

Correction slip No-02
Date of issue-17.02.2014

**EAST COAST RAILWAY
SAMBALPUR DIVISION**

Sl. No. SWR/SBPY/ 03

STATION WORKING RULES OF SAMBALPUR CITY STATION (CODE: SBPY)

BG/MG/NG: Broad Gauge
Date of issue: 10.08.2010
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.

1. **STATION WORKING RULE DIAGRAM: -**
- 1.1 **STATION WORKING RULE DIAGRAM NO: -** S.I/WRD – 22075 (ALT-'B')
- 1.2 **SIGNAL INTERLOCKING PLAN NO: -** S.I – 22075 (ALT-'B')

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

2. **DESCRIPTION OF STATION: -**
SAMBALPUR CITY is a Five-line junction station situated in Sambalpur-Talcher section at KM. 6.100 from Sambalpur, at KM 569.00 from HWH via JSG-SBP, at KM 559.081 from HWH via JSG-SLRA and at KM 664.081 from HWH via NRG-TLHR. It is Standard-III interlocked Class'B' station with central panel and LVCD axle counter is provided at either side of the station.
- 2.1 **GENERAL LOCATION:-**
- 2.1.1 **NAME OF STATION: -** SAMBALPUR CITY
- 2.1.2 **CLASSIFICATION OF STATION: -** 'B' class
- 2.1.3 **NAME OF THE SECTION: -** Sambalpur-Talcher, Single Line, Non-RE, BG section
- 2.1.4 **ROUTE: -** D-Spl.
- 2.1.5 **LOCATION: -** KM. 6.100 from Sambalpur and at KM 569.00 from HWH via JSG-SBP
- 2.2 **BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLYING SIDINGS: -**
- i) Sambalpur end: - SAMBALPUR (Code: SBP) inter distance 6.1 K.M.
- ii) Talcher end :- MANESWAR (Code: MANE) inter distance 9.00 K.M.
- iii) Jharsuguda end: - SARLA (Code : SLRA) inter distance 3.65 KM
- iv) Passenger halt: - Nil
- v) Flag station :- There is one Flag station in between Sambalpur and SBPY block section viz., Sambalpur Road (Code- SBPD) situated at Km.561.1 from Howrah and at Km1.8 from Sambalpur station.

- vi) Outlying siding: - Nil.
- vii) D.K. station: - Nil.
- viii) IBH: - Nil.
- ix) IBS: - Nil.

2.3 BLOCK SECTION LIMITS: -

Sl. No	Between Stations	The point from which "Block Section" commences	The point at which "Block Section" ends
1.	SBPY-SBP	DN Advanced starter signal No. 16 of SBPY	UP Advanced starter signal No.44 of SBP
2.	SBPY-SLRA	DN Advanced starter signal No.18 of SBPY	UP Advanced Starter of Signal No.17 of SLRA
3.	SBPY-MANE	UP Advanced starter signal No.19 of SBPY	DN Advanced starter signal No. 15 of MANE

2.3.1 STATION SECTION:-

The station section is between the UP and DN advanced starter signals of the station.

2.3.2 STATION LIMIT:-

The portion of line between UP and DOWN distant signals of SBPY station is the station limit of the station.

2.4: GRADIENT: -

(a) From the Centre of the station building towards MANE.

Chainage in Metre		Inter-Distance	Gradient
From	To		
CSB	860 M	860 M	1 in 1200 F
860 M	1407 M	547 M	1 in 200 F
1407 M	1875 M	468 M	Level
1875 M	3012 M	1137 M	1 in 350 R
3012 M	3751 M	739 M	1 in 150 R
3751 M	Block Section	-----	Level

(b) From the Centre of station building towards SBP.

Chainage in Metre		Inter distance	Gradient
From	To		
CSB	900 M	900 M	1 in 1200 R
900 M	1300 M	400 M	1 in 400 R
1300 M	1730 M	430 M	1 in 650 R
1730 M	1993 M	263 M	1 in 200 R
1993 M	2240 M	247 M	1 in 2245 R
2240 M	3227 M	987 M	1 in 205 F
3227 M	3500 M	273 M	Level
3500 M	Block Section	----	1 in 287 R

(c) From the centre of station building towards SLRA.

Chainage in metre		Inter distance	Gradient
From	To		
0 M	900 M	900 M	1 in 1200 R
900 M	1015 M	115 M	1 in 200 R
1015 M	1420 M	405 M	Level
1420 M	1720 M	300 M	1 in 200 R

1720 M	1840 M	120 M	Level
1840 M	2660 M	820 M	1 in 200 F
2660 M	3000 M	340 M	Level
3000M	4500M	1500M	1 in 400R

2.5 LAY OUT: -

- i) No. of running lines :- 5 (Five)
- ii) No. of sidings :- 1 (One) Saloon siding (CAL-70.25 M) taking off from Line No.1
- iii) No. of Passenger platform :- 1(One), One High level platform (400 x 6.10 M) beside Line No.-1.
- iv) No. of goods shed platform :- 1 (One) One High level goods platform (686 x15m) with cover shed beside goods loop (Line No. 5).
- v) FOB :- 1 (One) at CH 61.00M from CSB connecting passenger PF and Goods PF.

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

(i)

Line No.	Description	CSL	Isolation Provided	
			MANE end	SBP end
Line No. 1	1 st Loop	725 M	ORL	ORL
Line No. 2	Main line	789 M	-	-
Line No.3	2 nd Loop	789 M	DS	DS
Line No. 4	3 rd Loop	804 M	DS	ORL
Line No. 5	Goods Loop	795 M	DS	DS

(ii) **DIRECTIONS OF MOVEMENT: -**

Trains arriving from SBP /SLRA end are UP trains.
Trains arriving from MANESWAR end are DN trains.

2.5.2 NON RUNNING LINES AND CAL:

Sl.No	Description	CSL	Takes off line No.	Exit	Operation
1.	Saloon Siding	70.25Mts. (DS - DE)	Line No.1(1 st Loop)	One way at Maneswar end	Operated by Ground lever frame near siding point and controlled by 36 from operating panel.

(Working of sidings is mentioned in Appendix – 'B')

2.5.3 ANY ABNORMAL FEATURE IN THE LAY OUT: - NIL

2.6 i) LEVEL CROSSINGS: (STATION SECTION) :- NIL

ii) LEVEL CROSSING: (IN BLOCK SECTION)

Srl. No	Location	Km.	Normal Position	Class	Type	Operation	Communication
1.	Between DN Distant & DN Home signal.	7/4-5(ST-4)	Unmanned	C	--	---	--
2.	Between DN Distant & DN Home signal.	7/8-9(ST-4)	Unmanned	C	--	--	--
3.	Between SBPY-SLRA	557/4 (JT-24)	Open to road traffic	'B-1'	Interlocked	Winch operated Lifting barrier	Magneto Telephone with SM/SLRA
4.	Between SBPY- MANE	13.872 (ST-12)	Open to road traffic	'B-1'	Interlocked	Winch operated Lifting barrier	Magneto Telephone with SM/MANE

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Train Actuated warning device is not provided at all the above Level Crossing Gates.
(Details of working are given in Appendix 'A')

3.0 **SYSTEM AND MEANS OF WORKING:-**

(Rule No. Chapter XIV of GR & SR, Absolute Block System No.8.01 (1) (a & c) 8.01(2) (b) 8.03 (2). Chapter IV Part-II of BWM)

- i) **System of working** : - Absolute block System of working on single line.
- ii) **Type of block instruments**: - Single Line Tokenless Block Instruments (DIADO Type) for Block Section SBPY-SLRA, SBPY-SBP & SBPY-MANE.
- iii) **Instruments**: Co-operative.
- iv) **Staff responsible for their operation**: -SM on duty.
- vi) **Custodian of keys**: - SM on duty.

4.0 **SYSTEM OF SIGNALLING AND INTERLOCKING :-**

4.1 **STANDARD OF INTERLOCKING AND TYPE OF SIGNALLING:-**

- i) **INTERLOCKING**: - The station is provided with Standard III interlocking, central panel with Multiple Aspect Colour Light Signalling and Axle counter for last vehicle check. 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 single line Tokenless block instruments. CRS's dispensation has been obtained vide letter No-1106, Dated 16.12.2009 for combining of DN Adv. starter signal No-18 of SBPY with DN gate Distant signal at KM 557.225. Authority to proceed to enter into block section for the Driver is taking off Last stop signal. GR 3.08(4) (b) governs the aspect and indications of the signals. The station has no end cabins.
- ii) **MAXIMUM EQUIPMENT OF SIGNAL**: - Distant, Home, Calling on, Starter and Advanced starter in either direction.
- (iii) **AXLE COUNTER**: - All the block sections are monitored by axle counter system as LVCD. Electronic axle counters along with associated entrance and exit trolley suppression tracks are provided at both end of the station just ahead of advanced starters. A pair of electronic axle counter is provided between SBPY and MANE, one beyond Up advanced starter of SBPY and another just before the Down advanced starter of MANE station 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 axle counter each is provided between SBPY-SBP and SBPY-SLRA, one just ahead of DN advanced starter signal of SBPY for SBP/ SLRA line and the other just ahead of UP advanced starter signal of SBP and SLRA stations for counting the axles 'IN' and '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 in the illuminated control panel diagram and 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.

For the axle counter related to the block section SBPY-MANE a reset box consisting of a counter and one resetting key with a push switch and three indications i.e., 'RED', 'GREEN' and 'YELLOW' with locking arrangements for each pair of axle counter kept at the SM's office. Before resetting the axle counter, despatching station should verify clearance of block section by exchanging private no. with station in advance. RED and GREEN indicate occupation and clearance of the block section respectively while YELLOW indication glows during resetting operation. The resetting key of this panel is kept in a separate box locked and sealed, the key of which is kept in the custody of the SM on duty.

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For the axle counters related to block section SBPY-SBP & SBPY-SLRA separate reset boxes consisting of a counter and one resetting key with a push switch and three indications i.e. 'RED' and 'GREEN' and 'Miniature Green' with locking arrangement for each pair of axle counter are kept at the station masters office. While 'RED' and 'GREEN' indicates occupations and clearance of Block section respectively 'Miniature Green' indications glows during resetting operation. The resetting key of this panel is kept locked and sealed in a separate box. The key of the box is kept under the custody of on duty station master.

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 the Tokenless Block instrument.

- iv) **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 SM on duty shall break open the seal of the concerned button to make the button operative. Immediately after completion of emergency operation SM on duty shall inform concerned S&T staff for sealing of the concerned button.
- v) **TRACK CIRCUIT:-** All the lines including point zone between UP and DN Home signal is track circuited. Normally the panel is non-illuminated except for point and block section indications. The position of the running lines is indicated in the illuminated diagram at the Station Master's office. It shows 'RED' when the line is occupied and 'WHITE' when the route is set and signal taken OFF. The position of points at either end is also indicated in the illuminated panel diagram. Whenever a signal is taken OFF, the route set indication i.e. "WHITE" appears for the particular route set. As the Train occupies the track circuit the "WHITE" indication disappears and "RED" indication appears.
- vi) **STATION MASTER'S CONTROL:-** A push button type electric control apparatus is provided in the Station Master's office to operate electrically the UP and DN signals and points. The control apparatus is provided with a lock up key, which shall always remain in the personal custody of the Station Master on duty in terms of Subsidiary Rule 3.36.03(a). The position of all points and signals and running lines are available in the Station Master's illuminated panel diagram. Reminder block collars are provided for use on push buttons which will be placed on point button to prevent operation of the button in case the concerned line is blocked.
- 4.1 **POSITION AND OPERATION OF POINTS:-** The position of all points is 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.
- 4.2 **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.
- 4.3 **IBS: -** NIL
- 4.4 **POINT AND TRAP INDICATOR: -** NIL
- 4.5 **REPEATING SIGNAL (BANNER TYPE):-** NIL
- 4.6 **EMERGENCY CROSS OVER-** NIL
- 4.7 **L.C. GATE OPERATION: -** NIL
- 4.8 **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.

4.10 **SHUNT SIGNALS:** - Position light shunt signals have been provided at either end of the yard ahead of top point Nos. 26(MANE end)& 27 (SBP and SLRA end) for back shunting in the yard and to be used whenever necessary. Forward shunting movement may be carried out with starter signals in Up direction (MANE End) and with shunt signals provided below starter signals in Dn direction (SBP & SLRA end).

4.11 **ANTI COLLISION DEVICE: - NIL**

4.12 **CRANK HANDEL:-**

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 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.

The crank handle keys are kept in RKTs in the end locations and can be released from the RKTs when required. The SM has to press concerned crank handle button (Blue) and Trans button (Black dot on white). This will enable SM/TP to extract crank handle key CH-1/CH-3/CH-5/CH-2/CH-4 from RKT at end locations. 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 by rotating it in clock wise direction. Station Master on getting ' Key IN ' flashing indication that will appear on panel, shall press relevant CH button & Group Release button (Black dot on white) to get the steady key "IN" indication. 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 20.06 (d) 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 20.06.

4.13 **EMERGENCY POINT OPERATION (RED DOT on BLACK):-**

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' and turned, 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.

4.14 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE RELEASE 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 on the top of panel to be pressed first by breaking the seal and subsequently the

concerned signal button is to be pressed. 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 each case the concerned S&T staff should be advised immediately to get the emergency route release button sealed 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, train signal register and veeder counter 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: -**

The relay room should be kept locked with two separate locks, the arrangement should be 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 Relay room key register. The maintainer on receipt of the key from the station master 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 staffs concerned vide SR 3.51.05. 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.

NOTE: Details of signalling and interlocking are given in Appendix 'B' of the SWR.

4.17 **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).

Secondary cell back up through integrated power supply system are provided to prevent possibility of blank signals in case of SEB power supply failure and supply to other signaling installations. Whenever SEB power supply fails Secondary cell back up through integrated power supply system will immediately extend power supply to signals thereby preventing blank signals. In SM's Office there is SM power panel, which represents the voltage of the integrated power supply system as follows:

- (I) In case voltage drops 105.9V an audible buzzer appears for starting Generator.
- (II) In case voltage drops 105.1V an audible buzzer appears for emergency start of Generator.
- (III) In case voltage drops 104.3V an audible buzzer appears for system shut down.

Based on the indication shown in the SM's Power Panel SM on duty should start DG for avoiding any case of shut down of power sub system of integrated Power Supply system.

The SM now has to start the diesel generator for standby (Auxiliary) power supply. After stable run of the Diesel generator, the SM on duty has to operate the change over switch for connecting the auxiliary supply to the signalling installation. On resumption of power supply, the Diesel generator shall be stopped by SM on duty after isolating Diesel generator by change over switch. Each time the power supply goes OFF or ON SM/SS on duty shall acknowledge. In case of any audible buzzer in SM's power panel, SM on duty should

acknowledge the buzzer by pressing 'buzzer' stop button.
Solar Power supply is provided in the station as standby power supply.
If there is any indication on SM's power panel regarding deviation in IPS system, S&T staff shall be called for rectification.

5.0 TELECOMMUNICATION FACILITIES: -

- (i) Telephones attached with single line Tokenless block Instruments for Block Section SBPY-SLRA , SBPY-SBP & SBPY-MANE.
- (ii) Station to Station fixed telephone (Hot line) is provided
- (iii) Station is provided with auto telephone connected with Railway Exchange
- (iv) BSNL telephone is provided
- (v) The station is connected to Sambalpur – Talcher control circuit by a control telephone
- (vi) Station to station 25 Watt VHF communication is provided
- (vii) Telephone is provided between Station and both end crank handle locations.

- 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 Drivers, Guards or any other staff.
 - (iii) The on duty SM shall use the above electrical communication instruments stated in Para- 5.00 from item no. (I) To (VI) 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 06.02.06.

(For details refer Appendix 'B')

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 IN EACH SHIFT: - 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 (In-charge)---	Supervisory	---	---
2.	DY.SS/SM/ASM-----	Continuous	1	08 hrs.
3.	TP/Sr.TP/TPM-B/ TPM-A	Continuous	1	08 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's office.

6.1.2 RESPONSIBILITY OF ASCERTAINING CLEARANCE OF THE LINES AND ZONES OF RESPONSIBILITY: - The 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 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 SMR 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 Manager is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance of staff shall 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 Manager.

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.

6.2 (A) CONDITIONS FOR GRANTING LINE CLEAR: -The conditions laid down in GR 8.01 (1) (a) & (c), 8.01 (2) (b), 8.03 (2) (a)(b)(c)(II), BWM 2.07 (3) & (4) shall be complied with by the Station Master on duty before granting line clear. He shall ensure that

- i) The whole of last preceding train has arrived complete.
- ii) All necessary signals are put back to 'ON' behind the said train.
- iii) The line is clear upto Advanced Starter at that end of station nearest to the expected train. (Up advanced starter signal No. 19 for a DN train and DN advanced starter signal No. 16 or 18 for an UP train)
- iv) Block section is clear of trains running in the direction towards the block station to which such line clear is being given.

NOTE: If the light of the reception signal is fused/ not burning, 'Line Clear' shall not be granted for a train till such time it is ensured that the concerned driver is notified of the fact in writing by the SS/SM on duty of the station to which such line clear is granted.

(B) **OUTLYING SIDING:** - NIL.

6.2.1 ANY SPECIAL CONDITIONS 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 otherwise authorised by special instructions. When a running line is blocked by a stable load, wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after arrival of a train at the station, the points at either end 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 an obstructed line, the SM shall follow GR 5.09 & SR 5.09.01.

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- 6.2.1.3 **RECEPTION OF TRAIN ON NON-SIGNALLED LINE:** - In case reception of a train on a non-signalled line, the SM shall follow GR 5.10 & SR thereto.
- 6.2.1.4 **DESPATCH OF TRAINS ON NON-SIGNALLED LINE:** - In case despatch of a train on a Non-signalled line, the SM shall follow GR 5.11 & SR thereto.
- 6.2.1.5 **DESPATCH OF TRAINS FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:-** N/A.
- 6.2.1.6 **SPECIAL RESTRICTIONS:** -
- (i) Shunting in face of an approaching train is prohibited.
- (ii) Hand shunting and fly shunting is not permitted at both end of the yard.
- (iii) The over run line/sand hump shall not be obstructed for stabling vehicles or harboring an engine. If it is obstructed through any accident or for any other cause it ceases to be a substitute for the adequate distance, in that case the train shall be passed over loop line as per Subsidiary Rules 3.40.02(a).
- (iv) Speed is raised to 30 KMPH on first loop lines on either side of main line and over its turnouts. However, no train shall be allowed to negotiate at a speed more than 15 KMPH if it involves negotiating more than one crossover at a time.
- 6.2.1.7 **SPECIAL INSTRUCTIONS:-**
- (i) After a non-signal movement has taken place over a point, SM on duty shall operate the point to normal and reverse position for ensuring the correct setting and indication on the panel. Then after, further signal movement may be permitted over the point.
- (ii) DN Advanced Starter signal No. 18 has been combined with DN Gate Distant signal of L.C. Gate (JT-24) at KM 557.225 towards Sarla end.
- 6.3 **CONDITIONS FOR TAKING 'OFF' APPROACH SIGNALS: -**
- A. Reception of trains is governed by General Rules 0. 3.36, 3.38, 3.40, 4.17, Subsidiary Rule 3.42.02 (a)(iv), 3.42.03, 3.36.02, 3.36.04 and other relevant provisions of General and Subsidiary Rules, Block Working Manual and Station Working Rules of the station.
- B. Adequate distance to be kept clear vide General Rule 3.40. (1) (b). CRS's dispensation for reckoning adequate distance from starter signal instead of trailing point has been obtained vide dispensation letter No.723 of date 06.09.2012.

LINE NO.	CLEARANCE OF ADEQUATE DISTANCE			
	DN TRAINS		UP TRAINS	
	FROM	TO	FROM	TO
1 st Loop (L-1)	DN Starter Signal No. 6A/B	End of Over run line or DN Adv. starter signal No.16 or Dn. Adv. Starter cum gate dist sig. No. 18	UP Starter signal No. 17.	End of Over run line or UP Adv. Starter signal No. 19
Main Line (L-2)	DN Starter Signal No. 8A/B	DN Adv. starter signal No.16 or Dn. Adv. Starter cum gate dist sig. No. 18	UP. Starter signal No. 15	UP Adv. Starter signal No. 19.
2 nd Loop (L-3)	DN. Starter Signal No. 10A/B	Upto DS point No. 35 or DN Adv. starter signal No.16 or Dn. Adv. Starter cum gate dist sig. No. 18	UP. starter Signal No. 13	Upto DS Point No. 32 or UP Adv. Starter signal No. 19
3rd Loop (L-4)	DN. Starter Signal No. 12A/B	End of over run line or DN Adv. starter signal No.16 or Dn. Adv. Starter cum gate dist sig. No. 18	UP. starter Signal No. 11	Upto DS Point No. 28B or UP Adv. Starter signal No. 19

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Goods Loop (L-5)	DN. Starter Signal No. 14A/B	End of over run line or DN Adv. starter signal No.16 or Dn. Adv. Starter cum gate dist sig. No. 18	UP. starter Signal No. 9	Upto DS Point No. 28B or UP Adv. Starter signal No. 19
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Before admitting a train on any line, it must be ensured that the route indication for the respective line shows 'WHITE' indication in the illuminated panel diagram. To receive a train, for which line clear is given, the Station Master on duty shall nominate a clear line in consultation with the Section Controller on duty. He shall personally satisfy himself that the nominated line is clear and free from all obstructions by seeing the track circuit indication 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.

Unless the track circuit indication for the concerned line is 'Clear' even with other conditions satisfied, the operation of panel control button by the station Master on duty will not permit the concerned home signal to be taken off. However, reception of trains will be possible in such case with "Calling on signal" provided below Home signal unless the first track circuit in advance of home signal does not show 'RED' indication.

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

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 can not be taken 'OFF' due to failure or any other reason or for admission of a train on blocked line.

C. 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 a train occupies the track circuit, a 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 points through panel. After the route is set, the calling-on signal button 'C1' / 'C3' / 'C2' (Red with white dot), as the case may be, shall be pressed simultaneously along with concerned route button for 2-3 seconds and then released. After a lapse of 120 seconds, the calling-on signal clears and a white 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, a time delay of 2 minutes shall be observed before the points can be altered.

6.4 SIMULTANEOUS RECEPTION, DESPATCH, CROSSING & PRECEDENCE OF TRAINS: -

(a) Reception of an Up train from SBP on Line No.1 by setting Over run line.	(a) Reception of a Dn train on L-3 or L-4 or L-5 or dispatch of an Up train from L-2 or L-3 or L-4 or L-5 or dispatch of a Dn train from L-3 or L-4 or L-5 towards SLRA or reception of an Up train from SLRA on L-3 or L-4 or L-5.
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(b)	Reception of an Up train from SBP on Line No.1 by setting route Upto Up advanced starter.	(b)	Dispatch of a Dn train from L-3 or L-4 or L-5 towards SLRA or reception of an Up train from SLRA on L-3 or L-4 or L-5.
(c)	Reception of an Up train from SBP on Line No.2	(c)	Dispatch of a Dn train from L-3 or L-4 or L-5 towards SLRA or reception of an Up train from SLRA on L-3 or L-4 or L-5.
(d)	Reception of an Up train from SBP on Line No.3 by setting upto DS 32	(d)	Reception of a Dn train on L-1 or L-4 or L-5 Or, dispatch of an Up train from L-1or L-2 or L-4 or L-5
(e)	Reception of an Up train from SBP on Line No.4 by setting upto Point 28B	(e)	Reception of a Dn train on L-1 or L-3 Or, dispatch of an Up train from L-1or L-2 or L-3
(f)	Reception of an Up train from SBP on Line No.5 by setting upto Point 28B	(f)	Reception of a Dn train on L-1 or L-3 Or, dispatch of an Up train from L-1or L-2 or L-3
(g)	Reception of an Up train from SLRA on Line No.1 by setting Over run line.	(g)	Reception of a Dn train on L-3 or L-4 or L-5 Or, dispatch of an Up train from L-2 or L-3 or L-4 or L-5
(h)	Reception of an Up train from SLRA on Line No.3 by setting upto DS 32	(h)	Reception of a Dn train on L-1 or L-2 or L-4 or L-5 Or, reception of an Up train on L-1 or L-2 from SBP Or, dispatch of an Up train from L-1or L-2 or L-4 or L-5 Or, dispatch of a Dn. train from L-1 or L-2 to SBP
(i)	Reception of an Up train from SLRA on Line No.4 by setting upto Point 28B	(i)	Reception of a Dn train on L-1 or L-2 or L-3 Or, reception of an Up train on L-1 or L-2 from SBP Or, dispatch of an Up train from L-1or L-2 or L-3 Or, dispatch of a Dn. train from L-1 or L-2 to SBP
(j)	Reception of an Up train from SLRA on Line No.5 by setting upto Point 28B	(j)	Reception of a Dn train on L-1 or L-2 or L-3 Or, reception of an Up train on L-1 or L-2 from SBP Or, dispatch of an Up train from L-1or L-2 or L-3 Or, dispatch of a Dn. train from L-1 or L-2 to SBP
(k)	Reception of a Dn train on Line No.1 by setting Over run line.	(k)	Reception of an Up train on L-3 or L-4 or L-5 Or, dispatch of a Dn. train from L-2 or L-3 or L-4 or L-5
(l)	Reception of a Dn train on Line No.1 or No. 2 by setting upto Dn. advanced starter to SBP.	(l)	Reception of an Up train on L-3 or L-4 or L-5 from SLRA Or, dispatch of a Dn. train from L-3 or L-4 or L-5 to SLRA.

(m)	Reception of a Dn train on Line No.3 by setting upto DS 35.	(m)	Reception of an Up train on L-1 or L-4 or L-5 Or, dispatch of a Dn. train from L-1 or L-2 or L-4 or L-5.
(n)	Reception of a Dn train on Line-4 by setting over run line.	(n)	Reception of an Up train on L-1 or L-3 Or dispatch of a Dn train from L-1 or L-2 or L-3.
(o)	Reception of a Dn train on Line-4 by setting Upto advanced starter to SLRA.	(o)	Reception of an Up train on L-1 Or, dispatch of a Dn. train from L-1 or L-2 to SBP
(p)	Reception of a Dn train on Line-4 by setting over run line.	(p)	Reception of an Up train on L-1 or L-3 Or, dispatch of a Dn. train from L-1 or L-2 or L-3.
(q)	Reception of a Dn train on Line-5. by setting Upto advanced starter to SLRA.	(q)	Reception of an Up train on L-1 Or, dispatch of a Dn. Train from L-1 or L-2 to SBP
(r)	Reception of a Dn train on Line-5 by setting over run line.	(r)	Reception of an Up train on L-1 or L-3 Or, dispatch of a Dn. train from L-1 or L-2 or L-3.

6.4.1 According to the existing interlocking & lay out at this station, the simultaneous reception and despatch of trains permitted are stipulated above (GR 3.47). Setting of points during crossing of trains shall be done as per relevant provisions in SR 3.47.01, (a, b, c & e). Rules laid down in SR 3.47.02 shall be followed for berthing and crossing of passenger and goods trains as the station is having single platform.

6.5 COMPLETE ARRIVAL OF TRAIN: -

(Rule No. GR 4.16 & SR 4.17.01, GR4.17.02, GR 14.10)

a) **STAFF RESPONSIBLE TO VERIFY COMPLETE ARRIVAL: -** SM on duty.

b) **MODE OF VERIFICATION:** Through AXLE COUNTER or through physical verification, if Axle counter fails.

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 Station Master's office. 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 SM on duty shall give 'Train out of Block 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 trains. For through passing trains, the Station master on duty shall satisfy himself about complete arrival of the 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.

6.6 **DESPATCH OF TRAINS: -** Despatch of trains are governed by General Rules 3.36, 3.38, 3.39, 3.42, & 8.01, Subsidiary Rules 3.36.04(b), 3.42.04 and Block Working Manual

2.07(5)(a)(b) and other provisions of General Rules, Subsidiary Rules, Block Working Manual and Station Working Rules of the station.

To despatch a train, the Station Master 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 then suspend all non-isolated shunting and ensure that the manned Level Crossing gates in the block section are closed against road traffic. He shall then take off the concerned route starter and advanced starter signals. After observing the 'OFF' aspect of the route starter and advanced starter, 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

When a train is worked without a Guard or Brake Van, the instructions 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 General 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(i).
- 6.7 **TRAINS RUNNING THROUGH:** -The procedure detailed in Para 6.3, 6.6 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 SMR/SM is responsible to observe/watch the condition of the vehicles on a passing train and shall wave green hand signal horizontally as per Subsidiary Rule 4.42.02 until anything wrong is noticed on train. For this purpose the 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 points man with hand signal to the other side of the passing train who shall exhibit danger hand signal to draw the attention of the Guard/Driver of the train in case of observing any unsafe condition(s)/abnormalities in the train. He shall also report to the SMR/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.

The SM on duty shall obtain 'Line clear' from the station in advance and shall take 'off' the reception and departure signal in time to avoid detention to the through train.

- 6.8 **WORKING IN CASE OF FAILURE:** - 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. The responsibility of correct setting of points, clamping and padlocking of the facing and trailing points for reception and despatch of trains rests with SM on duty himself.

6.8.2 TRACK CIRCUIT:-

In the event of failure of track circuit in the yard, trains shall be admitted in to the yard on piloting 'IN'. Before piloting a train in to the yard the clearance of the track must be ensured by physical verification. Calling-On signals can be used for admitting a train in case of failure of track circuit after due verification of the track.

6.8.3 AXLE COUNTER:-

In the event of failure of axle counter, concerned Block section will be suspended and all trains will be worked on PLCT till rectification.

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 lights, Station Master on duty shall before giving line clear initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]

In case of failure of colour light signal, SM shall take the action vide SR 3.68.05.

6.8.5 BLOCK INSTRUMENT:-

In the event of partial interruption / failure of Tokenless Block Instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR [Ref. SR 6.02.04 & 6.02.06]

6.8.6 DEFECTIVE 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 points for admission of train.

6.8.7 DEFECTIVE/DAMAGED POINTS:-

When the points, crossings or guard rails are defective / damaged, the Station Master will take action immediately vide GR 3.77, SR 3.77.01 & 3.39.01 (c). 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.

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 end 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 45mts 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:-

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 what is indicated by the position of the switches on the panel in terms of GR 3.68, 3.70 & SR 3.77.01(b)] and then only 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 TROLLEYS / MOTOR TROLLEYS / MATERIAL TROLLEYS or LORRIES : -

(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 or a motor trolley.

7.0 BLOCKING OF LINES: - Whenever a running line is blocked either by loose vehicles or by a stabling train or by a train which is to cross or give precedence to another train, the points at either end 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. A clear remark in 'RED' ink shall be made immediately in the train signal register. 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. A record thereof shall be made in the Station Diary vide SR 5.23.01 (a) (c) & (d).

7.1 USE OF REMINDER COLLARS: - Whenever a running line is blocked either by loose vehicles or by stabled 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 SM on duty.

7.2 SECURING OF VEHICLES: - As far as practicable loose vehicles shall not be allowed to stand on the running lines. 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, 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 of fouling.

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 FORMAT given below: -

1	2	3		4	5	6
Date	Name of SM on duty	Duty Hours		Line on which stabled	Total No. of wagons	Time Line blocked
		From	To			
7(a)	7(b)		7(c)		7(d)	
No. of Hand brakes pinned down	No. of wagons on which wooden wedges used		No. of safety chains with pad lock used		Clamps and pad locks used to set the line against blocked line	
7(e)	7(f)		8	9	10	
Switch nos. on which reminder collars applied	Time Line cleared		Signature of SM on duty	Signature of SM taken over	Remarks	
	Date	Time				

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

- 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 at either end 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.
- 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 case of mishap, the chances of casualties are minimized.
- 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.

7.4 **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.

8.0 **SHUNTING:** -

8.1 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.

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

Hand Fly & Loose shunting is not permitted at both end of the yard. Shunting in the face of approaching train is prohibited.

8.3

<u>SHUNTING ZONE</u>	<u>BLOCK SECTION IS CLEARED</u>	<u>BLOCK SECTION IS OCCUPIED</u>
Shunting outside Home signal	The concerned section shall be blocked back vide GR 8.13.	Not permitted
Shunting within station section	Permitted	Permitted provided GR 8.09 is complied with
Shunting outside station section and up to home signal.	Permitted vide GR 8.12	Not permitted

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

While shunting in the Saloon siding, proper shunting authority on T/806 to be issued to the train staff with clear instruction and limit upto which shunting is to be performed. While performing shunting in the station yard, Goods Loop and Saloon siding, relevant GR 5.14 and SRs thereto are to be followed. All siding points in the facing direction are detected in concerned signals by provision of Electrical point detection.

8.5 **SHUNTING ON DOUBLE LINE:- N/A**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 Tokenless Block Instrument and during partial failure of other available means of communications, trains will be worked in terms of Subsidiary Rule 6.02.06 and Chapter-IV Part-II of Block Working Manual.

[II] **DESPATCHING OF TRAINS ON THE 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 SM at other end shall be obtained and recorded in caution order register and train signal register.

On the block ticket (T/A 602) it shall be mentioned in detail the place of obstruction i.e. Engine 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.

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

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 or shall be sent to the issuing station for cancellation.

In case of accident/engineering block, an 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 LVCD 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.
- © **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 SS/SM on duty shall communicate the failure report to the Signal Maintainer, the JE/SE/SSE (SIG) of the Section and others through a memo as per SR 3.68.04 and shall document all such transactions.
- 9.1 **TOTAL FAILURE OF COMMUNICATION:** - In the event of total interruption of communication occurring between SAMBALPUR CITY-MANESWAR or SAMBALPUR CITY-SAMBALPUR or SAMBALPUR CITY-SARLA stations, i.e when line clear can not be obtained by 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 telephone (Hot Line).
- d. Fixed telephone such as Railway auto telephone & BSNL phone
- e. Control telephone
- f. VHF sets

and actions shall be taken as per SR 6.02.04. The train which is to be despatched to the affected section will be stopped and the Driver and Guard of the train shall be informed about the fact.

Before dispatching the light engine /main engine/motor trolley /Tower wagon/Trolley /Cycle trolley/Moped trolley/Diesel car/rail motor car/EMU rake, the SM on duty shall hand over a Authority for opening of communication during total failure interruption of communication on Single Line Section to the driver /motorman/Guard/SM who is being sent to open communication, which includes.

- (i) An authority to proceed without "Line Clear" in the prescribed form (T/B 602).
- (ii) A Caution Order restricting to speed of the train to 15Kmph by day when the view ahead is clear and 10 Kmph during night or when view ahead is obstructed in addition to other speed restrictions in force (T/409).
- (iii) Paper Line Clear Ticket to pass the Last Stop Signal at 'ON' position.
- (iv) A "Line Clear" enquiry message (T/E602) asking "Line Clear" for the awaiting train.
- (v) A conditional "Line Clear" message for the light engine to return with or without a train attached, supported by a Private Number (T/F602).

On arrival of the engine at the next station, the conditional "Line Clear" message and enquiry message shall be collected by the SM on duty who shall prepare conditional "Line Clear" ticket (T/G602 (UP) or T/H602 (DN) for engine to return either light or a train attached to it and conditional "Line Clear" reply message for the enquiry message, giving "Line Clear" for the train waiting at the other end shall be handed over to the Driver of the light engine. On return trip, the Driver will come on booked speed subject to any other speed restriction in force.

As soon as any one of the means of communication has been restored the conditional "Line Clear" working of train shall be cancelled when there is no train in the affected block section and messages shall be exchanged supported by Private Number. The section controller shall be informed.

- 9.2 **TEMPORARY SINGLE LINE WORKING ON A DOUBLE LINE SECTION:** - N.A.
- 9.3 **DESPATCHING OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:** - The Station Master will take action as per SR 6.02.04 for despatching trains under 'Authority to Proceed without Line Clear'. Actions shall be taken to assist the crippled train as per SR 6.02.05.
- 10.0 **VISIBILITY TEST OBJECT:** -
- i) V.T.O. post / Authorised substitutes earmarked to work as V.T.O. Post. – The lights of DN starter signal No.6 and UP starter signal No.17 of 1st loop during day and night are earmarked to serve as VISIBILITY TEST OBJECTS vide GR 3.61 (2) (b) (ii).
 - ii) Distance between CSB and V. T. O. post: - 180 Mts.
 - iii) Station Master 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 SRs thereto.
- 11.0 **ESSENTIAL EQUIPMENTS AT THE STATION:** - This is mentioned in the Appendix 'E' of the SWR. Essential equipments shall be kept ready on hand in good condition with necessary relief stock.
- 12.0 **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 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 Signaller 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.

STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

- a) **INSTRUCTIONS:**
This register contains the following parts.
- Part. - I: Particulars of fog signal men posted at the station from time to time.
 - Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.
 - Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.
 - Part – IV: Particulars of issue and testing of fog signals at the station.
- b) In charge of the station shall ensure that the information maintained in the register is kept upto date and is accurate in all respects.
- c) Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

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 SAMBALPUR CITY 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 COLLISION DEVICE (RAKSHA KAVACH).
APPENDIX 'D'	--	DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT.
APPENDIX 'E'	--	LIST OF ESSENTIAL EQUIPMENTS PROVIDED AT THE STATION.
APPENDIX 'F'	--	RULES FOR WORKING OF DK STATIONS, HALTS, IBH, IBS AND OUTLYING SIDINGS.
APPENDIX 'G'	--	RULES FOR 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.

1.0 GATE WORKING RULE FOR "B-1" CLASS, ENGG., INTERLOCKED LEVEL CROSSING GATE AT KM 557/4-5 (No.JT-24) BETWEEN SLRA & SBP/SBPY STATIONS.

1.1 GENERAL INSTRUCTIONS: -

DESCRIPTION OF THE LEVEL CROSSING GATE:-

- | | | |
|-----|--|---|
| 1. | Number of Level Crossing Gate: - | JT-24. |
| 2. | Engineering or Traffic Gate: - | Engineering. |
| 3. | Under control of Station Master/PWI: | PWI |
| 4. | Location KM | 557/3-4 |
| 5. | At. Station: - | ----- |
| 6. | In between stations: - | SLRA- SBP/SBPY. |
| 7. | BG/MG/NG: - | BG. |
| 8. | Single line/Double line/Multiple line: - | SLRA-SBPY Single line.
SLRA-SBP 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. | (I) UP line- at KM 557/1
(II) DN line- at KM 557/7 |
| 13. | Signalling arrangement: - | NIL. |
| 14. | Means of Communication: | Telephone Communication from Gate
Goomty with SM/ SLRA. |
| 15. | Width of level crossing Gate: - | 7.5 M |
| 16. | Type of road. (NH/SH/Others): - | Others (Village) |
| 17. | Name of Road: - | Sankarma road. |
| 18. | Metaled/NonMetaled: | Metaled |
| 19. | Approach Road: - | Metaled. |
| 20. | Width of the road: - | 5.5 m. |
| 21. | Angle of road crossing (In case of the skew Gates) | NIL. |
| 22. | Road gradient (If any) | |
| | | i) East/North side - Level.
ii) West/South side - Level. |
| 23. | Road alignment (Straight/Curve): - | i) East/North side - Curve
ii) West/South side - Curve |
| 24. | Provision of height gauges: - | Not provided. |
| 25. | Type of Barriers: - | Winch operated Lifting barriers. |
| 26. | Length of checkrails: - | 9.5 Meter. |
| 27. | Road surface in between Level Xings Gates | Level. |
| 28. | Length of speed breakers: - | 7.5 Meters. |
| 29. | Road signs: - | Available |
| 30. | Speed breaker indication board: - | Provided. |
| 31. | TVU: - | 1417 on 05/2013. |
| 32. | Census next due on: - | 05/2016. |
| 33. | Demarcation for placement of Detonators: - | Displayed. |
| 34. | No. of the Gateman working: - | 02. |

35. Nearest Railway Medical Assistance: - Sambalpur.
36. Nearest Private Medical Assistance available (if any) Sambalpur.
37. List of equipment available Yes//No: - Yes.

**1.2 EQUIPMENT:
ITEMS**

QUANTITY/NUMBERS

1. Hand signal Lamp/ 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 and 7 in case Hexable 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 Hexable 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 failure of gate boom lock.	2

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) Gateman Rule Book in Local vernacular language.
- iv) List of 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.

R.Das
DSTE/SBP

C.R.Das
Sr. DEN/East/SBP

D.Nayak
DOM(G)/SBP

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 remain 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 during emergency and obstruction on the track.
- ii) Gateman shall ensure that Gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the Gate unless 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 condition 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 driver 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 the SM/SLRA, Gangmate and PWI any defect in his Gate or apparatus pertaining to it, as soon as possible.
- ix) In the event of gate signal becoming defective the gateman shall maintain the signal in ON position even by disconnecting the signal or the wire if necessary.
- x) At the gate whose signal have become defective, the gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the driver to report the defect at the next station.
- xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing Gate.
- xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xiii) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
- xiv) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
- xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xvi) Gateman must keep the road surface well-watered and rammed in case of un-metalled roads.

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

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 in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master/SLRA 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.

The gateman shall protect the line as under: -

a) **ON SINGLE LINE SECTION:**

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

b) **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, fusees and red flag by day and red hand signal lamp by night.
- (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 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 / SLRA regarding the particulars and obstructions at the level crossing Gate, through messenger or other means available.

1.5 SPECIAL INSRUCTIONS-

1 MODE OF OPERATION :-

This is a Manned, Engineering interlocked L.C. Gate situated in between SLRA-SBP double line and SLRA –SBPY bye pass line at Km 557/3-4. This gate is interlocked with Gate stop signals. Telephone communication is provided between the L C. gate lodge and SM on duty at SLRA 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 six-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' the signals, SM/SLRA 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 'G' is to be extracted from the winch, which will be inserted in the lever of GF-1 to release the same. When GF-1 is reversed it locks the booms of the gate and releases GF-2 or GF-3 or GF-4 or GF-5. Thereafter the gateman can reverse GF-2 or GF-3 or GF-4 or GF-5 for taking 'OFF' concerned UP and DN Gate Home signals respectively. GF-6 is a spare lever.

After passage of the Train the gateman shall normalise the concerned GF-2 or GF-3 or GF-4 or GF-5 lever to put back the gate signal. Then the gate man shall normalise GF-1 lever and extract key 'G' from GF-1. Thereafter he will open the gate by inserting the Key 'G' in 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 inconsistency with safety as per subsidiary rule 16.03.01 (a).

Once the LC gate is closed, it should not be opened by the gateman till such time the train for which the gate was closed has passed the LC gate completely. In case of emergency, the LC gate may be opened for road traffic with the specific permission of SM/SLRA on duty under exchange of PN if there is no train in the section.

2. INTIMATION TO GATE MAN:

R.Das
DSTE/SBP

C.R.Das
Sr. DEN/East/SBP

D.Nayak
DOM(G)/SBP

- (i) Immediately after departure of the train, Station Master/SLRA shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.
- (ii) This advice shall be given by the Station Master/SLRA to the gateman, as soon as he receives train entering section advice from the SM on duty at SBP/SBPY station.
- (iii) If the actual running time of the train from either end of the section and the L. C. Gate is less than 10 minutes, Station Master/SLRA will convey this advice to the gateman before obtaining/granting line clear.
- (iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train of excessive detention to road traffic.

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/SLRA shall issue a caution order to the driver of the departing train.
- (ii) Station Master 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 gate signal and follow the procedure laid down under GR 3.73.
- (iv) In case of an approaching train, the Station Master/SLRA shall advise the Station Master/SBP/SBPY at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The Station Master/SBP/SBPY at the dispatching end shall then issue a caution order to the driver before dispatching a train into the block section from his end.
- (vi) Station Master/SLRA will also advise the gateman through Gangman/Patrolman/Driver of the first train that the telephone has become defective.
- (vii) Station Master/SLRA should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

4. **FAILURE OF LIFTING BARRIERS OF GATES:**

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

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

- (i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master/SLRA 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/SLRA on duty shall issue caution order to the driver of a departing train.
- (iv) He shall also advise the Station Master/SBP/SBPY at the dispatching end, under exchange of private number, to similarly issue a caution order to the driver before dispatching a train into the block section at his end.
- (v) Station Master/SLRA 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 repairs 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/SLRA 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/SLRA on duty shall issue a caution order to the driver of a departing train.
- (v) He shall also advise the Station Master/SBP/SBY at the dispatching end, 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.
- (vi) Station Master/SLRA 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 repairs the key transmitter and issue reconnection/fit memo for the same.

7. DEFECTIVE GATE SIGNAL:

- (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.
- (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.
- (iii) The gateman will immediately advise the Station Master/SLRA 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/SLRA on duty will issue a caution order to the driver of all departing train.

- (vii) He shall also advise the Station Master/SBP/SBPY at the dispatching end, 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/SLRA 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 rectifies 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 barriers of the gate 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/SLRA on duty regarding the defects /obstructions at the gate, under exchange of private number.
- (iv) If there is no response from the Station Master /SLRA after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item No.1.4 (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/SLRA who shall not start the trains unless he has been assured by the gateman that the road vehicle or the lifting barriers of the gate are not fouling the track.
- (viii) The Station Master/SLRA shall also inform the Station Master/SBP/SBPY at the dispatching end, under exchange of private number, asking him not to dispatch any train into the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master/SLRA accordingly, under exchange of private number.
- (x) Station Master/SLRA 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 thereafter exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master/SLRA shall advise maintenance staff responsible for maintaining the lifting barrier of gate to repair the same at the earliest.
- (xiii) Normally working will be resumed only after maintenance staff rectifies the defective lifting barrier 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 a tree, fouling by road vehicle or derailment, which is visible to the gateman, the gateman and Station Master/ SLRA 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 obstructions.

Correction slip No. 02
Date of issue. 17.02.2014

2.0 GATE WORKING RULE FOR "B-1" CLASS ENGG. INTERLOCKED LEVEL CROSSING GATE AT KM 13.872 (NO.ST-12) BETWEEN MANE-SBPY STATIONS.

2.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

- | | | |
|-----|--|--|
| 1. | Number of Level Crossing Gate: - | ST-12 |
| 2. | Engineering or Traffic Gate: - | Engineering. |
| 3. | Under control of Station Master/Permanent Way Inspector: | PWI. |
| 4. | Location KM | 13.872 (13/8-9) |
| 5. | At. Station: - | -----. |
| 6. | In between stations: - | MANE-SBPY |
| 7. | BG/MG/NG: - | BG. |
| 8. | Single line/Double line/Multiple line: - | Single Line. |
| 9. | Normal Position: - | Open to road traffic. |
| 10. | Interlocked/Non Interlocked: - | Interlocked. |
| 11. | Means of interlocking: - | Interlocked with gate stop signals. |
| 12. | Provision of Gate signal at Kms. | |
| | | i) Up gate signal:13.692 |
| | | ii) Dn gate signal: 14.052 |
| 13. | Signalling arrangement: - | MACLS |
| 14. | Means of Communication: | Magneto Telephone Communication from Gate Goomty with SM/ MANE |
| 15. | Width of level crossing Gate: - | 7.5 Meters. |
| 16. | Type of road. (NH/SH/Others): - | Others |
| 17. | Name of Road: - | NH-42 – Kisinda Road |
| 18. | Metaled/Non Metaled: | Metaled |
| 19. | Approach Road: - | WBM |
| 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) East/North side : Level |
| | | ii) West/South side :Level |
| 23. | Road alignment (Straight/Curve): - | |
| | | i) North side. Straight. |
| | | ii) South side Straight. |
| 24. | Provision of height gauges: - | Not provided |
| 25. | Type of Barriers: - | Winch Operated Lifting barriers. |
| 26. | Length of checkrails: - | 10.0 Meter. |
| 27. | Road surface in between Level X ings Gates: - | C.C.Blocks. |
| 28. | Length of speed breakers: - | 5.5 Meters. |
| 29. | Road signs: - | Available |
| 30. | Speed breaker indication board: - | Provided |
| 31. | TVU: - | 35671 on 04/2013. |
| 32. | Census next due on: - | 04/2016. |
| 33. | Demarcation for placement of Detonators: - | Displayed. |
| 34. | No of the Gateman working: - | 02 |
| 35. | Nearest Railway Medical Assistance: - | SBP. |
| 36. | Nearest Private Medical Assistance available (if any) | MANE |
| 37. | List of equipment available Yes//No: - | Yes. |

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DEN/East/SBP

D.Nayak
DOM(G)/SBP

2.2 **EQUIPMENT:**
ITEMS

	QUANTITY/NUMBERS
1. Hand signal Lamp/ 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 and 7 in case Hexable 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 Hexable 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 failure of gate boom lock.	2

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) Gateman Rule Book in Local vernacular language.
- iv) List OF 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:**

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Sr. DEN/East/SBP

D.Nayak
DOM(G)/SBP

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 during emergency and obstruction on the track.
 - ii) Gateman shall ensure that Gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
 - iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the Gate unless 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 condition 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 driver 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 the SM/MANE, Gangmate and PWI/MANE any defect in his Gate or apparatus pertaining to it, as soon as possible.
 - ix) In the event of gate signal becoming defective the gateman shall maintain the signal in ON position even by disconnecting the signal or the wire if necessary.
 - x) At the gate whose signal have become defective, the gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the driver to report the defect at the next station.
 - xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing Gate.
 - xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
 - xiii) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
 - xiv) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
 - xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
 - xvi) Gateman must keep the road surface well-watered and rammed in case of un-metalled roads.
 - xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
 - xviii) 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 any thing unusual with a passing train, he shall take the 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 train does not stop, 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 in the 'ON' position.
- ii) Therefore, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master/MANE on duty, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master/MANE after two or three attempts he shall first protect the gate and then inform on phone.
The gateman shall protect the line as under: -

c) ON SINGLE LINE SECTION:

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

b) OTHER ACTION TO BE TAKEN BY GATEMAN:

- i) At night Gateman shall lit 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 load vehicle, which is fouling the track, or if lifting barriers or any other part of the gate fouls the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the nearest Station Master/MANE or P. Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

2.5 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is a Manned, Engineering interlocked L.C. Gate situated in between Maneswar and Sambalpur City at Km 13/8-9. This gate is interlocked with Gate stop signals. Telephone communication is provided between the L C. gate lodge with SM on duty of MANE 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 in open condition. When it is necessary to close the gate, for taking OFF the signals, the SM/MANE 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 'P1' is to be extracted from the winch, which will be inserted in the lever of GF-2. When GF-2 is reversed it locks the booms of the gates and releases GF-3 & 4. Then after, the gateman can reverse GF-3 or GF-4 for taking OFF concerned DN and UP Gate stop signals respectively. GF-3 or GF-4 can be used to put back the concerned Gate stop signal in case of emergency.

Up gate stop signal 3 is interlocked with Up Home signal S-18 of MANE station. Up gate stop signal can be taken off only after SM/MANE takes off the Up Home signal S-18.

After passage of the Train the gateman shall normalize GF-3 or GF-4 and then GF-2 lever. He shall extract Key 'P1' and open the gate by inserting the Key 'P1' 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 in consistence with safety as per subsidiary rule 16.03.01 (a).

2 NORMAL WORKING:

- (i) Immediately after departure of the train, Station Master/MANE shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.
- (ii) This advice shall be given by the Station Master/MANE to the gateman, as soon as he receives train entering section advice from SM on duty at SBPY station.
- (iii) If the actual running time of the train from either end of the section to the L. C. Gate is less than 10 minutes, Station Master/MANE will convey this advice to the gateman before obtaining/granting line clear.
- (iv) It should be the duty of the gateman to ensure that the gate is closed and signal is taken off in time, so that there is no detention to the train or excessive detention to road traffic.

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/MANE shall issue a caution order to the driver of the departing train.
- (ii) Station Master 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 gate signal and follow the procedure laid down under GR 3.73.
- (iv) In case of an approaching train, the Station Master/MANE shall advise the Station Master/SBPY at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The Station Master/SBPY at the dispatching end shall then issue a caution order to the driver before dispatching a train into the block section from his end.
- (vi) Station Master/MANE will also advise the gateman through Gangman / Patrolman/ Driver of the first train that the telephone has become defective.
- (vii) Station Master/MANE should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

4 FAILURE OF LIFTING BARRIERS OF GATES:

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

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

- (i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master/MANE 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/MANE on duty shall issue caution order to the driver of a departing train.
- (iv) He shall also advise the Station Master/SBPY at the dispatching end, 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.
- (v) Station Master/MANE 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 repairs 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/MANE 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/MANE on duty shall issue a caution order to the driver of a departing train.
- (v) He shall also advise the Station Master/SBPY; at the dispatching end, 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.
- (vi) Station Master/MANE shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

7 DEFECTIVE GATE SIGNAL:

- (i) The gateman shall treat the gate signal as defective and must not lower them under following circumstances:
 - (a) If gate signals can be taken 'OFF' without closing the gate, or
 - (b) The key can be extracted from the operating winch 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.
- (iii) The gateman will immediately advise the Station Master/MANE 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/MANE on duty will issue a caution order to the driver of departing train.
- (vii) He shall also advise the Station Master/SBPY at the dispatching end, under exchanged private number, to similarly issue a caution order to the driver before dispatching train into the blocks section from his end.
- (viii) Station Master/MANE 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 rectifies 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 gates 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/MANE on duty regarding the defects /obstructions at the gate, under exchange of private number.
- iv) If there is no response from the Station Master/MANE 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/SBPY who shall not start the trains unless he has been assured by the gateman that the road vehicle or the lifting barriers of the gate are not fouling the track.
- viii) The Station Master/MANE shall also inform the Station Master/SBPY at the dispatching end, under exchange of private number, asking him not to dispatch any train into 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/MANE accordingly under exchange of private number.
- x) Station Master/MANE 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 thereafter exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master/MANE shall advise maintenance staff responsible for maintaining the lifting barrier of gate to repair the same at the earliest.
- xiii) Normally working will be resumed only after maintenance staff rectifies the defective lifting barrier 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 a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master/MANE will adopt the procedure given under item No.8 above. If the obstruction fouls the level Crossing Gate, gateman must keep the gate closed against road traffic till the track is cleared of the obstruction.

CERTIFICATE: -

NOTHING IN THESE RULES SHALL BE READ AS CANCELLING, AMENDING AND MODIFYING ANY OF THE GENERAL RULES, SUBSIDIARY RULES, BLOCK WORKING MANNUAL AND OPERATING MANNUAL.

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APPENDIX – ‘B’**DETAILS OF SIGNALLING AND INTERLOCKING INSTALLATIONS, INSTRUCTIONS FOR WORKING THEM NORMALLY AND IN EMERGENCIES ETC. INCLUDING POWER SUPPLY ARRANGEMENTS.**

- 1.0 This is a ‘B’ Class Station with Standard III 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 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) :-

Srl. No.	Point No.	Colour	Description
1	27	BLACK	1 st crossover point between SLRA line and SBP Main line at SBP end.
2	29	BLACK	2 nd Crossover point between SBP Main Line and SLRA Main Line at SBP end.
3	31	BLACK	Crossover point between Line no. 3 and Line no. 4 at SLRA end
4	33	BLACK	Crossover point between Line no. 4 & Line no. 5 at SLRA end
5	35	BLACK	DS point on L-3 at SLRA End
6	37	BLACK	Cross over point between Main Line & L-1 at SBP end.
7	26	BLACK	Crossover between Mail Line & L-3 at Mane end.
8	28	BLACK	Crossover between L-3 & L-4 at MANE end.
9	30	BLACK	Crossover point between L-4 & L-5 at MANE end.
10	32	BLACK	DS point on L-3 at MANE end.
11	34	BLACK	Crossover point between Main Line & L-1 at Mane end.

- 1.1.2 **DESCRIPTION OF POINT GROUP BUTTONS:** - There 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 WHITE indication will start flashing till the point is correctly set to reverse at site and steady WHITE 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 SM on duty according to SR 3.68.01 ©. 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 these points in the desired position by Station Master on duty himself for all trains according to SR 3.69.03 ©. In such case both ends of the points shall be clamped and padlocked.
- 1.2.6 **DESCRIPTION OF CRANK HANDLE BUTTONS:-** All motor operated points in the yard have been grouped into three crank handle zones for emergency / manual operation of points by crank handles as follows:

SL NO.	CRANK HANDLE	COLOUR OF BUTTON	CONTROL POINTS
1	CH-1	BLUE	27A/B, 29A/B
2	CH-2	BLUE	26A/B, 34A/B
3	CH-3	BLUE	31A/B, 33 A/B, 35
4	CH-4	BLUE	28 A/B, 30A/B, 32
5	CH-5	BLUE	37A/B

Crank Handle buttons must be operated in conjunction with GROUP TRANS / 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:-**

SI. No.	BUTTON NO.	COLOUR	DESCRIPTION
01	C1	RED With white dot	Up Calling on Signal for Line Nos.1, 2, 3, 4 & 5 at SLRA end

02	S1	RED	Up Home Signal for Line Nos.1, 2, 3, 4 & 5 at SLRA end
03	C3	RED With white dot	Up Calling on Signal for Line Nos.1, 2, 3, 4 & 5 at SBP end
04	S3	RED	Up Calling on Signal for Line Nos.1, 2, 3, 4 & 5 at SBP end
05	SH-5	YELLOW	UP shunt signal for line No.1,2 , 3, 4 & 5 from SLRA end
06	SH-7	YELLOW	UP shunt signal for line No.1,2 , 3, 4 & 5 from SBP end
07	S9	RED	Up starter of L-5
08	S11	RED	Up starter of L-4
09	S13	RED	Up starter of L-3
10	S15	RED	Up starter of L-2
11	S17	RED	Up starter of L-1
12	S19	RED	Up Advanced starter
13	C2	RED With white dot	Dn Calling on Signal for Line Nos.1, 2, 3, 4 & 5
14	S2	RED	Dn Home Signal for Line Nos.1, 2, 3, 4 & 5
15	SH 4	YELLOW	Dn shunt signal for line No.1,2 , 3, 4 & 5
16	S 6	RED	DOWN Starter of Line No. 1 (SBP &SLRA)
17	SH-6	YELLOW	Down Shunt signal of L-1 (Towards SBP & SLRA)
18	S8	RED	DOWN Starter of Line No. 2 (SBP &SLRA)
19	SH-8	YELLOW	Down Shunt signal of L-2 (Towards SBP & SLRA)
20	S10	RED	DOWN Starter of Line No. 3 (SBP &SLRA)
21	SH-10	YELLOW	Down Shunt signal of L-3 (Towards SBP & SLRA)
22	S 12	RED	DOWN Starter of Line No. 4 (SBP &SLRA)
23	SH-12	YELLOW	Down Shunt signal of L-4(Towards SBP & SLRA)
24	S 14	RED	DOWN Starter of Line No. 5 (SBP &SLRA)
25	SH-14	YELLOW	Down Shunt signal of L-5 (Towards SBP & SLRA)
26	S 16	RED	DOWN Advanced Starter (SBP)
27	S 18	RED	DOWN Advanced Starter (SLRA)

1.3.2 **SIGNAL INDICATIONS:** - All signals in the yard are depicted on the panel along side 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

2.0 **ROUTE BUTTONS:** - Route buttons are provided separately on each running line on the panel for initiation of route (viz. 1UN, L1UN1, L1UN2, L2UN, L2UN1, L3UN, L3UN1, L3UN2, L4UN, L4UN1, L5UN, L5UN1). Common route buttons are also provided for taking off starters

(viz.: 19 AT UN, 16 AT UN & 18 AT UN). Common route buttons are also provided for taking off dependent Shunt signals in Dn directions (viz.: 19 AT UN, 16 AT UN & 18 AT UN). An individual route button is provided for taking off Advanced starter (Viz.: 19 UN, 16 UN & 18 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.

2.1 **DESCRIPTION OF ROUTE BUTTONS:-**

Srl. No.	Button No.	Colour	Description
1	L1UN	WHITE	DN and UP common route button for Home, for loop Line No.1 setting overlap towards Advanced starter of SBP and MANE direction.
2	L1UN1	WHITE	DN and UP common route button for Home/Calling on/Back shunts for loop line No. 1 setting overlap up to the end of over run line in particular direction.
3	L1UN2	WHITE	DN common route button for Home for loop line No.1 setting overlap towards Advanced starter of SLRA direction.
4	L2UN	WHITE	DN and UP common route button for Home for L-2, setting overlap towards Advanced starter of SBP and MANE direction.
5	L2UN1	WHITE	Common route button for Dn. Home for main line setting overlap towards advanced starter of SLRA direction and for Dn & Up Calling on/ Back shunts for L-2.
6	L3UN	WHITE	Common route button for UP & DN Home signals for L-3 setting overlaps to Advanced starter (MANE & SLRA).
7	L3UN1	WHITE	DN and UP common route button for Home/Calling On/ Back Shunts for loop line No.3 setting overlap up to the DS point in particular direction.
8	L3UN2	WHITE	DN route button for Home for Line No.3 setting overlap towards advance starter of SBP direction.
9	L4UN	WHITE	Common route button for UP (From SLRA) and DN Home setting overlap towards advance starter MANE & SLRA SBP direction
10	L4UN1	WHITE	DN and UP common route button for Home/Calling On/ Back Shunts for loop line No.4 setting overlap up to the DS point(for UP Home)/ end of over run line (for Dn Home) in particular direction.
11	L5UN	WHITE	NOT IN USE
12	L5UN1	WHITE	DN and UP common route button for Home/Calling On/ Back Shunts for loop line No.5 setting overlap up to the DS point(for UP Home)/ end of over run line (for Dn Home) in particular direction.
13	19 AT UN	WHITE	Common route button for UP starter No.9, 11, 13, 15 & 17

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14	16 AT UN	WHITE	Common route button for DN Starter No.6, 8, 10, 12, & 14 and Dependant shunt SH-6, SH-8, SH-10, SH-12 & SH-14 towards SBP direction.
15	18 AT UN	WHITE	Common route button for DN Starter No.6, 8, 10, 12, & 14 and Dependant shunt SH-6, SH-8, SH-10, SH-12 & SH-14 towards SLRA direction.
16	19 UN	WHITE	Route button for UP advance starter No. 19
17	16 UN	WHITE	Route button for DN Adv. Starter No. 16 (SBP)
18	18 UN	WHITE	Route button for DN Adv. Starter No. 18(SLRA).

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 SBPY - MANE, SBPY-SLRA & SBPY-SBP sections to check the complete arrival of trains and it is interlocked with the respective Block Instruments. After the whole train arrives complete clearing the block section, "Green" indication appears on the Axle counter indication panel and if it indicates "Red" even after the complete arrival of train, then the Block instrument of the respective section can not be normalized. The SM on duty shall resort to resetting of Axle counter (Refer resetting procedure of Axle counter).

4.0 POWER FAILURE: - Normal power supply to the signalling and interlocking installations at this station is drawn from SEB power supply source (AC 230 Volt / 50 Hz). Secondary cell back up through integrated power supply system are provided to prevent possibility of blank signals in case of SEB power supply failure and supply to other signaling installations. Whenever SEB power supply fails Secondary cell back up through integrated power supply system will immediately extend power supply to signals thereby preventing blank signals. In SM's Office there is ASM power panel, which represents the voltage of the integrated power supply system as follows:

- (I) In case voltage drops 105.9V an audible buzzer appears for starting Generator.
 - (II) In case voltage drops 105.1V an audible buzzer appears for emergency start of Generator.
 - (III) In case voltage drops 104.3V an audible buzzer appears for system shut down.
- Based on the indication shown in the SM's Power Panel SM on duty should start DG for avoiding any case of shut down of power sub system of integrated Power Supply system.

The SM now has to start the diesel generator for standby (Auxiliary) power supply. After stable run of the Diesel generator, the SM on duty has to operate the change over switch for connecting the auxiliary supply to the signalling installation. On resumption of power supply, the Diesel generator shall be stopped by SM on duty after isolating Diesel generator by change over switch. Each time the power supply goes OFF or ON SM/SS on duty shall acknowledge. In case of any audible buzzer in SM's power panel, SM on duty should acknowledge the buzzer by pressing 'buzzer' stop button.

Solar Power supply is provided in the station as standby power supply.

If there is any indication on SM's power panel regarding deviation in IPS system, S&T staff shall be called for rectification.

5.0 EMERGENCY ROUTE RELEASE COUNTER: - This counter is provided to register the number of operations made for emergency cancellation of route. The SM on duty must record the last number registered on the counter while taking over/ handing over duty.

5.1 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

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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 in 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. In such case the emergency cancellation of route has to be resorted to. 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.

- 6.0 **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. While holding 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 an 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 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 strip 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 for five rail lengths in rear of the Home signals on either side. Track circuits 1AT, 2AT & 3AT are calling-on track circuits. 27AT, 27BT, 29AT, 29 BT,35T, 31BT, 33T,37AT, 37BT, 26AT, 26BT, 32T, 30T, 34AT & 34BT are point zone track circuits. L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3, L4T1, L4T2, L4T3, L5T1, L5T2 & L5T3 are berthing track circuits. Other track circuits namely 1T, 3T, 18AT, 16AT, 10T, 13T, 2T, & 19AT are for signal replacement, route holding and trolley suppression. Indications for all track circuits are indicated on the panel. Normally these are not lit when the track circuits are clear. RED light appears when the track circuit is occupied / failed. White lights for the track indications appear

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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 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 locks 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 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 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.

The crank handle keys are housed in the respective RKTs in the end locations. The SM has to press concerned crank handle button (Blue) and Trans button (Black dot on white) to release the keys from the RKT. This will enable SM/TP to extract crank handle key CH-1/CH-3/CH-5/CH-2/CH-4 from RKT at end locations. 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 by rotating it in clock wise direction. Station Master on getting 'Key IN' flashing indication that will appear on panel, shall press relevant CH button & Group Release button (Black dot on white) 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 20.06 (d) 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 20.06.

- 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 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.
- 13.1 **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. The Calling on signal can not be taken 'off' if the track circuit just in advance of the Home signal is occupied i.e. showing Red.

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

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received shall be set by operating the point push button and group button individually or by pressing signal and route button or by crank handling in the event of failure of operation of points through panel. After the route is set, the calling on signal button 'C1'/'C3/ C2 (Red with white dot), as the case may be, shall be pressed simultaneously along with the concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the calling on signal clears i.e., a yellow light glows at the concerned calling on signal on the panel. For all the lines, route button UN1 shall be used irrespective of the setting of the overlap point.

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 signal, 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.

14.1 To take off the starter signal the concerned signal button to be pressed and at the same time 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.

All the Starter signals in the Down direction are released by Advanced Starter of the respective routes.

Shunt Signals below DN starter signals are to be used for shunting purposes.

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.

14.2 **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.

15.0 **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.

14.5.1 Advanced starter is interlocked with respective Tokenless block instrument in sending position i.e. train going to position and by axle counter for last vehicle check. The same cannot be taken off unless the concerned block instrument is in line clear position (TGT).

14.5.2 The Block instrument cannot be made normal unless the respective Home signal/ Advanced starter is put back to 'ON'. However, the Home signals can be taken off in case of failure of the block instruments

14.5.3 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.

14.5.4 When the block instrument or Advanced starter fail, trains will be worked under authority of paper line clear ticket

14.5.5 Block instrument can not be operated unless the Home signal and Adv. Starter of the concerned end are in ON position.

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- 15.1 **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 on duty personally and all the points en-route must be clamped & padlocked at both facing & trailing end by Operating staff. Same procedure shall be adopted when route illumination fails 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-signalled movement.
- 15.2 **SHUNTING:** For shunting, OFF aspect of starter signals shall be used for shunting in MANE end and Shunt signals below UP starter signals in SBP/SLRA end. For back shunting, shunt signals provided on each side of the yard shall be used.

16.0 **NON RUNNING LINES**

SALOON SIDING:-

The Saloon siding takes off from line No.-1 with one side entry at MANE end of the yard. The Siding points are operated locally by Arc levers at site and these points are interlocked with the panel interlocking system. The normal detection of siding point on line No.1 is Key IN (Control-36) with steady white light glowing on the panel. In case of failure or improper setting of siding point such indication will be flashing. In this case all reception/despatch signals (S1/C-1 E, S3/C3 E, S2/C2 A, SH-4A, SH-5E, S6, SH-6, SH-7E & S7) for L-1 cannot be taken-off. Whenever it is necessary to operate the siding point, siding control button No.36 is to be pressed along with Trans button to release the control key from the corresponding RKT instrument fitted in the Station Master's office. The siding can be operated releasing the key locked points on the siding by the key released and till such time the key is out no signalled movement on line No.1 is possible in the yard.

SIDING CONTROL	COLOUR	DESCRIPTION
36	BLUE	Control over saloon siding

- 17.0 **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 passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the SM on duty personally through panel indications of track before any movement of train is permitted on the concerned route subject to the other conditions such as locking of the points etc.
- 18.0 **CRANK HANDLING EMERGENCY OPERATION OF POINTS:** - Crank handle operation is interlocked with the signalling and interlocking system at this station. Key for Crank handles are normally locked inside the RKT instrument 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 corresponding crank handle button simultaneously. When this key is taken out, no signal can be take off in the yard. This key can be electrically transmitted at 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

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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 main SWR para No. 4.12.

In case 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

- 19.0 **INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:** - When a train is stabled on a running line for a duration, the use of the said running line for passing the trains at the station shall be done with a lot of care and diligence. Station Master on duty shall carefully observe proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If the Station Master on duty is not satisfied with the proper functioning of the track circuits on which the train is/was stabled, the signals leading on the line shall be suspended and the S & T maintenance staff shall be informed for attending to this.
- 20.0 **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 SM on duty must press the emergency route cancellation button 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 favourable for route release.
- 20.2 The Veeder counter registers the number of such emergency cancellation operations. 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.
- 20.3 **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 12.0 of Appendix 'B' shall be followed.

- 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 and proper acknowledgement in

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the basement/Relay room key register. The maintainer on receipt of the key from the station master 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 vide SR 3.51.05. 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, 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, SM on duty shall co-operate with S&T staff for safe and satisfactory maintenance.

- 23.0 **PROCEDURE TO BE FOLLOWED IN CASE 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 SM on duty to the signal Maintainer, the JE/SE/SSE (SIG) of the Section and others through a memo as per SR 3.51.04 and 3.68.04 and the SM shall document all such transactions.

- 24.0 **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.

- 25.0 **RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:** - On receipt of 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).

- 27.0 **PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:** - Whenever any normal maintenance or special works for major renewals etc., are involved, the signal & Telecom should pre plan these works. Field staff and the JE/SE/SSE(SIG) should give 'Advance Intimation' to the SM on duty in writing about this work in terms of SR 15.08.01.

- 28.0 **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 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 SM on duty must act promptly on such messages and take adequate precautions treating the

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S&T installation as defective and pass trains over the affected interlocking equipment according to extant instructions as contained in SR 3.77.

- 29.0 **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 SM on duty personally for all trains.
- 29.1 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.
- 29.2 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 and Group Trans button simultaneously. All signals will be locked in normal position as soon as the key is released. SM on duty shall transmit the key to required end of the yard and operate the point manually.
- 29.3 When the crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody vests with the Station Master on duty, till it is replaced back in RKT.
- 29.4 The case of failure of motor operated points should be promptly reported to the concerned Signal maintainer or JE/SE/SSE (Sig.) for rectification.
- 29.5 Whenever an Emergency Crank Handle is required to be used by a signal official for maintenance work or attending a failure, the signal official will give a disconnection memo to the SM on duty .The SM on duty will obtain the acknowledgement of the signal official in the Emergency Crank Handle Register and then hand over to him the Emergency Crank Handle.. The points will be treated as defective till the Emergency Crank Handle is returned back to the SM on duty.
- 29.6 Before parting with the Emergency Crank Handle either for attending failures or for maintenance work by Signal maintenance officials, the 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 SM on duty is responsible for introduction of non-interlocked working and the trains will be piloted 'IN' and 'OUT' after 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 SM on duty will be personally responsible for correct setting, clamping and padlocking of points for reception or despatch of all trains.
- 29.7 The Emergency Crank Handle Register is to be maintained vide OM 20.06 Note (d) by the SM on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.
- 30.0 **SUSPENSION OF LAST STOP SIGNALS:** - When the Block instrument is suspended with its handle in 'TRAIN ON LINE' 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'.
- 30.1 The SS/SM on duty shall not grant 'LINE CLEAR' unless he has ensured that the lamps of

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concerned 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 3.68 to 3.72 .

- 30.2 The SS/SM on duty shall not grant or ask 'LINE CLEAR', if the Axle Counter Section indicates section occupied and will treat the Block Instrument as suspended.
- 31.0 **SIGNAL LIGHTS:** - The SS/SM on duty 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. Care and lighting of signal lamps shall be done vide GR 3.49.
- 32.0 **CORRECTING TIME IN STATION CLOCK:** - The 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 SR 4.01.01 and 4.01.02.
- 33.0. **NORMAL POWER SUPPLY:** - The Station works on 230 volts AC single-phase power supply. The normal power supply is drawn from the SEB. Stand-by power is supplied by the diesel generators. All controls have been provided with Battery backup through Integrated Power Supply System. Also Solar Power system has been provided for power back up.
- 33.1 **POWER FAILURE AND REPORTING SUCH FAILURES:** - Normal power supply to the Signalling and Interlocking installations at this station is drawn from the SEB Power supply source (at 230 V, 50 Hz). In SM's Office there is ASM 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.
- Whenever SEB (Main) power supply fails, a buzzer on the panel will buzz on. SM on duty has to press the power acknowledgement button. The SM on duty shall start the Diesel generator for stand by (Auxiliary) power supply. After run of the Diesel generator and on resumption of power supply, SM shall acknowledge the same by pressing the power acknowledgement button.
- 33.2 The 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.

TOKEN LESS BLOCK INSTRUMENT:

15.1 **27.4 KEYS & BUTTONS**

SM's KEY-Intended to lock the instrument and to prevent unauthorized manipulation of the same during the absence of SM.

Shunting Key- This key remains normally inserted in the instrument and can be removed only if block handle is in either line closed position or TGT position.

Push button PB1- This is a push button used to transmit DC pulses for exchanging bell code signals.

Push button PB2- This is a push button used in conjunction with PB1 for releasing block handle of other instrument.

Switch S1 with counter- It is used for cancellation of line clear. The counter registers number of such operation.

Switch S2 with counter- For cancellation of line clear by the sending station after the train

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has entered the block section & return to the sending station and received on proper signals. The counter registers the number of such operation.

TOL Indicator- This indicator normally displays a white indication and displays red indication with caption "Train on line" when a train enters the block section.

Time-release indicator- This indicator is operated during canceling line clear operation when the required time delay has taken place. Normally the indicator displays white with caption 'Locked' and changes over to green with caption 'Free' when occupied.

Galvanometer- It deflects the flow of current from one instrument to another when either push button PB1 or PB2 is pressed

Block handle- Block handle can be set at 'N' (Line closed), 'L' (Train going to) and 'R' (Train coming from position). It is locked by the block lever lock in all positions.

Buzzer BZ1- Audible indications at both stations when the train enters the block section.

Buzzer BZ2- Audible indication at the receiving station when the whole of the train has arrived.

15.2 MODE OF SIGNALING OF TRAINS ON DAIDO TYPE TOKENLESS BLOCK INSTRUMENT FOR A TRAIN TO LEAVE A BLOCK STATION FOR THE BLOCK STATION IN ADVANCE (BWM 4.33)-

<u>Despatching Station</u>	<u>Receiving Station</u>
[Block handle in 'Line Closed position. All concerned signals and signal buttons normal]	[Block handle in 'Line Closed position. All concerned signals and signal buttons normal]
1. Inserts SM's key and turn	
2. Presses the button PB-1 and sends cell attention code of bell signals.	3. Inserts SM's key
	4. Acknowledges the call attention code of bell signals by pressing the button PB-1.
5. Sends 'Attend telephone' code of bell signals	6. Acknowledges the 'Attend telephone' code of bell signals and attends on telephone.
7. Attends on telephone, gives the name of the station and asks B if he is prepared to receive train No..... [Refer BWM Rule No. 2.07 (3)]	8. Gives out the name of the station, and if he is prepared to receive, replies, 'Yes' take line clear for train No. Private Number.....
9. Repeats the Private Number given by Station Master 'B' and replaces telephone.	10. Replaces telephone.
11. Sends 'Is line clear enquiry' code of signals through button PB-1 and keeps the buttons PB-1 and PB-2 pressed on the last beat for 5 seconds or until the Galvanometer needle vibrates.	12. Turns the operating handle to 'Train coming from' position.
14. Turns operating handle	13. Acknowledges the "Is line clear" code of bell signals through button PB-1 and keeps the buttons PB-1 and PB-2 pressed on the last beat for 5 seconds or till the Galvanometer needle vibrates.

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- 15(a) Takes 'OFF' the last Stop signal (after ensuring that the route is clear and points are correctly set and locked)
- (b) Train enters Block section.
- (c) Last Stop signal returns to 'ON' position.
- (d) 'Train on line' indication appears automatically.
- (e) Buzzer 1 starts operating.
16. 'Train on Line' indication appears automatically and Buzzer 1 starts operating.
17. Sends 'Call attention' code of bell signals through button PB-1
18. Acknowledges 'Call attention' code of bell signals through button PB-1
19. Sends 'Train Entering Block section' code of bell signals after complying with BMW Rule 2.07 (5)
20. Acknowledge 'train Entering Block section code of bell signals through PB-1. Buzzer stops.
21. Buzzer 1 stops.
22. Takes 'OFF' the reception signals (after ensuring that the line nominated is clear and points are correctly set and locked).
- 23.(a) Train enters the station.
- (b) Reception signals replaced to 'ON' position automatically.
- (c) Buzzer 2 starts operating.
- (d) Buzzer-2 stops when reset push button is pressed.
- (e) comply with BMW Rule 2.07 (6)
24. Sends 'Call attention' code of bell signals through button PB-1
25. Acknowledges 'Call attention' code of bell signals
26. Sends 'Train out of block section' code of bell signals through PB-1 and the buttons PB-1 and PB-2 pressed on the last beat for 5 seconds or till the Galvanometer needle vibrates.
27. Turns operating handle to 'Line Closed' position.
28. Acknowledges 'Train out block section' code of bell signals through PB-1 and keeps "Buttons PB-1 and PB-2" pressed on the last beat for 5 seconds or till the Galvanometer needle vibrates.
29. Turns operating handle to "Line Closed" position and thus buzzer 2 stops.

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15.3 TO CANCEL A LINE CLEAR WHICH HAS BEEN OBTAINED (BWM 4.34):

Before proceeding to cancel the line clear obtained, the Station Master at the station at which the instrument is in 'Train going to' position, shall personally ensure that the train concerned has not started, the Last Stop Signal has been properly put back to 'ON' position and the concerned buttons on the panel are normal, and that they remain so until the cancellation procedure is completed.

Despatching Station	Receiving Station.
(Block Instrument handle at "train going to" position, concerned Last Stop signal is restored to normal) If the departure singles had been taken 'OFF' they are replaced to 'ON' position.	(Block Instrument handle at "Train Coming from" position)
1. Sends "Call attention" code of bell signal on PB-1	2. Acknowledges on PB-1
3. Sends "Attend Telephone" code of bell Signal on PB-1	4. Acknowledges on PB-1 and attends telephone.
5. Takes up telephone, calls out station name and asks for his consent.	6. Ensures that reception signal(s) is/are at 'ON', Calls out station name and then gives his consent on telephone.
7. Turns switch SI, from normal to cancellation position. <ul style="list-style-type: none"> (a) (b) The 'Counter' registers next higher number, (c) Waits for 2 minutes. (d) T.E.R (Time Element Relay) Indicator operates. 	
8. Sends 'Call attention' code of bell signals.	9. Acknowledges 'Call Attention' code of bell signals.
10. Sends cancellation code of bell signals through PB-1 and keeps the buttons PB-1 & PB-2 pressed for 5 second on the last beat.	11. Turns his Block handle to 'Line Closed' position and acknowledges the code of bell signals through PB-1 and keeps PB-1 and PB-2 pressed for 5 seconds.
12. Turns switch SI to normal position, Turns Block handle to 'Line Closed' position.	

15.4 NORMALISING OF BLOCK INSTRUMENT WHEN TRAINS RETURNS TO THE DISPATCHING BLOCK STATION (BWM 4. 35):-

Before receiving the train back into the station from which it started, the following is the sequence of actions to be taken:-

Despatching Station	Receiving Station.
(Block handle on 'Train Going to' position)	(Block handle on 'train Coming from' position)
1. Advises Station Master B on telephone the intention to push back the train.	2. Gives consent on telephone.

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3. Turns the switch S2 from normal to cancellation position.
 - (a) The 'Counter' registers next higher number.
 - (b) Takes 'OFF' the reception signals.
 - (c) Train enters the station.
 - (d) Home signal goes to normal
 - (e) Buzzer 2 for arrival of the train starts operating
 - (f) Buzzer 2 stops when reset push button is pressed.
4. Sends 'Train out of Block Section' code of bell signals through PB-1 and keeps the buttons PB-2 pressed for 5 seconds on the last beat or till the galvanometer needle vibrates.
5. Turns his block handle to 'Line Closed' position.
6. Acknowledges 'Train out of Block Section' code of bell signal and keeps buttons PB-1 and PB-2 pressed for 5 seconds on the last beat or till the galvanometer needle vibrates.
7. Turns switch S2 to normal position.
8. 'Turns the Block handle to 'Line Closed' position.

15.5 **OTHER OPERATIONS OF TLBI (DIADO) INSTRUMENT:**

SM shall follow the detail procedure vide para No. 4.36 for shunting between last stop signal & the first stop signal from the opposite direction, 4.37 for shunting between the last stop signal & opposite first stop signal behind departing train, 4.38 for shunting outside first stop signal, 4.39 for working of Motor trolley, 4.40 for working of material trolley, 4.43 for failure of electrical instrument & 4.45 for resumption of normal working , of BWM Chapter-IV, Part-II.

27.5 **OPERATIONS OF TLBI (DIADO) INSTRUMENT:**

SM shall follow the detail procedure vide Para No. 4.33 for line clear transaction, 4.34 for cancellation of line obtained, 4.35 for normalising block instrument when train returns to the dispatching block section, 4.36 for shunting between last stop signal & the first stop signal from the opposite direction, 4.37 for shunting between the last stop signal & opposite first stop signal behind departing train, 4.38 for shunting outside first stop signal, 4.39 for working of Motor trolley, 4.40 for working of material trolley, 4.43 for failure of electrical instrument & 4.45 for resumption of normal working , of BWM Chapter-IV, Part-II.

27.6 **INTERLOCKING BETWEEN SIGNALS AND BLOCK INSTRUMENTS:**

- 1) SBPY Station is equipped with the following types of Block Instruments to control movements of trains from and to adjacent Block Sections.

	Section	Type of Block Instrument
1.	SBPY-MANE	Daido Type Single line Token-less Block Instrument.
2.	SBPY-SBP	Daido Type Single line Token-less Block Instrument.

3.	SBPY-SLRA	Daido Type Single line Token-less Block Instrument.
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2) **LAST STOP SIGNAL CONTROL:-**

- a) The block working of the section SBPY-MANE, SBPY-SBP & SBPY-SLRA is controlled with the provision of Token-less Block Instrument (Diado type).
- b) The Advanced starter signals are interlocked with the respective Block Instrument in such a way that the Advanced starter signal can not be taken off unless the Line Clear is obtained from the block station in advance and the handle of the Token-less Block Instrument is turned to "TGT" position.
- c) The concerned Advanced starter signal aspect will be changed from "OFF" aspect to "ON" aspect as soon as the leading pair of the train wheels occupies the concerned Advanced starter signal replacement track circuit provided in advance of the respective signal.

3) **BLOCK RELEASE:-**

- [a] The Block Instruments are restored to normal (Line Closed condition) only after the complete arrival of the train past the block over lap ahead of the respective Home signal on either side of the Station yard.
- [b] All the power signaling installations in the Station yard are centrally controlled from the panel and it is explicit in this arrangement that the complete arrival of a train into the yard from the block section can not be ensured by the operating personnel in the centrally located panel hence, to ensure complete arrival of the incoming train, Axle Counters are provided between SBPY-MANE, SBPY-SBP & SBPY-SLRA sections.
- [c] In the event of failure of Axle Counter, block working of the section concerned is to be suspended, Line clear Station Master shall not normalize the commutator of the concerned Block Instrument to "Line Closed" position and shall not dispatch "Train out of block section" report to the station in rear until he is satisfied by seeing the Last Vehicle Indicator on the last vehicle of the incoming train (after arrival) of which Axle Counters failed or obtaining the complete arrival certificate from the Guard of the train. Then station master shall resort to resetting procedure of the axle counter of concerned block section.

34.0 **AXLE COUNTER AS LAST VEHICLE CHECKING DEVICE (LVCD):-** The system provides for automatic check for last vehicle arrival through provision of axle counter. Axle counters are provided in SAMBALPUR CITY-MANESWAR, SAMBALPUR CITY-SARLA and SAMBALPUR CITY-SAMBALPUR sections to check the complete arrival of trains. The system is interlocked with the Block Instrument. When the Axle counter section indication provided on the topside of the panel individually for either section indicates (R) i.e. occupied even after the complete arrival of train, the Block instrument of the respective section is to be suspended and the trains will be worked as per Para No.30.

34.1 **PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF AXLE COUNTER (RESETTING):-**

SBPY-MANE Section:

When after arrival of a train section clear indication (GREEN) does not appear and/or section occupied indication (RED) continues to glow it may be assumed that the axle counter system has failed, the station master on duty shall verify that:-

- a) The last preceding train has arrived complete at its destination.
- b) Block section is clear of any train/ vehicles.

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Before resetting the Axle counter despatching station should verify clearance of block section by exchanging private number with station in advance. During such failures the station master on duty shall obtain the resetting key after breaking the seal and unlocking the reset key after due verification of complete arrival of trains. Resetting has to be done by inserting the reset key in the reset box. Pressing and turning it clockwise till the resetting indication (YELLOW) appears on the reset box. Each resetting operation shall be recorded in a register by the Station Master on duty. After resetting is over "RED" indication will be extinguished and "GREEN" Indication will appear on the panel as well as on the reset box. The reset key extracted from the reset box shall be kept in the box and locked. The S&T Staff shall be advised to seal the same.

If after resetting, "GREEN" indication does not appear on the panel or reset box, the Station Master on duty shall inform S&T staff regarding the failure. The block working of the concerned section shall be suspended and GR 14.13 in addition to Para 6.5 of Station working Rule, to ensure complete arrival of trains, shall be followed.

SBPY-SBP & SBPY-SLRA section:

After complete arrival of train, if the axle counter of the section does not clear or Axle counter section free indication (G) does not appear in the 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. And, if arrived fully shall so 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 to the section to make the system normal.

If the axle counters functioning properly now, then Block Section clear indication 'GREEN' will appear on the panel and the Block instrument of concerned Block Section will be normalised.

If the axle counter section indication does not appear 'Green' and continues to show 'RED' indication, the concerned Block instrument shall remain suspended and failure intimation to be given to sectional signal Maintainer/JE/SE (Signal) for early rectification.

The SM shall record in his Train Register the resetting operation giving details of train number, time, Private Number exchanged with SM in rear, giving reasons for the resetting operation

35.0 TELECOMMUNICATIONS: -

- (i) Telephones attached with single line Tokenless block Instruments for Block Section SBPY-SLRA , SBPY-SBP & SBPY-MANE.
- (ii) Station to Station fixed telephone (Hot line) is provided
- (iii) Station is provided with auto telephone connected with Railway Exchange
- (iv) BSNL telephone is provided
- (v) The station is connected to Sambalpur – Talcher control circuit by a control telephone
- (vi) Station to station VHF communication is provided
- (vii) Telephone is provided between Station and both end crank handle locations.

- 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 Drivers, Guards or any other staff.
 - (iii) The on duty SM shall use the above electrical communication instruments stated in Para-5.00 from item no. (I) To (VI) 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 06.02.06.

36.0 FAILURE OF COMMUNICATION / FAILURE OF BLOCK INSTRUMENTS:

- 1) In the event of failure/suspension of Block instrument, Track circuit & Axle Counters –

'Line Clear' shall be obtained on the Telephone attached to the Block instrument or station to station telephone by exchanging Identification Number and supported by Private Number as per GR 6.02.06 (a) and Chapter–III Part–I of Block Working Manual.
- 2) In the event of failure/suspension of Block instrument or Track Circuit or Axle counters or telephone attached to the Block instruments, or the station to station fixed telephone -

'Line Clear' shall be obtained on Railway auto phone or BSNL phone by exchanging Identification Number supported by private number vide GR 6.02.06 (1) (b) and Chapter-III Part-I of Block Working Manual.
- 3) In the event of failure/suspension of Block instrument or Track circuit or Axle counter 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 the control phone exchanging Identification Number supported by Private Number vide GR 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 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

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- 5) In the event of total interruption of all communications, trains shall be worked vide SR 6.02.04.

APPENDIX - 'C'

ANTI COLLISION DEVICE (RAKSHA KAVACH)

NIL

APPENDIX - 'D'

- 1.0 **STATION MANAGER (IN-CHARGE):-** He is the In-charge of the station. He is responsible for the efficient discharge of duties devolved upon all the staff employed at the station whether permanently or temporarily according to rules, safe working instructions and Station Working Rules. He shall see that all signals, points, level crossings, sidings and the whole machinery at the station are in perfect working order. He shall report all defects to the concerned officials. It is his personal responsibility to maintain the Station Working Rule; all rule books and Assurance Registers up to date. He shall see that all operating and commercial records separately be maintained and due statements and returns are up to date. He shall submit the coaching return/statements in time with the help of his assistants. 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. His special attention is drawn to chapter No.II of General (Amendment) rules & SR 2000 and GR 5.01 to 5.08 with relevant SRs. He shall follow the instruction laid down in BWM 2.09 (e). He will promptly attend to accidents and report them. He will supervise the work of staff and report lapses of staff under him. He shall also ensure that the safety equipments in the station as mentioned in the station working rules are supplied in full and they are in good working order with necessary relief stock.
- 2.0 **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.
- 2.1 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 SMR 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 them fully about their duties and responsibilities.
- 2.2 The Station Manager is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance of staff 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 the personal custody of the Station Manager.

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- 2.3 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 BOOKS & IDENTIFICATION NUMBER SHEET:** - Sufficient Private Number books and I.D number sheets in sealed covers shall be kept always in the stock by Station Manager 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 Manager in-charge in accordance with the instructions laid down in the Accident Manual. Whenever the Station Manager receives 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 Manager 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 etc. Coaching returns and other statements shall be prepared and submitted by him in time under the direction of the Station Manager. He shall assist the Station Manager 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 14.07.01. Their special attention is drawn to Chapter II of General (Amendment) & SR 2000 and GR 5.01 to 5.08 with relevant SRs. As an assistant to the SMR, he shall follow the instructions given to him by the Station Manager.

- 7.0 **HANDING OVER AND TAKING OVER CHARGE:** The Station Manager/ Dy.SS/Station Master / Assistant Station Master on duty shall record in the SM's diary the condition of all the running lines, the caution orders in force at the time of handing over and taking over of charge. These entries must be counter signed by the SMR/Dy.SS/Station Master/Assistant Station Master coming on duty while taking over charge. This will not, however, relieve any one of the SMR/Dy.SS/SM/ASM 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) Setting and locking of points 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.

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Correction slip No. 01

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- (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 intact 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) Use of emergency crank handles for setting of points.
- (xiii) To supervise shunting as per SR 5.13.03.
- (xiv) He 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.

GENERAL

- i) A set of flags and tri-colour hand signal lamps will be part of the essential equipment of the staff while on duty. He shall not leave the station except when required by the SM on duty or with his permission and shall comply with subsidiary rules 4.42.02(b) (i) and (d).
- ii) Staff working at the station must be able to distinguish Up and Down line clear tickets and educated in distinguishing other operational forms and documents delivered to Drivers and Guards and must also know how and when to ring the station bell.

APPENDIX - 'E'**ESSENTIAL EQUIPMENTS OF THE STATION**

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

Srl No.	Description	Quantity
1.	Detonators	20 in tin case
2.	Hand signal lamps/Tri colour torch	06 Nos.
3.	Hand signal flags	04 sets.
4.	Safety chains with pad locks	10 Nos.
5.	Wedges/ Skids	08 Nos.
6.	Fire buckets (with sand and water)	05 Nos.
7.	Clamps with padlocks	06 Nos.
8.	Reminder collars	06 Nos.
9.	"Motor Trolley on Line" boards	03 Nos.
10.	First aid Box	01 No.
11.	Stretcher	01No.
12.	Fire extinguisher	01 No.
13	Blanket	01 No.

APPENDIX - 'F'**RULES FOR WORKING OF DK STATIONS , HALTS, IBH, IBS AND OUTLYING SIDING**

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DOM(G)/SBP

There is one Flag station in between Sambalpur and SBPY/SLRA block stations viz., Sambalpur Road (Code– SBPD) situated at Km.560.0 from Howrah and Km.2.0 from Sambalpur station.

APPENDIX - 'G'

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS

NIL.

R. Das
DSTE/SBP

D.Nayak
DOM(G)/SBP