take appropriate action, under exchange of private number.

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

- i) In case of an obstruction at the level crossing gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the SM/ SSN on duty, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master/ SSN after three attempts, he shall first protect the gate and then inform on phone.

B) **Electrified Section:**

- (i) On noticing that, the whole or part of the OHE or a feeder or a cable falling down, the gate keeper shall ensure that, as far as possible, human beings, animals or vehicles etc are kept away in order to avoid any contact with the live equipment.
- (ii) As soon as it is noticed that, Pantograph of an electric rolling stock getting damaged and/or entanglement of the same with the OHE, he shall make every possible effort to stop the train and immediately inform SM on duty.
- (iii) Any damage to the track or structures of the OHE comes to the notice of on duty GK, he shall immediately inform SM on duty and take all necessary measure for protection of the line as under.

A) **THE GATEMAN SHALL PROTECT THE LINE AS UNDER:**

- 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 from the line on which train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction, 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 in 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, which was placed at boom.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in (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 stop the approaching train by waving his red flag by day, red hand signal lamp by night repeatedly.

B) OTHER ACTIONS 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 Station Master/ SSN and sectional Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

3.5 ENGINEERING ITEMS:

- i) Visibility: -

Direction	Side	Visibility Distance
UP	Right	1000 M
	Left	600 M
DN	Right	1000 M
	Left	700 M

- ii) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- iii) Periodical Census of traffic has been taken and the latest TVU is 14678 on 02/2022.

3.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is a Manned & Non-interlocked Engineering L.C.Gate situated at Km 547/5-7(UP),547/6-8(DN) in between RGL-SSN Stations. This gate is provided with winch operated coupled lifting barriers and the gate is closed/opened by the gateman manually by winch operation. Telephone communication is provided between the L C. gate lodge with SM office of SSN station. The level crossing gate is normally kept closed and locked against road traffic. The Station Master/ SSN shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number. When the gateman desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the Station Master/ SSN for the passage of train or the whole of the train with last vehicle indicator has passed over the level crossing gate for which the gateman has exchanged private number with the SM/ SSN Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2. EXCHANGE OF PRIVATE NUMBERS.

- (i) The normal position of level crossing gate being "Closed to Road Traffic" it should always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.

The Station Master / SSN before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master / SSN in assurance of gate being closed and locked against road traffic.

- (ii) The Station Master / SSN shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number.
- (iii) When the gateman desires to open the gate for passage of road traffic he should ensure that:
 - (1) He has not exchanged any private number with the SM / SSN as per (ii) above.
 - (2) If he has exchanged private number with the Station Master / SSN, the whole of the train with last vehicle indicator has passed over the level crossing gate and Station Master / SSN has not exchanged private number with him for any other movement immediately in rear of the train.

Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.

- (iv) In case the Gateman is not responding on the telephone or in case the telephone becomes defective or private number is not received from the Gateman, the Station Master/ SSN shall adhere to the procedure prescribed in SR 16.03.04.
- (v) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.

3. **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or SM/ SSN does not get any response from the Gateman despite 2 or 3 attempts, the following procedure shall be adopted:

- a) SM/ SSN shall serve a caution order to the Loco pilot and the Guard of every train proceeding into the affected section giving the number and kilometreage of the level crossing and directing the loco pilot:-
 - (i) To whistle frequently to attract the attention of the gateman,
 - (ii) To proceed cautiously, and stop 30M. short of the level crossing and be guided by hand signal.
- b) (i) The Loco Pilot after stopping, if the gateman is available and apparently in a fit condition to continue his duty and the gates are closed, shall arrange to advise the station master / SSN as the case may be of the fact using the telephone provided at the gate. The Station Master/ SSN on receipt of such an advice from the Loco Pilot shall discontinue issue of caution order to the following trains provided the acknowledgement of the gateman is available over the telephone.
- (ii) In the above circumstance, the Loco Pilot should not stop his train at the next station to advise the Station Master.
- c) (i) If the loco Pilot does not find the gateman at the level crossing or if the gateman is apparently unfit for duty and the gates are not closed, he shall depute his Assistant, the Loco Pilot shall seek assistance of the Assistant Guard or Guard of the train. The same should be informed to the Station Master/ SSN on gate telephone.

- (ii) The Loco Pilot, after being hand signaled, shall pass the level crossing and stop clear of it by at least 2 bogie lengths to pick up the Assistant or Assistant Guard / Guard, as the case may be. The Railway servant deputed for closing the gate shall reopen it for road traffic after the passage of the last vehicle of the train.
- (iii) If, however, the telephone is out of order or the gateman is not available or is apparently unfit to continue his duty and intimation of the fact could not be given to the station/ SSN from the gate, the Loco Pilot shall stop his train at the next station (even if it is through passing station) and give a memo to the Station Master/ RGL indicating the condition of the gateman, gate and telephone.
- (iv) The Station Master/ RGL on receipt of the Loco Pilot's report regarding absence or unfitness of the gateman, shall advise the station Master/ SSN, the Notice Station, the Section Controller, JE/SE/SSE (P.Way) and AEN concerned and the Gangmate of the nearest gang for immediate posting of a gateman. He shall also inform the maintenance staff to attend and repair the telephone, if required. Issue of caution order should continue till normal working condition is restored.
- d) Before giving line clear to a train, the Station Master/ RGL shall advise the Station Master/ SSN of the facts by message supported by a Private Number, and obtain his acknowledgement with a Private Number. The latter shall issue a caution order to the Loco Pilot as detailed in Para (a).
- e) Necessary entries shall be made in the Caution Order Register, Station Diary or Signal Failure Register as the case may be by Station Masters at either end of the affected station. The Section Controller shall also keep a note in his chart indicating the action taken by him.

4. **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/ SSN, 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 & 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 Loco pilot of an approaching train.
- v) Station Master on duty/ SSN shall issue caution order to the Loco pilot of departing UP train.
- vi) SM/ SSN shall also advise the Station Master/ RGL at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco pilot before despatching a DN train in to the block section from his end.
- vii) SM/ SSN should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the defect 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.

5. **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/ SSN on duty regarding the defects/obstruction at the Gate under exchange of private number.
- iii) Stationmaster at SSN on duty shall be advised to put the departure signals back to 'ON' position, if taken 'OFF' for a train.

- iv) If there is no response from the Station Master / SSN after two or three attempts, he shall first protect the Gate and then inform him 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.1.4. (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/ SSN who shall not allow the trains 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/ SSN shall also inform the station Master/ RGL, under exchange of private number, asking him not to despatch any train into 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/ SSN accordingly under exchange of private number.
- x) 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.
- xi) Station Master/ SSN shall advise maintenance staff responsible for maintaining the lifting barriers of Gate to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

6. **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment, which is visible to the Gateman, the Gateman and Station Master/ SSN will adopt the procedure given under item No.5 above. If the obstruction fouls the level Crossing Gate, Gateman must keep the Gates closed against road traffic till the track is cleared of obstructions.

7. **DUTIES OF GATEMAN IN CASE OF ACCIDENTAL ROLLING DOWN OF TRAIN:-**

When the Gateman seen that a train is rolling down or immediately after receipt of the information about accidental rolling down of the train the Gateman shall:

- (i) First close the gate against the road traffic.
- (ii) Then immediately inform the SM on Duty.
- (iii) He shall not open the gate till he ensured that the train has completely stopped.

CERTIFICATE: - NOTHING IN THESE RULES SHALL BE READ AS CANCELLING AMENDING OR MODIFYING ANY GR & SR'S ANY OTHER RELEVANT RULES.

APPENDIX – ‘B’

DETAILS OF SIGNALLING AND INTERLOCKING INSTALLATIONS, INSTRUCTIONS FOR WORKING THEM NORMALLY AND EMERGENCIES ETC., INCLUDING THE POWER SUPPLY ARRANGEMENTS.

1.0 BRIEF DESCRIPTION OF THE SIGNALLING & INTERLOCKING INSTALLATIONS:

This is a ‘B’ Class Station with Standard II (R) Interlocking (with isolations). The points and Signals are power operated from composite miniature central panel installed in the Station Master’s Office. The Station is equipped with manually operated Multi Aspect Colour Light Signalling.

1.1 DESCRIPTION OF PANEL:

The yard layout is depicted on the panel and the panel is fixed parallel to the track so that when SS/SM on duty faces the panel, the yard drawing of the panel corresponds to the actual layout.

1.1.1 DESCRIPTION OF POINT PUSH BUTTON (RUNNING LINE POINT): -

SI. No.	POINT No.	COLOUR OF BUTTON	DESCRIPTION
1	20	BLACK	Cross over Point between UP & DN Line at SARLA end.
2	21	BLACK	Cross over Point between Line 2 & Line No.3 at RGL end.
3	22	BLACK	Cross over Point between UP & DN Line at SARLA end.
4	24	BLACK	Cross over Point between Line 3 & Line No.4 at SARLA end.
5	25	BLACK	Cross over Point between Line 3 & Line No.4 at RGL end.
6	26	BLACK	Cross over Point between Line No.1 and Line No. 2 at SARLA end.
7	27	BLACK	Cross over Point between Line No.1 and Line No. 2 at RGL end.

1.1.2 DESCRIPTION OF POINT GROUP BUTTON: -

These are two buttons at the top of panel one for Normal and one for reverse operation of points. These are coloured Black with red dot. The button is operated in conjunction with point button to operate the concerned point to the required setting.

1.1.3 OPERATION OF POINTS BY POINT PUSH BUTTONS: -

Points are operated for NORMAL to REVERSE or vice versa by operating concerned point push button along with common point group button for normal or reverse operation. When the points are required to set from normal to reverse, the concerned point push button along with common point group button for reverse operation are to be pressed simultaneously. As soon as the operation is initiated the RED indication will start flashing till the point is correctly set to reverse at site and GREEN indication glows. Similar operation shall be done when the points are required to set from reverse to normal. Only one point can be operated individually at a time.

1.2.0 POINT INDICATIONS: -

Points are normally operated automatically along with route setting operation. However, required points can also be operated individually. For this, POINT BUTTONS, which are BLACK in colour, are fitted over the point layout on the panel board. The individual operation of the electric point machine is controlled by these point push buttons in conjunction with the POINT GROUP BUTTON (which are BLACK with red dot on it) ‘N’ or ‘R’ as per requirement fitted on the top of panel board. The indication for points are as follows; -

- 1.2.1. When a point is set and locked in Normal position, a horizontal 'WHITE' indication appears suggesting that the point is set in NORMAL position.
- 1.2.2 When a point is set and locked in REVERSE position, a diagonal 'WHITE' indication appears suggesting that the point is set in REVERSE position
- 1.2.3 When the points of any route have been correctly set and relevant signal taken 'OFF', RED indication near the point on the panel appears indicating that the concerned points are locked either in NORMAL or REVERSE position as the case may be.
- 1.2.4 When the points are not set or locked either in NORMAL or in REVERSE correctly, the normal and reverse steady indication will not be there but the WHITE indication will start flashing till such time the point is housed & locked properly in one of the positions. In such case points are to be set both ways by crank handle and clamped and padlocked. This WHITE indication will flash during operation of point also. After completion operation of point during crank handle operation, NORMAL or REVERSE indication appears on panel.
- 1.2.5 All points over running lines are operated by electric point machines.
- 1.2.6 **NON SETTING OF POINTS:** -

The cause for non-setting of the point in the desired position shall be checked up by the SS/SM on duty according to SR 3.68.01 (C). If there is a defect other than any obstruction, then the point shall be considered defective and action shall be taken for clamping and padlocking of this point in the desired position by Station Master on duty himself for all trains according to SR 3.69.03(C). In such case both ends of the points shall be clamped and padlocked.

1.2.7 DESCRIPTION OF CRANK HANDLE BUTTONS: -

All motor operated points in the yard have been grouped into four crank handle zones for emergency / manual operation of points by crank handles as follows:

SL NO.	CRANK HANDLE	COLOUR OF BUTTON	CONTROL POINTS
1	CH1	BLUE	26 A and B, 27 A and B.
2	CH2	BLUE	24 A and B, 25 A and B.
3	CH3	BLUE	20 A and B, 22 A and B.
4	CH4	BLUE	21 A and B.

Crank Handle buttons must be operated in conjunction with GROUP TRANS or GROUP RELEASE button to transmit or receive the crank handle.

1.3.0 SIGNAL PUSH BUTTON:

Push buttons for operation of signals are provided near the signals on the panel. These are operated in conjunction with Route button (white coloured) to operate the signals.

1.3.1 **DESCRIPTION OF SIGNAL BUTTONS:**

SL. NO.	BUTTON NO.	COLOUR	DESCRIPTION
01	S1	RED	Press to take 'off' UP Home Signal for Line No. 1 & 2 along with respective route button
02	C1	RED with WHITE DOT	Press to take 'off' UP calling on Signal for line No. 1 & 2 along with respective route button after the train has occupied Calling-on track circuit 1AT.
03	S2	RED	Press to take 'off' DN Home Signal for Line No.1, 3 & 4 along with respective route button
04	C2	RED with WHITE DOT	Press to take 'off' DN calling on Signal for line No.1, 3 & 4 along with respective route button after the train has occupied Calling-on track circuit.2AT
05	SH3	YELLOW	Press to take 'off' Shunt signal for back shunting towards line no. 1, 2, 3 & 4 along with respective route button.
06	SH4	YELLOW	Press to take 'off' Shunt signal for back shunting towards line no. 1, 2, 3 & 4 along with respective route button.
07	SH5	YELLOW	Press to take 'off' Shunt signal for shunting from line No.4 up to advanced starter signal No.15 along with respective route button.
08	S6	RED	Press to take 'off' DN Starter on line No.4 along with route button.
09	SH7	YELLOW	Press to take 'off' Shunt signal for shunting from line No.3 up to advanced starter signal No.15 along with respective route button.
10	S8	RED	Press to take 'off' DN Starter on line No.1 along with route button.
11	S9	RED	Press to take 'off' UP starter from line No.1 along with route button.
12	SH10	YELLOW	Press to take 'off' Shunting from line No.2 up to advanced starter signal No.16 along with respective route button.
13	S11	RED	Press to take 'off' UP starter from line No.2 along with route button.
14	S12	RED	Press to take 'off' DN starter from line No.3 along with route button.
15	S15	RED	Press to take 'off' UP Advanced starter signal towards SARLA.
16	S16	RED	Press to take 'off' DN Advanced starter signal toward RGL

1.3.2. **SIGNAL INDICATIONS: -**

All signals in the yard are depicted on the panel alongside the track as per their respective position in the yard. The aspects of all signals in the yard, at any time, are shown on the signal indications depicted on panel.

- 1.3.3 **ASPECTS OF SIGNALS:-** G:-Green light indicates “PROCEED” aspect of the colour light signal and authorizes to proceed. Y: - Yellow light indicates the “CAUTION” aspect i.e. Proceed and be prepared to stop at the next stop signal. YY:-Double yellow light indicates “ATTENTION” aspect i.e. Proceed and be prepared to pass the next signal at restricted speed as may be prescribed by special instructions. R: - Red light indicates the “STOP” aspect i.e. Stop dead.

The aspect of Distant signal is corrected vide amendment to GR-3.07 and CPTM/ECOR's letter No.ECOR/Optg/SC/55/X/SWR, dtd.05.02.2014. The revised indications are given as under.

Receiving On	Existing		Revised	
To stop at home signal	Aspect of Distant	Aspect of Home	Aspect of Distant	Aspect of Home
	Y	R	Y	R
i)To stop at loop line starter, ii) Through via loop.	YY	Y with lunar	YY	Y with lunar
To stop at main line starter	G	Y without lunar	YY	Y without lunar
Through via main line	G	G	G	G

1.4 **ROUTE BUTTONS: -**

Route buttons are provided separately on each running line on the panel for initiation of route (viz. L1 UN, L1 UN1, L2 UN, L3 UN, L4 UN, L4 UN1). Common route buttons are also provided for taking off starters (viz.: 15AT UN, 16 AT UN). An individual route button is provided for taking off Advance starter (Viz.: 15 UN, 16 UN). For clearing the signals it is necessary to operate the signal buttons and the concerned route button concurrently. In the panel, the routes are set automatically by operation of entry and exit button.

1.4.1 **DESCRIPTION OF ROUTE BUTTONS**

SL. NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	L1 UN	WHITE	Route button for UP Home, for line No.1 setting overlap up to advanced starter.
2	L1 UN1	WHITE with BLACK DOT	Common route button for UP/DN Home setting overlap upto ORL and for UP/DN Calling-On & back shunt (SH-3 OR SH-4) for Line No.1
3	L2 UN	WHITE	Route button for UP Home setting overlap up to advanced starter, UP Calling-on & back shunt (SH3 or SH4) for line No.2
4	L3 UN	WHITE	Route button for DN Home, for line No.3 setting overlap up to advanced starter and DN Calling-on & back shunt (SH3 or SH4) for line No.3.
5	L4 UN	WHITE	Route button for DN Home, for line No.4 setting overlap up to advanced starter.
6	L4 UN1	WHITE with BLACK DOT	Common route button for DN Home setting overlap to ORL and for DN Calling-On & back shunts (SH-3 OR SH-4) for Line No.4
7	15AT UN	WHITE	Common Route button for UP starter signal No. 9 or 11 & For shunt signal No.SH5, SH7
8	15 UN	WHITE	Route button for UP advanced starter signal No.15.
9	16AT UN	WHITE	Common route button for DN starter signal No. 6 or 8 or 12 & for shunt signal No.10.
10	16 UN	WHITE	Route button for DN advanced starter signal No. 16.

2.0 DESCRIPTION OF KEYS, COUNTERS , INDICATIONS AND OTHER BUTTONS.

SL. NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	SM's Emergency Point Key		This key is required to be inserted and turned to right whenever the point is to be operated in track circuit failure condition. This key shall be in the personal custody of SM on duty.
2	SM's Panel operation Key		This key is required to be inserted and turned to right for any operation of Points, Signals etc. This key shall be in the personal custody of SM on duty.
3	Emergency Point operation push button	Black colour with Red dot	This is to be pressed for emergency operation of point in association with SM's emergency point key when concerned point zone track circuit has failed.
4	Emergency Point operation counters.		This registers the emergency operation of points.
5	Emergency route release counters.		This registers the emergency route release operation.
6	Emergency Route Release Button	White with Red dot	For Emergency Route Release
7	Group Trans Button	White colour button with Black dot	To be pressed for transferring the control to concerned Crank Handle along with concerned Button
8	Group Release Button	White colour button with Black dot	To be pressed for releasing the control from the concerned Crank Handle along with concerned Push Button
9	Point Normal push button	Black colour with Red dot	This is to be pressed to initiate Normal setting of points along with concerned button for individual operation of points
10	Point Reverse push button	Black colour with Red dot	This is to be pressed to initiate Reverse setting of points along with concerned button for individual operation of points
11	Signal Cancellation Push Button	Red colour button	For cancellation of a signal, which is already taken off.
12	Signal Lamp Failure /Point Failure Buzzer Muting Button	Red colour with White dot	To be pressed for acknowledging Signal Lamp Failure/Point Failure Buzzer.
13	Button held buzzer		This button comes to operation when any of push buttons is stuck up
14	Signal/Point failure buzzer		This button comes to operation when signal/Point failure occurs.
15	Button Held Buzzer ack. Button	White colour button with Black dot	For muting the button held buzzer, which starts buzzing when a button is held up.
16	Calling on counters		These are the registers to record the operation of UP & DN Calling- on signals.
17	Block release push button	Chocolate with white dot	This is to be pressed after the complete arrival of train to normalize the Block instrument
18	CH button	Blue coloured push button	Press to extract Crank Handle Key for Point along with group "TRANS" push button.

3.0 TRAIN ARRIVAL INDICATION THROUGH AXLE COUNTER:

The system provides for automatic check for last vehicle arrival through provision of axle counter. Axle counters are provided in SSN – RGL (Both for UP & DN line) and SSN –SLRA (Both for UP & DN Line) section to check the complete arrival of trains. The system is

interlocked with respective Block Instrument. When the Axle counter section indication provided for each direction on the panel individually for sections indicates 'RED' i.e. occupied even after the complete arrival of trains, the Block instrument of the respective section can be normalized after ensuring complete arrival of trains by means of physical verification of last vehicle for stopping as well as run through trains (refer resetting procedure of Axle counter).

4.0 (A) POWER SUPPLY ARRANGEMENT FOR THE SIGNALLING INSTALLATION

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

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

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

- a) A change over switch is provided in the SM's office with the three power supplies viz UP AT, DN AT and local power supply for changing the switch to the required supply position. The availability of the supply is indicated by luminous indicator above the circuit breaker for each supply.
- b) Normally the switch will be kept towards UP AT or DN AT position. Whenever the power block is to be given on the line, on duty SS/SM must ascertain the power is available on the other AT and change over the switch to desired position e.g if power block is to be given on the UP line, DN AT must be available and vice versa.
- c) In case of failure of one of the AT supply without any power block, on duty SS/SM has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is UP and when tripped, it goes DN). In case of failure of both AT supplies without any power block, the local supplies shall be utilized by operating the change over switch. If the circuit breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and a message shall be given to the AEEE/GEN and CTFO/PSI/TRD/GEN for prompt rectification.
- d) Whenever there is a failure of power supply in one AT, the on duty SS/SM shall take prompt action to inform to all concerned for the rectification, The on duty SS/SM himself, during his daily checks, shall test the availability of power supplies on both AT's and make entry in station diary duly initiating action for rectification of failure, if any.

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

- i) Power supply to the signalling installation is fed through IPS installed in the S&T power supply room. The IPS is normally fed through UP AT/DN AT traction power selected by SS/SM on duty. Standby power supply is through OSEB local supply. One change over switch is provided in the SM's room for selection of output of either traction power supply or local power supply. The available traction/local supply is fed to the IPS through auto-change over switch provided in IPS.

- ii) The IPS system is connected with Battery as a back-up power source for safe working during transition of power and in case no 230v AC supply is available due to any reason.
- iii) In the event of failure of all the sources of 230V, 50 Hz AC supply, the signalling system shall be fed by power generated by back-up battery Bank connected to IPS for a limited power of 08 to 10 hours. The health of battery bank is monitored through one IPS monitoring Panel provided in the SM's room which shall be display the voltage 110V DC [Battery bank provided as back-up source of power supply].

Depending upon the health of the Battery Bank and the system, the following indication/alarm will appear on the Remote Monitoring Panel, their implications and action to be taken by SS/SM on duty is tabulated below.

SN	Instruction	Healthy of Battery Bank /Equipment	Visual Indication	Audio Indication	Action to be taken by SS/SM on duty
A	-	50% DOD (Depth of Discharge)	Red	Alarm	Alarm shall be acknowledged by SS/SM on duty.
B	-	60% DOD	Red	Alarm	-Do-
C	System Shutdown	70% DOD	Red	Alarm	Signal feed cut off and all DC-DC converters to work. Audio alarm will continue till power supply is restored.
D	Call S&T Staff.	Equipment fault	Red	Alarm	Failure of any module will give the alarm in SM's panel. Alarm shall be acknowledged by SS/SM on duty for audio cut-off.

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

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

NOTE: In case of failure of all AC supply sources IPS Battery Bank can provide power supply maximum up to 08 to 10 hours before system shut down indication of IPS.

5.0 **EMERGENCY ROUTE RELEASE COUNTER**

This counter is provided to register the number of operations made for emergency cancellation of route. The SS/SM on duty must record the last number registered on the counter while taking over/ handing over duty.

6.0 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) / EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT)**

This panel interlocking is based on the principle of 'DEAD APPROCH LOCKING'. As such when a route is set and signal is taken off on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken off vide SR 3.36.02 (a), the concerned signal must be put

back to danger by pressing the Signal cancellation button and the concerned signal button. Then the emergency route release button (white with red dot) positioned at the top of panel to be pressed after breaking the seal and subsequently the concerned signal button pertaining to the route is to be pressed. A white light will flash (Up or Down) indicating that the timer is working. After 120 seconds, the white light along with the white strip of light will disappear suggesting the route has been released.

In case the route illumination (a white strip of lights) does not disappear, it suggests that the route is not released/cancelled. The concerned S&T staff should be advised immediately to get the emergency route release button resealed after rectification of fault if any. Each operation of emergency cancellation of route is recorded in the emergency route release counter by registering the next higher number. All such operations and the new number should be recorded in the station diary and in the train signal register.

7.0 **EMERGENCY POINT OPERATION (BLACK WITH RED DOT) :**

Emergency point operation facility is provided to operate point from the panel in the event of failure of track circuit controlling the point. A push button (BLACK WITH RED DOT) is provided on the top of panel. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit, shall insert SM's emergency point operation key in, turned and shall push the emergency Point operation button by breaking the seal and then operate the required point button. Retaining the point button pressed, SM shall release the emergency point operation button and press the point group button (N or R). After pressing the emergency point operation button and point button and indication will appear near emergency point operation button and a number will increase in the emergency point operation counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose. Before initiating emergency point operation when the concerned point zone track circuit is showing occupied, SM on duty must carry out physical verification at site to ascertain that the said track circuit is clear of vehicles. The concerned S&T staff should be advised immediately to get the emergency point operation button resealed after rectification of fault if any.

8.0 **BUTTON HELD ACKNOWLEDGEMENT BUTTON (WHITE WITH RED DOT) :**

All push button are self-restoring type. A button held acknowledgement push button (white with red dot) along with a white light is positioned at the top of the panel. When any button gets stuck in pressed condition, a buzzer will sound along with flashing white light Indication. The Station Master shall stop the buzzer by pressing the button held acknowledgement button (white with Red dot). The buzzer will stop but the flashing white light will continue to glow till the pressed button is normalised. SM on duty shall try to find out the pressed button for normalisation or otherwise inform the maintenance staff to rectify.

9.0 **OVERLAP TIME RELEASE INDICATION (WHITE LIGHT) : -**

These are two indications (white lights) for UP overlap time release and DN overlap time release to indicate the release of overlap. These indications will flash during releasing of overlap

10.0 **TRACK CIRCUITS: -**

The station yard is fully track circuited from Home signal to Home signal and also for 7 rail lengths in rear of the Home signals on either side. Track circuits 1AT and 2AT are calling-on track circuits. 20AT, 20BT, 21AT, 21BT, 22AT, 22BT, 24T, 25AT, 25BT, 26AT, 26BT, 27AT & 27BT are Point zone track circuits. L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3 L4T1, L4T2, L4T3 are berthing track circuits. Other track circuits namely 1T, 1T1 2T, 2T1, 15AT, 15T, 16AT & 16T are for signal replacement, route holding. Indications for all track circuits are

indicated on the panel. Normally these are not lit when the track circuits are clear. And RED light appears when the track circuit is occupied/failed. White strip lights for the track indications appear when the relevant route is set. In case of failure of any track circuit, the controlled signals or points are to be treated as non-interlocked and trains shall be worked as per relevant rules.

11.0 **STATION MASTER'S PANEL CONTROL KEY: -**

The panel is fitted with Station Master's lock up key to prevent any unauthorized operation of the Panel. The SM/SS on duty is the only authorised person to operate the panel and the panel key must always remain in his personal custody vide SR 3.36.03 & GR 5.08. The key locks the panel board and no operations are possible. In case of emergency, signals can be put back to danger by operating concerned signal button and Signal cancel button without releasing the panel lock also. However, the provisions of SR 3.36.02 shall be followed while replacing the signals to 'ON'.

12.0 **CRANK HANDLE CONTROL KEY AND OPERATION: -**

When any point fails to operate normally by the route setting operation or through the concerned Point button from control panel, it is inevitable to operate the points with crank handle. Crank handle keys are interlocked with signals and interlocking system. Crank handles are for all motor operated points at the station. The Crank Handle push button no. CH1/CH2/CH3/CH4 (BLUE) and Group Trans/Release button (WHITE WITH BLACK DOT) are provided at the top of the panel board. The CH button has two indications, viz. WHITE, and RED. The WHITE indication suggests that the crank handle key is in its interlocked position of the panel. This is called Crank Handle Key 'IN' indication. The RED indication suggests that the crank handle key is locked and not free for extraction from RKT. This is called 'Crank handle key LOCKED' indication. When there is no light or blank, it suggests that the KEY is OUT of RKT. The crank handle key in RKT in the end locations can be released from the RKT. The SM has to press concerned crank handle button and Trans button. This will enable SM/TP to extract crank handle key CH1/CH2/CH3/CH4 from RKT at end location. SS/SM/TPM on duty after extracting the crank handle key from RKT at end-location, insert it in the space provided for it on the point machine and turn it to open up the slot for crank handle in the point machine. After inserting the crank handle in the point machine he shall operate it to set the point in desired position. After completion of point work the crank handle key is to be inserted in the RKT at end location and transmitted to station. Station Master on getting 'Key IN' flashing indication that will appear on panel, shall press relevant CH button & Group Release button to get the steady key "IN" indication. SS/SM on duty shall personally ensure clamping and padlocking all facing and trailing points en-route. The cases of failure of Motor operated points should be promptly reported to the concerned ESM/Signal Inspector for immediate rectification. SS/SM on duty as per OM 2.19 shall maintain an emergency crank handle register. The procedure for use of crank handle for Motor operated points shall be followed in terms of operating Manual 2.19.

13.0 **SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS: -**

For setting a route all the concerned points must be set by operation of relevant point button and point group button one at a time in the desired position or by operating signal button and route Button. As soon as the points on route, overlap and isolation are set to the required position, the concerned signal for the route will clear and a white strip of light will appear on the entire route confirming that the Route is set & locked. The signal 'off' indication will appear on the panel provided other conditions for taking 'OFF' reception signals are satisfied.

14.0 **SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS:**

For setting a particular route for departure of a train, all the concerned points must be set by operation of point button and point group button one at a time in the desired position or by

operating signal button and route button. To take off Advanced starter, line clear must be obtained from the concerned block station in advance. Then the concerned Advanced starter signal button shall be pressed along with the Advanced starter route button to be pressed for two to three seconds and released. This will clear the Advanced starter signal and a white strip of light will appear on the panel up to the foot of the Advanced starter signal.

To take off the starter signal, concerned signal button to be pressed along with common Route button to be pressed for two to three seconds and released. This will clear starter signal and a white Strip of light will appear on the route from the concerned Starter to the Advanced starter signal.

14.1 TAKING OFF CALLING-ON SIGNAL: -

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

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. When a train occupies the track circuit a RED light strip will appear on the panel. The particular route on which train is intended to be received shall be set by operating by point push button and group button individually or by signal and route button pressing or by crank handling in the event of failure of operation of points through panel. After the route is set, the calling-on signal switches 'C1'/'C2' (RED WITH WHITE DOT as the case may be), shall be pressed simultaneously along with the concerned route button for few seconds and released. After a lapse of 60 seconds, the calling on signal clears i.e., a yellow light glows at the concerned calling on signal on the panel. For loop lines, route button UN1 (WHITE WITH BLACK DOT) shall be pressed for respective setting of the overlap points. Each operation of Calling On signal shall be registered in respective Calling On signal counter (UP or DN) by registering next higher number. A separate register is to be maintained for this purpose.

14.2 RELEASE / CANCELLATION OF ROUTE:

Normally when a train is received on any route and dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released.

14.3 REPLACEMENT OF SIGNALS TO 'ON':

Signals are replaced to 'ON' automatically by the passage of a train past the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the respective signal button and the signal cancellation button (RED) to be pressed simultaneously.

14.4 INTERLOCKING OF SIGNALS/POINTS:

All running line points are fitted with facing point locks in the point machine and are electrically detected by the relevant home signal and starters. Advanced starter is interlocked with respective block instrument in sending position i.e., train going to position and by axle counter for last vehicle check. The block instrument cannot be made normal unless the respective Home signal is put back to 'ON'. Signals once taken 'OFF' can be put back to danger in case of emergency by pressing concerned signal button and signal cancellation button even when the panel is locked up with Station Master's key.

14.5 PILOTING OF TRAINS: -

In the event of failure of both Home signal and Calling ON signal simultaneously, it is inevitable to pilot the train 'IN'. For piloting the train, the setting of route must be ensured by SM/SS on duty personally and the points en-route must be clamped & padlocked at both facing & trailing

end by Operating staff. Same procedure shall be adopted when route illumination fail to disappear. Facing and trailing ends of the all-motor operated points must be clamped and padlocked while piloting 'IN' or 'OUT' and during non-signal movement.

14.6 **SHUNTING:**

For shunting, OFF aspect of starter signals and independent shunt signals shall be used. For back shunting, shunt signals provided on each side of the yard shall be used.

15.0 **NON RUNNING LINES: -BALLAST SIDING.**

The Ballast Siding (CSL of 395 Mts) takes off from Line No.4 at RGL end of the yard with single side entry, The entrance point and derailing switch points are individually operated by an arc levers at site. These points are fitted with hand plunger locks. The entrance point hand plunger lock is unlocked by siding key No- D extracted from RKT at siding location by pressing the button No.29 (BLACK) along with group trans button (WHITE WITH BLACK DOT) provided in the panel. Similar to that of crank handle button indication, control button 29 has key 'IN' and key 'LOCKED' indication, which glows white when key is in, red when route is set and no light when key is out of the RKT. Signals 2A, C2A, SH4A & SH3D and despatch signals S6 & SH5 are electrically interlocked in such a way that these signals cannot be taken 'OFF', if the siding key is taken 'OUT' from the RKT.

Whenever shunting is to be carried out in the siding, SM on duty shall press the control button 29 and group trans button to extract the siding key in the siding location box. The hand plunger lock fitted in the siding point is to be unlocked through siding key No-D and entrance point will be set by the lever at site. Key D-1 released from hand plunger lock at the entrance point will be carried to the DS point. After unlocking the plunger lock fitted on DS point, the DS point is to be set to the desired position by pulling the lever. Points shall be clamped and padlocked for any movement of traffic. After completion of shunting, siding points shall be set and locked to normal setting at site and key shall be inserted in the RKT and turned, a flashing white indication will appear in the panel. SM on duty shall press the control button 29 and group release button to get the steady white indication.

16.0 **VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN INTO STATION YARD: -**

In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be clear of any obstruction for the passage of any train or for any other movements. The clearance of the route including overlap must be ensured by the SS/SM on duty personally through panel indications of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the points etc.

17.0 **CRANK HANDLING EMERGENCY OPERATION OF POINTS:**

Crank handles are interlocked with the signalling and interlocking system at this station. Crank handles which are normally locked inside the RKT instrument at the station, can be taken out only when all the signals are in the 'normal' position and the route is not locked for whatever reasons. Crank handle can be released by operating common 'TRANS' push button and concerned crank handle button simultaneously. When this key is taken out, no signal of the concerned route can be taken off in the yard. This key can be electrically transmitted to both ends of the yard.

On account of failure of point zone track circuits or crank handle key "LOCK" indication or when route is not released, crank handle key cannot be transmitted by normal operation. Hence SM/SS on duty has to resort to emergency crank handling of points. He shall press the

concerned CH button and trans button simultaneously after ensuring that no vehicle is on the point. The RED and WHITE indication of the CH button will start flashing and after 120 sec the RED indication will disappear indicating that crank handle is free to be extracted by normal crank handle operation. He shall then follow the procedure detailed in para 12.0.

On account of the doubtful operation of any track circuit by a light vehicle including self-propelled vehicle such as motor trolley or light steam/Diesel shunting engine or tower wagon, indicating the occupation of track, the SS/SM on duty shall satisfy himself positively that the said vehicle has cleared the point zone track circuits by observing the track indications of the track on either side of the crossovers.

18.0 INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:

When a train is stabled on a running line for a duration exceeding ten hours, the use of the said running line for passing the trains 'IN', 'THROUGH' or 'OUT' at the station shall be done with a lot of care and diligence. SS/SM on duty shall meticulously observe the proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If SS/SM on duty is not satisfied with the proper functioning of the track circuits on which the train was earlier stabled, the signals leading on the line shall be suspended and the S & T maintenance staff be informed for attending to this.

19.0 EMERGENCY OPERATIONS:

The following are the instructions for emergency operations.

20.1 EMERGENCY ROUTE CANCELLATION BUTTON AND VEEDER COUNTER: -

For the purpose of emergency operations there is an emergency 'Route cancellation'. There is a 'VEEDER COUNTER' for counting emergency operations involving operation of the emergency route cancellation button (provided at the top of the panel). The SS/SM on duty must press the emergency route cancellation button after breaking the seal and the signal button conforming to the section for which emergency route release is desired. A flashing indication will appear indicating that the cancellation operation has been initiated and after lapse of 120 seconds, the desired route will release provided all other conditions are favorable for route release.

The Veeder counter registers the number of such emergency cancellation operations. SS/SM on duty should specify the cause for its usage giving the particulars of causes and the time of operation as related to a particular train etc. in the train signal register as well as in a separate register meant for this purpose. The concerned S&T staff should be advised immediately to get the emergency route release button resealed after rectification of fault, if any. The detailed operational instructions are as follows:

20.2 EMERGENCY OPERATIONS – CANCELLATION OF THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHATEVER REASON: -

If the locking of the route does not get released for one reason or the other after passage of the train, it is necessary to take recourse to the following emergency operations.

- a) Firstly it must be ensured that the Signal is in the normal position.
- b) Operation as detailed in para 6.0 of Appendix-B to be followed. In case route is not released even after emergency route cancellation, facility of crank handling of points shall be used. For releasing the crank handle even when lock indication of crank handle appears on the panel, press Group Trans button and crank handle button. After two minutes key from RKT can be extracted. For further operation 17.0 of Appendix 'B' shall be followed.

20.3 EMERGENCY GATE RELEASE OPERATION: NIL

21.0 **LOCKING OF RELAY ROOM: -**

The relay room should be kept locked with two separate locks, the arrangement should such that one key is kept with the on duty SM in his custody and the other key with the signal maintainer. Whenever required, the Station Master shall hand over the key to the maintainer with proper arrangement with proper acknowledgement in the basement/Relay room key register. The maintainer on receipt of the key from the stationmaster may use the same and the key in his custody to open the relay room by inserting the keys one after another separately into the earmarked locks.

After completion of work, the relay room is to be locked using both the keys separately and designated key should be handed over to the SS/SM on duty. The details of the transaction should be properly recorded in the relevant register at the Station duly signed by SS/SM on duty and the signal staff concerned. If the relay room key is handed over to the Signal staff regarding the interference in safety gears the train shall be piloted in and piloted out.

22.0 **MAINTENANCE OF S&T INSTALLATION & ADHERENCE TO MAINTENANCE SCHEDULES: -**

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

The tests, checks and replacements etc., including overhauling shall conform to the schedules of Maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject. During checking/ testing or during day-to-day as well as regular maintenance of S&T gears, SS/SM on duty shall co-operate with S&T staff for safe and satisfactory maintenance.

22.1 **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF A SIGNAL INTERLOCKING INSTALLATION: -**

In case of failure of any interlocking gear at the station, the failure report should be communicated by the SS/SM on duty to the sectional Maintainer, the JE/SE/SSE (SIG) of the Section and others through a memo as per G & SR 3.51.04 and 3.68.04 and document all such transactions.

22.2 **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:-**

However, before declaring a signal or any other S&T gear as defective SS/SM on duty shall verify them and setting of points on the route and overlap for a signal to which it applies shall be inspected by the SS/SM on duty irrespective of the position of buttons and indications on the panel and will work vide GR 3.68.

22.3 **RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING: -**

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 Reconnection Memo detailing the rectification. Thereafter the SS/SM on duty shall personally check the defective apparatus. After satisfying himself that the gear is in good and proper working order, he shall resume the normal working of the said defective apparatus in terms of SR 3.68.04 (c), (d), (e) & (f).

22.4 **PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK: -**

Whenever any normal maintenance or special works for major renewals etc., are involved, the signal & Telecom should preplan these works. Field staff and the JE/SE/SSE(SIG) should give 'Advance Intimation' to the SS/SM in writing about this work in terms of GR & SR 15.08.01.

22.5 **EMERGENCIES: -**

Notwithstanding anything contained in the aforesaid paras when equipment is found to be defective and unsafe for passage of trains, the Signal & telecom. Staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of defect or damage to the interlocking installation to the SS/SM on duty and take the Station Master's acknowledgement. After this, the usual practice of exchange of disconnection memo and reconnection memo can follow.

The SS/SM on duty must act promptly on such messages and take adequate precaution treating the S&T installation as defective and pass trains over the affected interlocking equipment according to extant instructions as contained in GR 3.77.

23 **PROCEDURE TO BE FOLLOWED IN THE CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF EMERGENCY CRANK HANDLE: -**

Whenever a signal or a point becomes defective, any movement over the points on the running lines shall be made after clamping and padlocking of both facing and trailing points supervised by SS/SM on duty personally for all trains at this station.

- 23.1 In case of failure of a signal or a point and in case the point can not be operated from the panel, emergency crank handle, which is interlocked with system is to be extracted and the following procedure is to be adopted.
- 23.2 Emergency crank handle is provided for all motor operated points. This is mechanically attached to the key on RKT and can be released by pressing Crank Handle control push button CH1/CH2/CH3/CH4 and Group Trans button simultaneously. All signals will be locked in normal position as soon as the key is released. SS/SM on duty shall transmit the key to required end of the yard and operate the point manually.
- 23.3 When the crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody rests with the Station Master on duty, till it is replaced back in RKT.
- 23.4 The case of failure of motor operated points should be promptly reported to the concerned Signal maintainer/JE/SE/SSE for rectification.
- 23.5 Whenever Crank Handle is required to be used by a signal official for maintenance work or attending to failure, the signal official will give a disconnection memo to the SS/SM on duty and after making necessary entries in the Crank Handle Register. The SS/SM on duty will obtain the acknowledgement of the signal official in the Crank Handle Register and then hand over to him the Crank Handle. The points will be treated as defective till the Crank Handle is returned back to the SS/SM on duty.
- 23.6 Before parting with the Crank Handle either for attending failures or for maintenance work by Signal maintenance officials, the SS/SM on duty will ensure that the reception and departure signals are put back to 'ON' position. The points for the affected lines should be treated as non-interlocked. The SS/SM on duty is responsible for introduction of non-interlocked working and the trains will be piloted 'IN' and 'OUT' duly clamping and padlocking both facing and trailing points over which the train is to pass, as per GR 3.69 and 3.70 with relevant SRs. The SS/SM on duty will be personally responsible for setting and locking of points for reception or despatch of all trains.
- 23.7 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the SS/SM on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.

24.0 **SUSPENSION OF LAST STOP SIGNALS: -**

When the Block instrument is suspended with its handle in 'TRAIN COMING FROM' position or "TRAIN GOING TO" position as the case may be for whatever reason, the concerned last stop signal controlled by the Block Instruments must be treated as suspended and trains shall be piloted 'OUT'.

24.1 The SS/SM on duty shall not grant 'LINE CLEAR' unless he has ensured that the lamps of fixed signals, which apply, to the train are burning. If the signal lights can not be kept burning, the SS/SM on duty before giving 'LINE CLEAR' shall initiate action in accordance with the procedure prescribed in GR 3.61 to 3.71 & relevant SRs vide GR 3.49 (4).

24.2 The SS/SM on duty shall not grant or ask 'LINE CLEAR', if the Axle Counter Section indicates RED/ occupied and will treat the Block Instrument as suspended.

25. **SIGNAL LIGHTS: -**

The SS/SM on duty at 00.00 hours (2nd night shift) must also ensure from panel board that all the signal lights are burning properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the Section Controller on duty.

26. **CORRECTING TIME IN STATION CLOCK: -**

The SS/SM shall set the time in 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.

27.0. **NORMAL POWER SUPPLY: -**

Normal power supply to the signalling and interlocking installations at this station is drawn from SEB power supply source (AC 230 Volt / 50 Hz). In SM's Office there is SM power panel, which represents the voltage of the integrated power supply system.

1. In case voltage drops 105.9V an audible buzzer appears for starting Generator.
2. In case voltage drops 105.1V an audible buzzer appears for emergency start of Generator.
3. In case voltage drops 104.3V an audible buzzer appears for system shut down.

27.1 **POWER FAILURE AND REPORTING SUCH FAILURES: -**

For Power failure refer Para-4 of Appendix- B.

27.2 The SS/SM on duty must maintain record of power failure and he must promptly report the failure to the section controller and the concerned electrical and S&T maintenance staff.

28.0 **AXLE COUNTER AS LAST VEHICLE CHECKING DEVICE (LVCD):-**

- (a) Axle Counter as LVCD has been provided for the section SSN-RGL (Both for UP & DN Line) and SSN-SRLA (Both for UP & DN Line) as last vehicle checking device. The axle counter will also have control over the UP/DN last stop signals and block instrument of respective direction of SSN station.
- (b) The occupation and clearance of the axle counter section is indicated by RED and GREEN indication respectively provided on the panel.
- (c) UP last stop signal of SSN cannot be taken OFF if UP Line axle counter of block section SSN-SRLA fails. Similarly DN last stop signal of SSN cannot be taken OFF if axle counter of block section SSN-RGL fails. On the other hand on arrival of a train at station if the axle counter continues to show occupied the block instruments of concerned block section cannot be turned to line closed position.

28.1 **NORMALISATION OF AXLE COUNTER AND BLOCK WORKING BY RESETTING OF AXLE COUNTER**

(A) After the train has been received by the receiving station or after a block back operation or when no train has entered into the block section and the axle counter displays RED, then the following procedure shall be adopted to reset the axle counter.

(B) **VERIFY THE BLOCK SECTION IS CLEAR OF ANY VEHICLES**

- (i) Procedure laid down in GR 4.17 & relevant SRs thereto shall be followed for the purpose.
- (ii) By checking the train register, the detail of the train passed through the block section and finding out from the station at other end of the concerned block section or from Controller that last train has passed and arrived complete. SS/SM on duty shall exchange private number with the SS/SM at other end of the concerned block section or with the Controller or from whom the complete arrival has been confirmed.
- (iii) If the failure has occurred after arrival of a train, SS/SM on duty shall also obtain intact position from the guard of stopping train or by exchanging all right signal with the guard of through train, so that he can ensure that the train has arrived completely before resorting the reset of LVCD axle counter.

(C) **RESETTING PROCEDURE:-**

After complete arrival of train, if the axle counter of the section does not clear or Axle counter section free indication (GREEN) does not appear in the axle counter panel, The receiving station SM shall call the attention of the station in rear through telephone for resetting and shall establish communication with the said station if resetting of equipment is considered necessary giving details of last train that has arrived complete at his station and the block section is clear.

The receiving station shall inform the sending station as to whether the last train that entered into the section has arrived or not, if arrived fully, shall intimate authenticated by exchanging Private number with the sending station.

As digital Axle counters are provided as LVCD in Block section, resetting is to be done by both of sending end and receiving end individually.

The status of the section LVCD i.e. Clear (GREEN), occupied (RED), preparatory reset (Miniature GREEN) and power on indications (YELLOW) are provided in the reset box.

The procedure to be followed for re-setting by both of sending end and receiving end individually is as follows:-

- a. Insert SM's LV reset key, turn right and keep pressed.
- b. Press LV reset button provided on the panel.
- c. Release SM's LV reset key and reset button.
- d. Turn left the SM's LV reset key and remove it.
- e. The system obtains preparatory reset state and preparatory reset indication (miniature Green) glows on the panel.
- f. The counter reading increases by one count after a gap of 5 seconds approximately.
- g. The counter reading should be recorded.
- h. First train is to be piloted out into the section to make the system normal.

The SS/SM shall record in his Train Signal Register, Station Diary and register meant for it the details of resetting operation giving details of train number, time, Private Number exchanged with SS/SM in rear and reasons for the resetting operation.

If the axle counters functioning properly now, then Block Section cleared indication 'GREEN' will appear on the panel and the concerned Block working will be normalised. If the axle counter section indication does not appear 'Green' and continues to show 'RED' indication, the concerned Block section shall remain suspended and failure intimation to be given to sectional signal Maintainer/JE/SE (Signal) for early rectification.

29. **TELECOMMUNICATION FACILITIES: -**

1. Telephone attached with double line lock & block Instruments for either side Block Section.
2. Station to Station fixed telephone (hot line) is provided
3. Station is provided with Auto telephone connected with Railway Exchange
4. BSNL telephone is provided.
5. The station is connected to JHARSUGUDA-BALANGIR control circuit by control telephone.
6. Station to station 25 Watt VHF communication is provided.
7. Telephone is provided between Station and both end crank handle locations.
8. Telephone is provided between Station and L.C. gates at Km 550/11-13(UP),550/12-14(DN), KM 547/5-7(UP),547/6-8(DN) & Km 547/27-29(UP),547/28-30(DN).
9. Telephone is provided for communication with TPC.

NOTE: -

- I) For obtaining Line Clear, VHF should be used as a last alternative and not as a sole means of communication.
- II) VHF and Walkie-Talkie sets should not be used for unnecessary discussions with Loco Pilots, Guards or any other staff.
- III) The on duty SM shall use the above electrical communication instruments stated in Para-29 from item No. (1) to (6) strictly in order of preference for obtaining/granting line clear vide SR 14.01.01. In case of failure of any of the above means of communication the SM on duty shall work vide SR 6.02.06.

30. **FAILURE OF COMMUNICATION / FAILURE OF BLOCK INSTRUMENTS:**

- 1) In the event of failure/suspension of block instrument, Track circuit & Axle Counter 'Line Clear' shall be obtained over telephone attached to the block instrument or station to station telephone by exchanging identification number and supported by private number as per SR 6.02.06 (a) and Chapter-III Part-I of Block Working Manual.
- 2) In the event of failure/suspension of block instrument and telephone attached to the block instrument, or the Station to station fix telephone 'Line Clear' shall be obtained on Railway auto phone or BSNL phone, by exchanging identification number supported by private number vide SR 6.02.06 (1)(b) and Chapter-III Part-I of Block Working Manual.
- 3) In the event of failure/suspension of block instrument, telephone attached to the block instrument and station to station fixed telephone or Railway auto phone or BSNL phone, Line Clear shall be obtained over the control phone exchanging identification number and supported by 'Private Number' vide SR 6.02.06(1) (c) and Chapter-III Part-I of Block Working Manual.
- 4) In the event of failure / suspension of block instrument or block telephone attached to the block instrument, or station to station fixed telephone or Railway auto telephone or BSNL phone or control telephone line clear shall be obtained on the VHF set exchanging ID number supported by PN provided that the instructions contained in SR 14.01.02 are followed vide SR 6.02.06 (1) (d) Chapter-III Part-I of Block Working Manual.
- 5) In the event of total failure of all communications trains shall be worked vide SR 6.02.03.

APPENDIX - 'C'

ANTI COLLISION DEVICE (RAKSHA KAVACH)

NIL

APPENDIX - 'D'**1.0 STATION MANAGER-I (INCHARGE) :**

He is the over all In-charge of the station; He is responsible for the efficient discharge of duties devolving upon all the Staff employed at the station whether permanent or temporary according to Station Working Rules, Manuals & safe working Instructions. He shall get himself well conversant with the detailed working of Station and panel, points and signals etc.

He is responsible for maintaining the Assurance Register up-to-date. He shall conduct surprise night inspection and safety meetings/fire drills etc. as per instructions issued from time to time. He shall see that all the staff under his control working safely according to the rules in force.

He shall see that all signals, points, level crossing gates and the whole machinery at the station are in proper working order. He shall report all the defects to the concerned officials.

He shall satisfy himself that the staff employed under him are well conversant with Station Working Rules and perform their duties correctly. He is responsible for maintaining SWR, other Rule books and Assurance Register up to date.

He shall see that all safety records are maintained properly and all rules prescribed in G & SR, Block Working Manual, Operating Manual and other relevant directions issued from time to time by competent authorities are followed rigidly by all concerned and any irregularities if noticed are reported promptly to the authorities concerned.

He shall see that all accidents are promptly reported, attended to and GA-3 along with accident message is submitted to the concerned officers in time. He shall see that the staff is civil and helpful to all users of railway.

He shall frequently visit the platform, Station, LC gate etc. in order to maintain an effective supervision over the said staff and their working. He shall see that station premises are kept neat and clean.

He is responsible for booking all staffs working under him for PME and Refresher Course / Safety camp in their due time. His Special attention is drawn out to chapter II of General and Subsidiary Rules and GR 5.01 to 5.08 with relevant Subsidiary Rules, Chapter – XXII of Operating Manual.

He shall see that all equipment, apparatus and instruments including signal and interlocking gears are in proper working order and all failures are promptly reported to officials concerned for repairs/rectifications.

He shall pay special attention towards passenger amenities & coaching trains punctuality and yard feasibility. He shall endeavor for minimizing detention to freight trains by judicious planning of trains staff. He shall pay attention to smooth functioning of goods train to eliminate detentions. He shall attend to all compliance by traveling/trading public.

He shall see that the law and order in the station area is taken care of with the help of G.R.P. and R.P.F and civil authorities as per need.

He shall ensure compliances of all Operating, Safety and Commercial records maintained at the station. He is responsible for overall supervision of the station.

His special attention is drawn to chapter No.II of G & SR (Amendment) 2000 and GR 5.01 to 5.08 with relevant SRs. He shall follow the instruction laid down in SR 3.68.01© & (d) and SR 14.07.01 and BWM 2.09 (e). He shall conduct surprise night inspection, safety meetings and fire drills. He shall maintain good public relation as well as look after passenger's amenities and be helpful to travelling public.

1.1 **ASSURANCE REGISTER:**

All staff before taking up independent charge of their duties at this station, shall make a written declaration in the assurance register that they have read and thoroughly understood the system in force and must sign such declaration.

No Railway servant shall be entrusted with any duty involving safety of the public unless the station in-charge is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS is responsible to see that all the staff are conversant with the Station Working Rules and their signature obtained in the Assurance register after he is satisfied that they have thoroughly understood the working rules of the station. In case of Group 'D' staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibilities.

The station superintendent is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance Register must be maintained in two parts, one for Group 'C' and the other for Group 'D' staff. A duplicate copy of the Assurance Register must be maintained and kept in personal custody of the Station Superintendent.

The declaration shall be renewed in the following cases: -

- (i) Whenever there is a change in the Station Working Rules.
- (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days or more.

3.0 **USE OF PRIVATE NUMBER BLOCKS IDENTIFICATION NUMBER SHEET :-**

Sufficient Private Number books and I.D number sheets in sealed covers shall be kept always in the stock by Station Superintendent under lock and key. He shall maintain a register for this purpose.

4.0 **ACCIDENTS:**

Accidents shall be reported and immediate action shall be taken by the Station Superintendent in charge in accordance with the instruction laid down in the Accident Manual. Whenever the Station Superintendent received report of an accident, he shall take all necessary precautionary measures to protect the traffic and shall arrange earliest possible assistance as required at the site of accident. He shall frame the accident message/reports and follow up all safety principles without delay.

5.0 **TESTING OF POINTS AND SIGNALS :**

The Station Superintendent shall test the working of the reception signals daily during the day when there is no train due to arrive/leave the station. He shall also test the working of points, crossings etc. and record the result in the Station Master's diary.

6.0 **Dy SS/STATION MASTER/ASSISTANT STATION MASTER:**

He shall work in 8 hrs. shift for train passing and booking of traffic, coaching returns and other statements shall be prepared and submitted by him in time under the direction of the Station Superintendent in charge. He shall assist the Station Superintendent in charge for the up keep of the station in all aspects.

Station Master on duty who makes an entry in the train signal register must continue on duty till all the entries pertaining to the trains are completed vide Subsidiary Rule 14.07.01.

He is responsible for working beyond this period when called upon to do so in the exigencies of services. He will follow SR 3.68.01© & (d), SR 14.07.01. Their special attention is drawn to Chapter II of G & SR (Amendment) 2000 and GR 5.01 to 5.08 with relevant SRs. As an Assistant to the SS, he shall follow the instructions given to him by the Station Superintendent.

7.0 **HANDING OVER AND TAKING OVER CHARGE:**

The Station Superintendent in charge/Station Master/Assistant Station Master on duty shall record in the diary the condition of all the running lines, the caution orders in force at the time of handing over charge. These entries must be counter signed by Station Master/Assistant Station Master coming on duty while taking over charge. This will not, however, relieve any one of the SS/SM of his responsibility to ensure by physical check that the nominated line is clear of all obstructions before admission of any train on it.

8.0 **TRAFFIC POINTSMAN:**

He shall work under the instructions of SM on duty and follow the GR 02.05 to 2.11 and other relevant rules laid down in GR and SR. He shall remain responsible for:

- (i) Delivery of authority to proceed and caution order etc. to the driver of train.
 - (ii) Correct setting and locking and crank handling of points for reception/dispatch and shunting operation under the supervision of Station Master.
 - (iii) To couple and uncouple vehicles under the supervision of Station Master/Guard when shunting operation is in progress.
 - (iv) Piloting and hand signalling of trains when necessary.
 - (v) Knowledge of hand signals, detonators and their use.
 - (vi) Protection of line in emergency and fog signalling.
 - (vii) Exchange of signals with the Driver and Guard of passing trains as directed by the Station Master.
 - (viii) Cleaning, Oiling and lighting of lamps.
 - (ix) Loading/unloading of parcels, luggage and packages to and from the train and watching the packages and other materials by properly stacking in the station premises.
 - (x) Dusting of station office, filling up the fire buckets with sand/water and getting train interact arrival register (T/1410) signed by the Guard as and when required.
 - (xi) Serving messages and any other duties entrusted to them by the SMR/SM from time to time.
 - (xii) Uses of emergency crank handle for setting of points.
 - (xiii) To supervise shunting as per SR 5.13.03.
- They must be thoroughly conversant with the GR 3.38, 3.46, 3.77(I), 5.09, 3.52 to 3.60, 3.62, 5.13, 5.15, 5.16, 5.21, 5.23 & SRs there to.

9.0 **SAFAIWALA /LCS-**

He is responsible to attend the sanitation of Railway premises including SM's office Passengers awaiting room platform and platform latrines, cleaning of night soils, lighting of lamps and clearing of drainage. He shall remove night soil in staff quarters and dump in and also for clearing the drains attached to staff quarters. He shall do any other duties entrusted to him the SM in case of emergencies.

GENERAL

- i. All staff should be in uniform while on duty and follow the rosters issued by DPO/SBP from time to time.
- ii. A set of Red and Green flags and Tricolor hand signal lamps will be part of the essential equipments of staff while on duty. They shall not leave the station except when required by the SM on duty or with his permission. They shall comply with SR 4.42.02 (b) & (c).

APPENDIX - 'E'
ESSENTIAL EQUIPMENT OF THE STATION

Below is the list of essential safety equipment, which shall be readily available in good working order with necessary relief stock.

<u>Sl. No</u>	<u>Description</u>	<u>Quantity</u>
1.	Detonators ...	10 in tin case
2.	Hand signal lamps/Tri Colour torch ...	04 Nos.
3.	Hand signal flags ...	04 sets.
4.	Safety chains with pad locks ...	06 Sets.
5.	Wedges/Sprags ...	10 Nos.
6.	Fire buckets (with sand and water) ...	06 Nos.
7.	Clamps with padlocks ...	08 Nos.
8.	Reminder collars ...	06 Nos.
9.	"Motor Trolley on Line" boards ...	02 Nos
10.	Block suspension Boards	02 Nos
11.	First aid Box ...	01 No.
12.	Stretcher ...	01 No.
13.	Blanket	01 No
14.	Fire extinguisher ...	02 No.

APPENDIX - 'F'

RULES FOR WORKING OF DK STATIONS , HALTS,IBH, IBS,AND OUTLYING SIDING

-NIL-

APPENDIX - 'G'

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS

Enclosed (Page Nos.71-85)