

**EAST COAST RAILWAY
SAMBALPUR DIVISION**

Sl. No. SWR/BWIP/61

STATION WORKING RULES OF BHAWANIPATNA STATION (CODE: BWIP)

BG/MG/NG: Broad Gauge

Date of issue: 20.03.2023

Date brought into force: 25.03.2023

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 – 22077, ALT-'N'.

1.2 SIGNAL INTERLOCKING PLAN NO: - S.I – 22077, ALT-'N'.

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

2. DESCRIPTION OF STATION: -

BHAWANIPATNA is a two-line station situated in LANJIGARH ROAD JN-JUNAGARH single section at KM. 30.250 (OHE K.M. BWIP/1022-1025) from LANJIGARH RD JN. on TIG-VZM (double line) section. It is Standard – II(R) interlocked Class 'B' station with central panel and having absolute block system of working.

2.1 GENERAL LOCATION:-

2.1.1 NAME OF STATION: - BHAWANIPATNA (BWIP)

2.1.2 CLASSIFICATION OF STATION: - 'B' class

2.1.3 NAME OF THE SECTION: - LANJIGARH ROAD JN -JUNAGARH Single Line, RE,
BG section

2.1.4 ROUTE: - 'D'.

2.1.5 LOCATION: - KM. 30.250 (OHE K.M. BWIP/1022-1025) from LANJIGARH ROAD JN.

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

- i) LANJIGARH ROAD JN end :- LANJIGARH ROAD JN (Code: LJR) inter distance KM 30.250.
- ii) JUNAGARH end :- JUNAGARH inter distance KM 24.050.
- iii) Passenger halt: - 03, (i) G.Ramchandrapur PH at KM 9.040 (OHE KM: 8/16 to 9/2) from LJR in BWIP-LJR section. (ii) Depur PH at KM 17.352 (OHE KM: 17/8 to 17/10) from LJR in BWIP-LJR section. (iii) KUTRUKHAMAR PH at KM 41.275 (OHE KM: 41/3 to 41/7) from LJR in BWIP-Junagarh section.

- iv) Flag station: - Nil.
- v) Outlying siding: - Nil.
- vi) D.K. station: - Nil.
- vii) IBH: - Nil.
- viii) 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.	BHAWANIPATNA-LJR	UP Advanced starter signal No. 19 of BWIP	DN Advanced starter signal No. 14 of LJR
2.	BHAWANIPATNA-JUNAGARH	DN Advanced starter signal No. 18 of BWIP	UP Advanced starter signal No. 19 of JUNAGARH

2.3.1 STATION SECTION:-

The station section is between the UP Adv. Starter & DN Advanced starter signals of BWIP station.

2.3.2 STATION LIMIT:-

The portion of line between UP & DN Distant signals is station limit of the station.

2.4: GRADIENT: -

- (a) From the Centre of the station building towards LJR.

Chainage in Metre		Inter-Distance	Gradient
From	To		
CSB	961.00 M	961.00M	1 in 1500 R
961.00M	1645.00 M	674M	1 in 400 R
1645.00 M	1936.00M	291 M	Level
1936.00M	3177.2 M	1241.2 M	1 in 200 R
3177.2 M	Block section	----	Level

- (b) From the Centre of station building towards Junagarh.

Chainage in Metre		Inter distance	Gradient
From	To		

CSB	1039.0M	1039.0M	1 in 1500 F
1039.0M	2039.0 M	1000 M	1 in 150 F
2039.0 M	2738.75	699.75 M	1 in 450 R
2738.75	2840 M	101.25 M	Level
2840 M	3539M	699 M	1 in 250F
3539M	Block section	-----	Level

2.5 LAY OUT: -

I	No. of running lines	2 (Two)
II	No. of sidings	2 (Two), i) Sick siding cum Track machine siding (CSL 82 m) taking off from ORL of Line No.1. ii) Tower Wagon Siding (CSL 50 m) taking off from ORL of Line No.1.
III	No. of Passenger platform	1(One), One High level platform (435 x 12.2 M) beside Line No.-1
IV	No. of goods shed platform	Nil

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

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(i)

Line No.	Description	CSL	Isolation Provided	
			Junagarh end	Lanigarh Road end
Line No. 1	Loop line	728.6 M (STR-STR)	ORL	ORL
Line No. 2	Main line	776.6 M(STR-STR)	-	-

2.5.2 Tower Wagon Siding:-

The Tower Wagon Siding (TWS) takes off from Line No. 1 at Junagarh end of the yard with single side entry. The Tower wagon Siding is isolated from line No. 1 by DS point No. 23. The SM on duty is to press the SH-10 GN button along with TWS-UN button simultaneously for placement the train on Tower wagon siding. Similarly for drawn-out of the train from Tower wagon siding, SH-5 GN button along with L1/UN1 button to be pressed.

2.5.3 Sick siding-cum-Track machine siding;-

The sick siding cum track machine siding (CSL-82, SH to DE) takes off from ORL of line No.-1 with one side entry. The entrance point of Siding is isolated by derailing switch No, 24 which is operated from Panel. Whenever shunting is to be performed in siding, the concern shunt signals SH13 below starter signal No.13 and SH 6 shall be used. The signals 2A,1B, C2A,C1B, SH4A, S10, C10, SH10, C13, SH6 and starter signal S13 are electrically interlocked in such a way that these signals cannot be taken 'OFF' when SH13 is taken off for shunting in the siding. Likewise, signals 2A, 1B, C2A, C1B, SH3B, SH4A, S13, S10, C10, SH5, C13 and SH13 are locked in their normal position when shunt signal SH6 is taken off for drawn-out a train from the siding.

(ii) DIRECTIONS OF MOVEMENT: -

Trains arriving from Junagargh end are UP trains.

Trains arriving from Lanjigarh Road end are DN trains.

2.5.4 NON RUNNING LINES AND CSL:

Sl. No	Description	CSL	Takes off	Exit	Operation
1.	Sick Siding cum Track machine siding	82M (DE-SH)	From ORL of line No-1 at LJR end	One way	Operating the DS point No-24 from panel.
2.	Tower Wagon Siding	50M (DE-SH)	From ORL of line No-1 at JNRD end	One way	Operating the DS point No-23 from panel.

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

2.5.5 ANY ABNORMAL FEATURE IN THE LAY OUT: - NIL

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

ii) LEVEL CROSSING: (IN BLOCK SECTION)

SI No	Location Between	Km.& No.	OHE KM	Normal Position	Class	Type	Operation	Communication
1	BWIP-LJR	KM 11.048 (LJ-06)	11/1-2	Closed to road traffic	'C'	Non-Interlocked	Winch operated Lifting barrier	Voice logger Telephone with SM/LJR
2	BWIP-LJR	KM 17.249 (LJ-09)	17/5-6	Closed to road traffic	'C'	Non-Interlocked	Winch operated Lifting barrier	Voice logger Telephone with SM/BWIP

SI No	Location Between	Km.& No.	OHE KM	Normal Position	Class	Type	Operation	Communication
3	BWIP-LJR	KM 19.098 (LJ-11)	19/2-3	Closed to road traffic	'C'	Non-Interlocked	Winch operated Lifting barrier	Voice logger Telephone with SM/BWIP
4	BWIP-LJR	KM 26.685 (LJ-17)	26/13-14	Closed to road traffic	'C'	Non-Interlocked	Winch operated Lifting barrier	Voice logger Telephone with SM/BWIP
5	BWIP-LJR	KM 28.720 (LJ-19)	28/12-13	Open to road traffic	'B2'	Interlocked	Winch operated Lifting barrier	Magneto Telephone with SM/BWIP
6	BWIP - JNRD	34.683 (LJ-22)	34/11-12	Closed to road traffic	'C'	Non-Interlocked	Winch operated lifting barrier	Voice logger Telephone with SM/BWIP
7	BWIP-JNRD	41.515 (LJ-24)	41/8-9	Closed to road traffic	'C'	Non-Interlocked	Winch operated lifting barrier	Voice logger Telephone with SM/BWIP
8	BWIP-JNRD	44.893 (LJ-25)	44/17-18	Closed to road traffic	'C'	Non-Interlocked	Winch operated lifting barrier	Voice logger telephone with SM/JNRD
9	BWIP-JNRD	45.323 (LJ-26)	45/6-7	Closed to road traffic	'C'	Non-Interlocked	Winch operated lifting barrier	Voice logger telephone with SM/JNRD
10	BWIP-JNRD	52.097 (LJ-28)	51/10-11	Closed to road traffic	'C'	Non-Interlocked	Winch operated lifting barrier	Voice logger telephone with SM/JNRD

Train Actuated warning device has not been provided at 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) a,b,c (ii). Chapter III, Chapter IV(B)& Chapter V, Part-II of BWM)

- i) **System of working:** - Absolute block System of working on single line.
- ii) **Type of block instruments:** - Block Panel with UFSBI for BWIP- LJR and TLBIwithUFSBI between BWIP-JNRD block sections.
- iii) **Instruments:** - Token less block Instruments of BWIP-JNRD (co-operative type) with UFSBI and block panel with UFSBI of BWIP-LJR(Non-co operative type)
- iv) **Block Telephone:** Provided with block instruments of section BWIP-LJR and BWIP- JNRD section.
- v) **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 SIGNALING:-

- i) **INTERLOCKING:-** The station is provided with Standard II (R) interlocking, central panel with Multiple Aspect Colour Light signaling. 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 block instruments. Authority to proceed to enter into block section for the Driver is taking off of Last stop signal for BWIP-LJR and BWIP-Junagarh section. GR 3.08(4) (b) governs the aspect and indications of the signals. The station has no end cabins.
- ii) **MINIMUM EQUIPMENT OF SIGNAL:** - Distant, Home, Calling on, Starter, DN Advanced starter signal & UP Advanced starter cum Gate distant of LC Gate No-LJ-19.
- (iii) **AXLE COUNTER:** -Both side block sections are monitored by axle counter system, digital axle counters are provided at both end of the station just ahead of advanced starters. A pair of Digital axle counter is provided between BWIP and LJR, one beyond UP advanced starter of BWIP and another just beyond DN advanced starter of LJR 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 Digital axle counter

is provided between BWIP and JNRD, one just ahead of DN advanced starter signal of BWIP and the other just beyond the UP advanced starter signal of JNRD station for counting the axles 'IN and for counting the axels 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 axle counter box provided in the Station Master's office which shows 'GREEN' when the block section is clear and 'RED' when the block section is occupied.

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 block instrument.

[Details of resetting operation is given in Appendix-'B']

- v) **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 resealing of the concerned button.
 - vi) **TRACK CIRCUIT:-** All the lines including point zone, between Home signals and Fiverail length track in rear of Home signal at either end is track circuited. Normally the panel is dark except for point and block section indication. 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 illuminated panel diagram. Whenever a signal is taken OFF, the route set indication i.e. "WHITE" appears for the the particular route set. As the Train occupies the track circuit the "WHITE" indication disappears and "RED" indication appears.
 - vii) **STATION MASTER'S CONTROL:-** A push button type electric control apparatus is provided in the Station Master's office to operate electrically the 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.
- 4.2 **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

- 4.3.1 **ROTARY KEY TRANSMITTER (RKT):-** RKTs with crank handle keys are provided at the station and 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.
- 4.4 **IBS: - NIL**
- 4.5 **POINT AND TRAP INDICATOR: - NIL**
- 4.6 **REPEATING SIGNAL (BANNER TYPE):- NIL**
- 4.7 **EMERGENCY CROSS OVER- NIL**
- 4.8 **L.C. GATE OPERATION: -** Given in Appendix-A
- 4.9 **CALLING ON SIGNALS:-** 'Calling on' signals have been provided below home signals as well as bellow starter signal. 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 points and in sick siding for back shunting in the yard and to be used whenever necessary. Forward shunting movement may be carried out with starter signals & Shunt signal No-SH-13 below the starter signal No-13 and back shunting on Shunt signals No.SH3/4 at top point in addition to traffic signals. Shunt Signal SH-10 is provided for drawn-out of the train from Tower Wagon Siding.
- 4.11 **ANTI COLLISION DEVICE: - NIL.**
- 4.12 **CRANK HANDLE:-**

When any point fails to operate normally by the route setting operation or individual operation through panel it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handle keys are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle, for motor operated points shall be followed.

The crank handle key in the CH locations can be released from the RKT. The SM has to press concerned crank handle button and Trans button. This will enable SM/TPM to extract crank handle key CH-1/CH-2 from RKT at CH locations. SS/SM/TPM on duty after extracting the crank handle key from RKT, 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 to desired position. After completion of point work the crank handle key is to be inserted in the RKT and transmitted to station. Station Master on getting 'Key IN' flashing indication on the panel, shall press relevant CH button & Group Release button

to get the steady key "IN" indication. SM on duty shall personally ensure clamping and padlocking all facing and trailing points en-route. The cases of failure of Motor operated points should be promptly reported to the concerned ESM/Signal Inspector for immediate rectification. SM on duty as per OM 2.19 shall maintain an emergency crank handle register. The procedure for use of crank handle for Motor operated points shall be followed in terms of operating Manual 2.19.

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

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit and SM's emergency point key is 'IN' and turned shall press emergency point operation button by breaking the seal along with relevant point button simultaneously. Then retaining the point button in pressed condition, 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.

4.13 [A] **CRANK HANDLING EMERGENCY OPERATION OF POINTS: -**

Crank handle operation is interlocked with the signaling and interlocking system. When a route is not released after passage of a train or the Crank handle is in locked condition due to any failure, the "CH key" can also be extracted from the CH location box by applying emergency Crank Handle operation. The concerned signal has to be cancelled then the procedure is same for transmitting the CH key. In key "in" and lock condition, when the CH button and group trans button are pressed simultaneously, both the lock indication and key "in" indication start flashing. After 120 seconds the lock indication disappears and the key in indication continues to flash. At this position the key can be extracted from the RKT in the CH location box by pressing the push button switch provided inside the CH location box. The procedure for receiving the CH key is same like the normal operation of Crank handle.

4.14 **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.

4.15 **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 at the top of panel to be pressed first by breaking the seal and subsequently the concerned signal button is to be pressed releasing the emergency route release button.

A white flashing light will lit indicating that the timer is working. After 120 seconds, the white flashing light along with the white strip of light will disappear suggesting the route has been released.

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

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

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

Custody of Relay Room key and procedure for its handover and taking over between SM & S&T, the staff has to follow the procedure as per Para No.13.16 of Operating Manual (2015), JPO/02/2012, dated 29.08.2012, RB JPO issued vide No.2021/Sig/21/Safety Performance, dated.10.06.2023.

The provision of double locks in relay room includes all relay rooms, relay huts, goomties, LC Gate relay huts/goomties within station limits and cabins provided as an extension of station relay room for housing signaling gears in station yard.

The Relay room & extended relay rooms within the station limits shall have double locking system of operating and S&T Locks. One Godrej Lock shall be provided on the door of Relay Room by the Station Master. This lock is named as operating lock. The key shall be kept in the safe custody in the key- box with the SM on duty. Likewise, one Godrej lock shall be provided on the door of Relay Room by the Signal Maintainer/ Signal Supervisor of the Station /Section.

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

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

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

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

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

In case of emergencies such as fire, flood, earthquake etc., Open Line Section Engineer (Signal) / Signal Maintainer & SS/SM shall jointly decide the need for opening the Relay Room. Section Engineer Signal HQ at Divisional Control Office and Section controller shall be advised respectively. In case of communication failure during such emergencies, Open Line Signal Maintainers/ Supervisors and SS/SM on duty shall jointly decide the need for opening the Relay Room and communicate later on to respective controls.

In case key is lost /misplaced, it shall be reported to S&T control as well as section control for either lock. In normal course the spare key with respective custodians shall be used. In emergency situation, lock may be broken under advice to Section Control as well as S&T control. New lock shall be procured and provided.

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

Correction slip No.02 Date of issue: 18.11.2024
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4.17 POWER SUPPLY: -

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

[B] REMOTE MONITORING ASM BOX:

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

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

- e) Whenever there is a failure of AT supply, the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of AT supply and make an entry in station diary duly initiating action for rectification of failure, if any.

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.

5.0 **TELECOMMUNICATION FACILITIES: -**

- (i) Telephone attached to single line Block Panel with UFSBI of BWIP-LJR and Tokenless Block Instrument of BWIP-JNRD block sections.
- (ii) Station to Station fixed telephone (Hot line) has been provided
- (iii) Station has been provided with auto telephone connected with Railway Exchange.
- (iv) BSNL telephone has been provided
- (v) The station is connected to BLGR-SPRD control circuit by a control telephone
- (vi) Station to station 25 Watt VHF communication has been provided .
- (vii) Telephone has been provided between Station and both end crank handle locations.
- (viii) Telephone has been provided between Station and Engg. L.C Gates at KM: 28.720 [OHE KM: 28/12-13], KM:17.249 [OHE KM:17/5-6], KM: 19.098 (OHE KM:19/2-3], KM 26.685[OHE KM: 26/13-14] in BWIP-LJR section and at KM 34.683 [OHE KM:34/11-12], KM 41.515 [OHE KM:41/8-9] in BWIP- Junagarh section.
- (ix) Telephone has been provided between Station Master & TPC.

Note:

- (i) For obtaining line clear, VHF should be used as a last alternative and not as a sole means of communication.
- (ii) VHF and Walkie-Talkie sets should not be used for unnecessary discussions with Loco Pilots, Guards or any other staff.

5.1 **FAILURE OF COMMUNICATION: -**

The on duty SM shall use the above electrical communication instruments stated in Para-5.0 from item No. (i) to (vi) strictly in order of preference for obtaining/granting line clear vide SR 14.01.01. In case of partial failure of the above means of communication between the adjacent block stations the SM on duty shall work vide SR6.02.06. In the event of total failure of communications SR 6.02.04 shall be observed for working the train. During failures of signal, inter-locking, points, block instrument telephone etc. the S&T staff should be informed for rectification.

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

- 6.0 **SYSTEM OF TRAIN WORKING: -** The movement of trains is controlled by Section Controller on duty whose orders shall be complied with, provided they do not contravene any General Rules, Subsidiary Rules, Station Working Rules, Block Working Manual and other safe working instructions issued from time to time. In the event of

suspension of control working, the Station Master on duty shall work independently in conjunction with the Station Master of adjoining block station and shall be responsible to ensure that there is no undue delay to train operation in general.

6.1 **DUTIES OF TRAIN WORKING STAFF:** - Details of duties of operating staff are mentioned in Appendix 'D' of the SWR.

6.1.1 **TRAIN WORKING STAFF 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	No. of staff in each shift	Hrs. of Duty
1.	SS/SM-----	1	12 hrs.
2.	PM-B/ PM-A	1	12 hrs.

The above staff shall work as per the rosters issued by DPO/SBP from time to time and these rosters shall be displayed in the SM'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 SS/SM 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.
- (iii) When a staff joins as a new member in the station.

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) Block section is clear of trains running in the direction towards the block station to which such line clear is being given
- iv) The line is clear upto Advanced Starter at that end of station nearest to the expected train i.e. UP advanced starter signal No.19 for a DN train and DN advanced starter signal No-18 for an UP train)

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 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 authorized 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.

Safety Point Alarm Unit (SPAU):

A safety point alarm unit is provided on the SM table with different indications: On complete arrival of a train at the station, the SM has to set the points immediately against the occupied line as per SR 3.51.06. In case the SM forgets to alter the points, after a time lag of 02 minutes, an audible buzzer will be heard from this instrument along with the 'RED' indication of the line on which the train has arrived. The SM shall then press 'ACK' button to mute the buzzer, and immediately set the required points against the line on which the train has arrived. On setting the points against the occupied line, the RED indication will disappear. In case SM fails to set the required points against the occupied line a fault message will be triggered SMS will be sent to concerned station mobile and all concerned. If all the lines of a station happen to be blocked when line clear has been granted to a train the safety point alarm will not work and the point should be set for the line occupied by a stable load or a goods train by SM on duty, in that order so that, in case of any mishap, the chance of causalities minimized. In case of all the lines are occupied by passenger trains points should be set for a loop line to negotiate which the speed of incoming train would be reduced, which in turn would minimize the consequences/causalities vide SR 3.51.06 (b). These precautions shall be taken in addition to the observance of other precautions as contained in SR 5.04.01 and SR 5.23.01.

6.2.1.2 **RECEPTION OF 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 No. 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 than 45 Mtrs. from the point of

obstruction to indicate the LP as to where the train shall be brought to a stand (GR 5.09 and SR 5.09.01).

6.2.1.3 **RECEPTION OF TRAIN ON NON-SIGNALLED LINE:** - Not Applicable.

6.2.1.4 **DESPATCH OF TRAINS FROM NON-SIGNALLED LINE:** - Not Applicable.

6.2.1.5 **DESPATCH OF TRAINS FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:-**Not Applicable.

6.2.1.6 **SPECIAL RESTRICTIONS:** -

(i) During crossing, first train to be received on loop line first with over run setting.

6.2.1.7 **SPECIAL INSTRUCTIONS:-**

After any non-signal movement has taken place over point (s) operated by an electric point machine, whether in the facing or trailing direction, the SM on duty shall operate point(s) to normal and reverse setting for the purpose of testing the point. After ensuring that indication regarding the normal and reverse setting is correctly available, further movement may be permitted over such point(s).

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

A. Reception of trains is governed by General Rules 3.36, 3.38, 3.40, 4.17, Subsidiary Rule 3.42.02 (a)(iv), 3.42.03, 3.36.02 (a), 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 shall be kept clear vide General Rule 3.40. (1) (b).

LINE NO.	CLEARANCE OF ADEQUATE DISTANCE			
	UP TRAINS		DN TRAINS	
	FROM	TO	FROM	TO
(L-1) Loop line	UP Starter Signal No. 13	DS No-24 on Over run line or Advanced starter signal No.19	DN Starter Signal No. 10	DS Point No. 23 or Advanced starter signal No.18
Main Line (L-2)	UP Starter Signal No. 11	Advanced starter signal No.19	DN Starter Signal No. 12	Advanced starter signal No.18

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 has been 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 both the track circuits 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 signal 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 A/B or 'C2A/B' (Red with white dot), as the case may be, shall be pressed simultaneously along with concerned route button for 2-3 seconds and released. After a lapse of 60 seconds, the calling-on signal clears and a white light indication appears on the panel for the concerned calling-on signal.
- D. **RELEASING OFF CALLING ON SIGNAL BELOW STARTER:-** Miniature colour light Calling-on signals are provided below the Starter signals in terms of GR 3.13(2). A Calling on signal shows no light in the 'ON' position. The calling on signals below Starter Signal No. 10/12 is taken 'OFF' for dispatch of a train up to Advanced Starter Signal S-18 towards Junagarh end. Similarly the calling on signals below Starter Signal No. 11/13 is taken 'OFF' for dispatch of a train up to Advanced Starter Signal S 19 towards Lanjigarh Road end. A Calling ON Signal below starter signal requires zero time duration to be cleared.

NOTE:

- i) Before taking "OFF" Calling-on signal during failure of track circuit, the clearance of track over which the train is intended to be received must be verified physically.
- ii) SM on duty to ensure that no through signals are given while receiving a train on 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: -**
According to the existing interlocking at this station, the simultaneous reception and dispatch of trains are permitted as stipulated below (GR3.47).

(i)	While receiving an UP train on Line No.1 setting route to overrun line.	Dispatch of an UP train from Line No.2.
(ii)	While receiving a DN train on Line No.1 setting route to overrun line.	Dispatch of a DN train from Line No.2.

- 6.4.1 Rules laid down in SR 3.47.01 (a,b,c) and SR 3.47.02 (a,c, d,f) shall be followed.

6.5.1 COMPLETE ARRIVAL OF TRAIN: -

(Rule No. GR 4.16 & SR 4.17.01, SR4.17.02, SR 4.17.02, GR 14.10)

- a) **STAFF RESPONSIBLE TO VERIFY COMPLETE ARRIVAL: -** SM on duty.
- b) **MODE OF VERIFICATION:** Through AXLE COUNTER and physical verification when axle counter fails.

6.5.2 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 reset box. As soon as a train enters in to the block section, the 'RED' indication appears in the axle counter reset box. After the whole train clears the block section, 'GREEN' indication appears on the axle counter reset box. This confirms the complete arrival of train and the SM on duty shall give train out of section report on seeing the section clear (GREEN) indication in the panel.

- 6.6 **DESPATCH OF TRAINS: -** Dispatch 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)(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 outgoing 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 for dispatching trains to BWIP-LJR section and BWIP-JNRD section are closed against road traffic. He shall then take off the concerned route starter and advanced starter signals. Observing the 'OFF' aspect of the route starter and advanced starter, the Loco Pilot 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 line clear authority is to be withdrawn from the Loco Pilot with a memo, taking his acknowledgement thereof.

- 6.6 **TRAINS RUNNING THROUGH:** -The procedure detailed in Para 6.6, 6.6.1 above and General Rules 4.17, 4.42 and Subsidiary Rules 3.36.04(b)(i) 3.42.02(a)(iv), shall be observed. The SM is responsible to observe/watch the condition of the vehicles on a train and shall wave green hand signal horizontally as per Subsidiary Rule 4.42.02 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 Loco Pilot 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 hand danger signal to draw the attention of the guard/Loco Pilot of the train in case of observing any unsafe condition/abnormalities of the train. He shall also report to the SM on duty for taking further suitable action in terms of SR 4.42.02(d).

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

- 6.8 **WORKING IN CASE OF FAILURE:** - 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 and 3.69.06. In case of defective departure signals, trains will be piloted out vide GR 3.70 & SR 3.70.01. & 3.70.02 and 3.70.03. The responsibility of correct setting of points, clamping and padlocking of the facing and trailing points for reception and dispatch 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 yard after piloting 'IN' before piloting a train in to the yard the clearance of the track must be ensured by physical verification

6.8.3 AXLE COUNTER:-

In the event of failure of axle counter, Block Instrument of 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/total failure of communication, 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 para-20.06 of SWR and Operating Manual Para 2.19.

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 Locopilot 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 than 45mts. From the point of obstruction to indicate to the Driver as to whose the train shall be brought to a stand.

6.8.9 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:-

However, before declaring a signal is defective, the setting of the point on the route to which it applies shall be inspected by the Station Superintendent/Station Master irrespective of the position of the switches point laid down in GR with relevant SRs shall be followed. [Refer GR 3.68, 3.70 & SR 3.77.01(b)]. Initiate action in accordance with the procedure prescribed in GR and relevant Subsidiary Rules there to. [Refer GR 3.49(4) and 3.68, 3.77]

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

6.9 PROVISIONS FOR WORKING OF TROLLEYS /MOTOR TROLLEYS/MATERIAL 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
- (c) Rail Dolleys will work in accordance with Subsidiary Rules 15.27.10.

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) 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 stable load register is to be maintained shift wise as per FORMAT given in Operating Manual.

- 7.3 **ALTERING OF POINTS TO A CLEAR LINE WHEN RUNNING LINE IS BLOCKED:-**
- a) When a running line is blocked by stable load e.g., wagons, vehicles or by a train which is to cross or give precedence to another train or immediately after arrival of a train at the station etc. the points 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.
 - b) If all the lines at a station happens to be blocked when line clear has been granted to a train, the points should be set for the line occupied by a stable load or a goods train in that order so that in a case of mishap, the chances of casualties are minimized.
 - c) In case all the lines are occupied by passenger carrying trains, points should be set for a loop line, to negotiate which the speed of the incoming train would be reduced, which in turn would minimize the consequences of casualties. While doing so, points shall be set for a loop, occupied by a train, if any, whose engine is facing the direction of approach of the incoming train rather than a loop line, occupied by a train whose passenger coach will, in case of collision, receive the impact.

7.4 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.

At stations where loading and unloading of goods is permitted whether full rake or part thereof, the station master shall ensure that no goods are left fouling any line before and after clearance of the rake from the line. The railway servant supervising loading and unloading shall also ensure that consignment does not foul any line vide SR 5.19.01: (a).

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

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

8.0 SHUNTING: -**8.1 GENERAL PRECAUTIONS: -**

Shunting shall be performed in terms of General Rules 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17, 5.19, 5.20 to 5.23, 8.09, 8.14, 8.15 and Subsidiary Rules thereto. The Guard/Asst. Guard/SS/SM/ASM/TPM on duty is authorized to supervise shunting operation. The staff supervising shunting shall ensure correct setting of points, clamping and pad locking of points both in facing and trailing direction for non signal movement.

Normally, shunting operations will be conducted by means of hand signals, Shunt Signal and starter where Advanced starter is provided vide General Rule 3.46(2). Shunting authority should be either fixed signals or a written authority in form T/806 vide SR 5.13.02.

NOTE: For any non signaled movement physical verification of the clearance of the crossover points, clamping & padlocking of both facing and trailing points shall be ensured by the Guard/SM/TPM on duty for supervising shunting operations.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approach train is strictly prohibited vide General Rule No. 8.5(2) and 8.09.

8.3 PROHIBITION OF SHUNTING ANY SPECIAL FEATURES IF ANY:

- (i) Hand shunting is prohibited at both ends of the yard vide GR 5.20.
- (ii) Fly/loose shunting is prohibited at both ends of the yard vide SR 5.21.01 (c).
- (iv) SR 4.48.01 is applicable at this station.

8.4 SHUNTING ON SINGLE LINE:

- (i) Shunting in Station Section i.e. within Adv.Starter signals is permitted provided no line clear is given for a train (GR 8.10).
- (ii) The line outside the station section and upto the Home Signal shall not be obstructed unless a Railway Servant specially appointed on his behalf by the Station Master on duty who is the in-charge of the operations and unless the block section into which the shunting is to take place is clear of approaching train and all relevant & necessary signals are kept at "ON" position (GR 8.12).
- (iii) The line outside the first stop signal shall not be obstructed unless line has been blocked back under exchange of private number.

8.5 DURING FAILURE OF BLOCK INSTRUMENT: -

The SM on duty shall ensure that there is no train in the block section and the last train has arrived complete clearing the fouling mark while conducting shunting at that end of the block section of which block instrument has been suspended and all necessary precautions have been taken as per rules laid down in G&SR.

8.5.1 SHUNTING IN THE SIDING TAKING OFF STATION YARD: -

When shunting in the sidings shunt signals shall be used. During non signal movement, proper shunting authority on T/806 to be issued to the train staff with clear instructions and limit up to which shunting is to be performed. The staff supervising shunting shall ensure correct setting of points, clamping and pad locking of points both in facing and trailing direction. While performing shunting, relevant provisions of GR 5.14 and SRs thereto are to be followed.

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 Block Panel with UFSBI during & partial failure of other available means of communications, trains will be worked in terms of Subsidiary Rule 6.02.06 and Chapter-III,(I) 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. Engineering 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 Loco Pilot/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/Loco Pilot the SM on duty may resume normal working after exchanging proper messages supported by Private Number.

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

If a train carrying passenger does not arrive within 10 minutes or if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control of this fact. There after SMs at either end of the Block section shall send one Railway servant into block section to collect the whereabouts of train, condition of train and nature of assistance, if any, required. SM on duty shall collect the full particulars from railway servant so deputed and intimate the same to SM at other of block section and to the section control simultaneously for taking action according to circumstances of the case. [Refer GR 6.04 & SRs thereto].

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

[v] **FAILURE OF LVCD AXLE COUNTER: - (Given in appendix-B)**

(B) **PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE: -**
Details of the operation are given in Appendix 'B' of SWR.

(C) **CERTIFICATION OF CLEARANCE OF TRACK BEFORE CALLING-ON SIGNAL IS OPERATED:-**To take 'OFF' a calling on signal during failure of track circuit on the route, the clearance of the track over which the train would pass must be physically checked by the SS/SM on duty. After satisfying himself 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 sectional 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 all communications occurring between BWIP-LJR and BWIP-JNRD 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 telephones whenever available
 - d. Fixed telephone such as Railway auto telephone & BSNL phone
 - e. Control telephone
 - f. VHF sets
- and action shall be taken as per SR 6.02.04. The train which is to be dispatched 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 in the prescribed form (T/B 602) 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".
- (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/B409).
- (iii) Authority 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 (T/F602) for the light engine to return with or without a train attached, supported by a Private Number.

On arrival of the engine at the next station the conditional line clear message and enquiry message shall be collected by the Station Master on duty who shall prepare a conditional line clear ticket for engine to return either light or with train attached and conditional line clear reply message for the enquiry message giving line clear for the train waiting at other station shall be handed over to the Driver of light engine. On return trip the Driver will come on booked speed subject to speed and other restrictions in force.

If there be an even flow of in both directions, Enquiry and Conditional line clear message for each succeeding train may be sent through the Guard of the preceding train.

If the Station Master at one end has more than one train to despatch in the same direction he may ask line clear not only for one train but also for the following trains. It must be stated that these later trains will be despatched after the first train at an interval of 30 minutes.

When despatching the second and subsequent train particulars of last preceding train along with its departure time will be endorsed and a caution order restricting the speed to 25 Kmph. over straight when view ahead is clear and 10 Kmph. when the view ahead is not clear is to be issued. While adopting this procedure the Guard and Driver should be instructed to keep a 'Sharp' lookout and be prepared to stop short of any obstruction. Trains must continue to work on this system until any one of the means of communication is restored.

As soon as any one of the means of communication has been restored, the conditional Line clear working of trains shall be cancelled when there is no train in the affected block section and message shall be exchanged supported by Private Number keeping Section Controller.

- 9.2 **TEMPORARY SINGLE LINE WORKING ON A DOUBLE LINE SECTION: - N.A.**
 9.3 **DESPATCHING OF TRAINS UNDER AUTHORITY PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN: -** The Station Master will take action as per SR 6.02.04 for despatch of trains under 'Authority to Proceed without Line Clear'. Actions shall be taken to assist the crippled train as per SR 6.02.05.
10. **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.10 and UP starter signal No.13 of 1st loop during day and light are earmarked to serve as VISIBILITY TEST OBJECT 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. **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. **FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG:** In order to indicate to the Drivers of approaching trains the location of signal during thick, foggy and tempestuous weather or during dust storm, the SS/SM on duty shall arrange for fog signalling in terms of General Rule 3.61 and Subsidiary Rules thereto. Assurance of the staff shall be taken in the Fog Signal Register in the month of October every year as token of their having knowledge of Fog Signalling Rules and their use.

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

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 signalmen 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 THIS RULES SHALL BE READ AS CANCELLING, AMENDING AND MODIFYING ANY OF THE GENERAL RULES, SUBSIDIARY RULES, BLOCK WORKING MANUAL AND OPERATING MANUAL.THESE RULES CANCEL ALL PREVIOUS STATION WORKING RULES".

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 INSTRUCTIONS OF "C" CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE NO. LJ-09 AT KM:17/5-6 IN BETWEEN BWIP-LJR STATIONS.

1.1 GENERAL INSTRUCTIONS:-

1.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:-

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

1	Number of level crossing gate	:	LJ-09
2	Engineering or Traffic Gate	:	Engineering
3	Under control of Station Master or SSE(P.WAY)	:	SSE(P.WAY)
4	Location at KM	:	17/5-6
5	At station	:	----
6	In between station	:	LJR-BWIP
7	BG/MG/NG	:	BG
8	Single line/Doubling Line/Multiple Line	:	Single line
9	Normal position	:	Closed to road traffic
10	Interlocked/Non-interlocked	:	Non-Interlocked
11	Means of interlocking	:	Nil
12	Provision of gate Signal at Kms	:	Nil
13	Signaling arrangement	:	Nil
14	Means of communications /Telephone with or without Voice logger	:	Voice logger telephone from gate goomty with SM /BWIP
15	Width of Level Crossing Gate	:	7.5 MTRS
16	Type of Road (NH/SH/Others)	:	Other
17	Name of Road	:	Village road
18	Metaled/Non Metaled	:	Metaled
19	Approach Road	:	Metaled
20	Width of the Road	:	5.5 MTRS.
21	Angle of Road Crossing (in case of the SKEW gates)	:	Nil
22	Road Gradient (if any)	:	(a) North/East side – 1 in 30 (b) South/West side –1 in 30
23	Road alignment (straight/curve)	:	(a) North/East side – Straight (b) South/West side - Straight
24	Provision of height gauge	:	Provided
25	Type of Barrier	:	Winch Operated Lifting barrier
26	Length of check Rail	:	9.5 MTRS.
27	Road surface in between LC gates.	:	CC BLOCK
28	Length of Rumble strip/speed breakers.	:	5.5 MTRS

29	Road Signs	:	Provided
30	Speed breakers indication board	:	Provided.
31	TVU	:	1505 on 10/2024
32	Census next due on	:	10/2027
33	Demarcation for placement of detonators.	:	Provided
34	No. of Gatekeepers working	:	02 (12 Hours shift)
35	Nearest Railway Medical Assistance	:	TIG
36	Nearest Private Medical Assistance available (if any)	:	BWIP
37	List of equipment available Yes / No.	:	YES

1.2. **EQUIPMENT:**

ITEMS	QUANTITY/NUMBERS
1. LED based flashing tri colour hand signal lamp	3
2. Hand signal Flag Green	1 mounted on sticks
3. Hand Signal Flag Red.	3 mounted on sticks
4. Banner Flag Red	3
5. Posts for exhibiting red banner flag	2
6. Spare chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8. Gate Lamps	2
9. Tommy Bar	1
10. Mortar 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. Water pot/Bucket	1
16. Canister for Muster Roll	1
17. Set of spare spectacles of Gatekeeper wearing glasses.	1
18. Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate	1
19. Basket	1
20. Whistle	1
21. Wall clock	1
22. Small size chains with padlocks to be used in case of failure of boom lock.	2

1.3 LIST OF REGISTERS PROVIDED AT THE LC GATE LODGE: -

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

1.4 DUTIES OF GATEKEEPER:

1. ALERTNESS:

The Gate Keeper 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, Gate Keeper will stand in the manner indicated below:

- i) Gate Keeper will stand attentively in front of the gate – lodge facing the approaching train.
- ii) In daytime, Gate Keeper shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, Gate Keeper 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 GATE KEEPER:

- i) Gatekeeper shall ensure that red banner flag by day and red light by night is placed across the track in case of emergency and obstruction on the track.
- ii) Gatekeeper shall ensure that all gate light and hand signal lights are lighted and kept burning continuously from sunset to sunrise.
- iii) Gatekeeper 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 gate 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) Gatekeeper shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gatekeeper shall also be prepared to repeat any signal which TMR may give to Loco Pilot.
- vii) If lifting barriers get damaged or becomes out of order, the Gatekeeper shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gatekeeper shall report to the nearest Station Master, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) Gatekeeper shall wear badge and prescribed uniform while on duty at level crossing gate.
- x) Gatekeeper shall ensure that he is having competency certificate in his possession while on duty.
- xi) Gatekeeper shall work the gate as per gate working instructions and remain well conversant with these instructions.
- xii) Gatekeeper shall ensure that equipments supplied at the gate is in good order and ready for immediate use.
- xiii) Gatekeeper shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gatekeeper must keep the road surface well-watered and rammed in case of non-metalled roads.
- xv) Gatekeeper must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi) Gatekeeper shall prevent tress passing by persons or cattle to the maximum extent.
- xvii) Gatekeeper on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the Level crossing gate.
- xviii) Before opening the gate, he shall ensure that the train has passed complete over the level crossing by observing the last vehicle indicator of the train.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN:

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

- i) He shall take prompt action to warn the Loco Pilot/TMR of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot/TMR by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot/TMR fails to take notice, Gate Keeper shall immediately inform the station Master/BWIP to take appropriate action, under exchange of private number.

- iv) In case of train parting, Gate Keeper shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Loco Pilot/TMR 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, Gate Keeper shall immediately inform the Station Master/BWIP to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LC GATE:

- i) Place banner flag/red light lamp on the stave on track at 5M away from the check rail end.
- ii) Thereafter, if he is unable to remove the obstruction, Gate Keeper shall immediately inform the Station Master on duty by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts he shall first protect the gate and then inform on phone.

THE GATE KEEPER SHALL PROTECT THE LINE AS UNDER: -

(A) ON ELECTRIFIED SECTION:

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

(B) PROTECTION ON SINGLE LINE SECTION:

- i) If the line is obstructed the Gatekeeper shall plant a red banner flag by day and a red light by night 5 meters away from the direction on which train is expected to arrives first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gatekeeper shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gatekeeper shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 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 side, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
 - vii) In case the gatekeeper 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 Loco Pilot 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 GATEKEEPER:

- i) At night, Gatekeeper 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 Gatekeeper 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 and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

1.5 ENGINEERING ITEMS:

- i) **Visibility :-**

Direction	Side	Visibility Distance
UP	Right	320 m.
	Left	300 m.
DN	Right	300 m
	Left	320 m

- ii) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- ii) Periodical Census of traffic has been taken and the latest TVU is 1505 on 10/2024.

1.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is a Non-interlocked 'C' Class Engineering L.C. Gate situated at 17/5-6 between LJR - BWIP stations. This gate is provided with winch operated coupled lifting barriers. The gatekeeper closes and opens the lifting barriers of gate manually by operating the winch. Telephone connection is provided between the L C. gate

lodge and SM's office at SM/ BWIP station. The level crossing gate is normally closed to road traffic. The SM/ BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number. When the gatekeeper desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the SM/ BWIP for the passage of train or the whole of the train with last vehicle indicator has passed over the level crossing gate for which the gatekeeper has exchanged private number with the SM/ BWIP. Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2. EXCHANGE OF PRIVATE NUMBERS.

- (i) The normal position of level crossing gate being "Closed to Road Traffic" it should always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.
- (ii) The SM/ BWIP before permitting each train to enter into the block section, shall ask Gatekeeper on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gatekeeper only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the SM/ BWIP in assurance of gate being closed and locked against road traffic.
- (iii) The SM/ BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number.
- (iv) When the gatekeeper desires to open the gate for passage of road traffic he should ensure that:
 - (1) He has not exchanged any private number with the SM/ BWIP as per (ii) above.
 - (2) If he has exchanged private number with the SM/ BWIP, the whole of the train with last vehicle indicator has passed over the level crossing gate and SM/ BWIP has not exchanged private number with him for any other movement immediately in rear of the train.

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

- (v) In case the Gatekeeper is not responding on the telephone or in case the telephone becomes defective or private number is not received from the Gateman, the SM/ BWIP shall adhere to the procedure prescribed in SR 16.03.04.
- (vi) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gatekeeper shall look out in both directions before

opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.

1.7. **FAILURE OF TELEPHONIC COMMUNICATION:**

When telephonic communication fails or he does not get any response from gatekeeper despite two or three attempts, the following procedure should be adopted:

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

1.8 **FAILURE OF LIFTING BARRIERS:-**

- i) When the gate cannot be closed due to failure of lifting barriers, the Gate Keeper will immediately inform, the Station Master on duty/BWIP under exchange private number, and ensure the lifting barriers of gate do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gate Keeper shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, Gate Keeper shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train.

- v) Station Master on duty/BWIP shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the station Master/LJR at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train into the block section from his end.
- vii) Station Master/BWIP will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

1.9 OBSTRUCTION AT THE GATE:-

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gatekeeper shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gatekeeper shall advise the Station Master/BWIP on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Station Master/BWIP on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master/BWIP after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gatekeeper 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 gatekeeper 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/BWIP who shall not start the trains unless he has been assured by the gatekeeper that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/BWIP shall also inform the Station Master/LJR 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 obstructions.
- ix) After the track has been cleared of all obstructions the gatekeeper shall inform the Station Master/BWIP accordingly, under exchange of private number.
- x) Gatekeeper shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the gate is not obstructed.
- xi) Station Master/BWIP shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

1.10 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 gatekeeper, the gatekeeper and Station Master/BWIP will adopt the procedure given under item No.1.9 above. If the obstruction fouls the level Crossing Gate, gatekeeper must keep the gates closed against road traffic till the track is cleared of the obstruction.

1.11 ACCIDENTAL ROLLING DOWN OF TRAIN:

When the Gate Keeper observes that a train is rolling down or immediately after receipt of the information about accidental rolling down of the train the gatekeeper shall:

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

CERTIFICATE: -

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

2.0 GATE WORKING INSTRUCTIONS OF “C” CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE NO.LJ-11 AT KM. 19/2-3 IN BETWEEN BWIP - LJR STATIONS.

2.1 GENERAL INSTRUCTIONS:

2.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

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

1.	Number of level crossing gate	:	LJ-11
2.	Engineering or Traffic Gate	:	Engineering
3.	Under control of Station Master or SSE(P.WAY)	:	SSE(P.WAY)
4.	Location at KM	:	19/2-3
5.	At station	:	----
6.	In between station	:	BWIP-LJR
7.	BG/MG/NG	:	BG
8.	Single line/Doubling Line/Multiple Line	:	Single line
9.	Normal position	:	Closed to road traffic
10.	Interlocked/Non-interlocked	:	Non-Interlocked
11.	Means of interlocking	:	Nil
12.	Provision of gate Signal at Kms	:	Nil
13.	Signaling arrangement	:	Nil
14.	Means of communications /Telephone with or without Voice logger	:	Voice Logger telephone from gate goomty with SM /BWIP
15.	Width of Level Crossing Gate	:	7.5 MTRS
16.	Type of Road (NH/SH/Others)	:	Other
17.	Name of Road	:	Village Road
18.	Metaled/Non Metaled	:	Metaled
19.	Approach Road	:	Metaled
20.	Width of the Road	:	5.5 MTRS.
21.	Angle of Road Crossing (in case of the SKEW gates)	:	-----
22.	Road Gradient (if any)	:	(a) North/East side – Level (b) South/West side –Level
23.	Road alignment (straight/curve)	:	(a) North/East side – Straight (b) South/West side - Straight
24.	Provision of height gauge	:	Provided
25.	Type of Barrier	:	Winch Operated Lifting barrier
26.	Length of check Rail	:	12.0 MTRS.
27.	Road surface in between LC gates.	:	CC BLOCK
28.	Length of Rumble strip/speed breakers.	:	5.5 MTRS
29.	Road Signs	:	Provided
30.	Speed breakers indication board	:	Provided.
31.	TVU	:	8942 on 10/2024
32.	Census next due on	:	10/2027
33.	Demarcation for placement of detonators.	:	Displayed

34.	No. of Gatekeepers working	:	02 (12 Hours shift)
35.	Nearest Railway Medical Assistance	:	TIG
36.	Nearest Private Medical Assistance available (if any)	:	BWIP
37.	List of equipment available Yes / No.	:	YES

2.2. EQUIPMENT:

ITEMS	QUANTITY/NUMBERS
1. LED based flashing tri colour hand signal lamp	3
2. Hand signal Flag Green	1 mounted on sticks
3. Hand Signal Flag Red.	3 mounted on sticks
4. Banner Flag Red	3
5. Posts for exhibiting red banner flag	2
6. Spare chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8. Gate Lamps	2
9. Tommy Bar	1
10. Mortar 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. Water pot/Bucket	1
16. Canister for Muster Roll	1
17. Set of spare spectacles of Gatekeeper wearing glasses.	1
18. Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate	1
19. Basket	1
20. Whistle	1
21. Wall clock	1
22. Small size chains with padlocks to be used in case of failure of boom lock.	2

2.3 LIST OF REGISTERS PROVIDED AT THE LC GATE LODGE: -

- Gate working instructions in Hindi / English.
- Gate working instructions in local vernacular language.
- Gatekeeper Rule Book in Local vernacular language.
- List for tools and books.
- Duty Rosters.
- Certificate of competency for working as Gatekeeper.

- vii) Bio–Data particulars of Gatekeepers, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at LC gate.
- x) Public complaint Book.
- xi) Inspection Book.

2.4 DUTIES OF GATEKEEPER:

1. ALERTNESS:

The Gate Keeper 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, Gate Keeper will stand in the manner indicated below:

- i) Gate Keeper will stand attentively in front of the gate – lodge facing the approaching train.
- ii) In daytime, Gate Keeper shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, Gate Keeper 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 GATE KEEPER:

- i) Gatekeeper shall ensure that red banner flag by day and red light by night is placed across the track in case of emergency and obstruction on the track.
- ii) Gatekeeper shall ensure that all gate light and hand signal lights are lighted and kept burning continuously from sunset to sunrise.
- iii) Gatekeeper 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 gate 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) Gatekeeper shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/ battery/ box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gatekeeper shall also be prepared to repeat any signal which TMR may give to Loco Pilot.
- vii) If lifting barriers get damaged or becomes out of order, the Gatekeeper shall use the spare chain with disc and padlocks for securing the gate against road traffic.

- viii) Gatekeeper shall report to the nearest Station Master, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) Gatekeeper shall wear badge and prescribed uniform while on duty at level crossing gate.
- x) Gatekeeper shall ensure that he is having competency certificate in his possession while on duty.
- xi) Gatekeeper shall work the gate as per gate working instructions and remain well conversant with these instructions.
- xii) Gatekeeper shall ensure that equipments supplied at the gate is in good order and ready for immediate use.
- xiii) Gatekeeper shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gatekeeper must keep the road surface well-watered and rammed in case of non-metalled roads.
- xv) Gatekeeper must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi) Gatekeeper shall prevent tress passing by persons or cattle to the maximum extent.
- xvii) Gatekeeper on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the Level crossing gate.
- xviii) Before opening the gate, he shall ensure that the train has passed complete over the level crossing by observing the last vehicle indicator of the train.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN:

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

- i) He shall take prompt action to warn the Loco Pilot/TMR of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot/TMR by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot/TMR fails to take notice, Gate Keeper shall immediately inform the station Master/BWIP to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gate Keeper shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Loco Pilot/TMR 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, Gate Keeper shall immediately inform the Station Master/BWIP to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LC GATE:

- i) Place banner flag/red light lamp on the stave on track at 5M away from the check rail end.
- ii) Thereafter, if he is unable to remove the obstruction, Gate Keeper shall immediately inform the Station Master on duty by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts he shall first protect the gate and then inform on phone.

THE GATE KEEPER SHALL PROTECT THE LINE AS UNDER: -

(A) ON ELECTRIFIED SECTION:

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

(B) PROTECTION ON SINGLE LINE SECTION:

- i) If the line is obstructed the Gatekeeper shall plant a red banner flag by day and a red light by night 5 meters away from the direction on which train is expected to arrives first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gatekeeper shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gatekeeper shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 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 side, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

- vii) In case the gatekeeper 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 Loco Pilot 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 GATEKEEPER:

- i) At night, Gatekeeper 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 Gatekeeper 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 and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

2.5 ENGINEERING ITEMS:

i) Visibility :-

Direction	Side	Visibility Distance
UP	Right	300 m.
	Left	300 m.
DN	Right	300 m
	Left	300 m

- ii) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- iii) Periodical Census of traffic has been taken and the latest TVU is 8942 on 10/2024.

2.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is a Manned & Non-interlocked 'C'-Class Engineering L.C. Gate situated at KM19/2-3 in between BWIP-LJR Stations. This gate is provided with winch operated coupled lifting barriers and the gate is closed/opened by the gatekeeper manually by winch operation. Telephone communication is provided between the L C. gate lodge with SM office of BWIP station. The level crossing gate is normally kept closed and locked against road traffic. The Station Master/ BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number. When the gatekeeper desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the Station Master/ BWIP for the passage of train or the whole of the train with last vehicle indicator has passed over the level

crossing gate for which the gatekeeper has exchanged private number with the SM/ BWIP. Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2. EXCHANGE OF PRIVATE NUMBERS:

- i) The normal position of level crossing gate being "Closed to Road Traffic" it should always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.
- ii) The Station Master / BWIP before permitting each train to enter into the block section, shall ask Gatekeeper on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gatekeeper only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master / BWIP in assurance of gate being closed and locked against road traffic.
- iii) The Station Master / BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number.
- iv) When the gatekeeper desires to open the gate for passage of road traffic he should ensure that:
 - (1) He has not exchanged any private number with the SM / BWIP as per (ii) above.
 - (2) If he has exchanged private number with the SM/ BWIP, the whole of the train with last vehicle indicator has passed over the level crossing gate and Station Master / BWIP has not exchanged PN with him for any other movement immediately in rear of the train.

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

2.7. **FAILURE OF TELEPHONIC COMMUNICATION:**

When telephonic communication fails or he does not get any response from gatekeeper despite two or three attempts, the following procedure should be adopted:

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

2.8 **FAILURE OF LIFTING BARRIERS:-**

- i) When the gate cannot be closed due to failure of lifting barriers, the Gate Keeper will immediately inform, the Station Master on duty/BWIP under exchange private number, and ensure the lifting barriers of gate do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gate Keeper shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, Gate Keeper shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train.
- v) Station Master on duty/BWIP shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the station Master/LJR at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train into the block section from his end.
- vii) Station Master/BWIP will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.

- viii) Normal working will be resumed only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

2.9 OBSTRUCTION AT THE GATE:-

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gatekeeper shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gatekeeper shall advise the Station Master/BWIP on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Station Master/BWIP on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master/BWIP after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gatekeeper 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 gatekeeper 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/BWIP who shall not start the trains unless he has been assured by the gatekeeper that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/BWIP shall also inform the Station Master/LJR 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 obstructions.
- ix) After the track has been cleared of all obstructions the gatekeeper shall inform the Station Master/BWIP accordingly, under exchange of private number.
- x) Gatekeeper shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the gate is not obstructed.
- xi) Station Master/BWIP shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

2.10 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 gatekeeper, the gatekeeper and Station Master/BWIP will adopt the procedure given under item No.2.9 above. If the obstruction fouls the level Crossing Gate, gatekeeper must keep the gates closed against road traffic till the track is cleared of the obstruction.

2.11 ACCIDENTAL ROLLING DOWN OF TRAIN:

When the Gate Keeper observes that a train is rolling down or immediately after receipt of the information about accidental rolling down of the train the gatekeeper shall:

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

CERTIFICATE: -

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

3.0 GATE WORKING INSTRUCTIONS OF “C” CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE No. LJ-17 AT KM:26/13-14 IN BETWEEN LJR – BWIP STATIONS.

3.1 GENERAL INSTRUCTIONS:-

3.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:-

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

1	Number of level crossing gate	:	LJ-17
2	Engineering or Traffic Gate	:	Engineering
3	Under control of Station Master or SSE(P.WAY)	:	SSE(P.WAY)
4	Location at KM	:	26/13-14
5	At station	:	----
6	In between station	:	LJR-BWIP
7	BG/MG/NG	:	BG
8	Single line/Doubling Line/Multiple Line	:	Single line
9	Normal position	:	Closed to road traffic
10	Interlocked/Non-interlocked	:	Non-Interlocked
11	Means of interlocking	:	Nil
12	Provision of gate Signal at Kms	:	Nil
13	Signaling arrangement	:	Nil
14	Means of communications /Telephone with or without Voice logger	:	Voice logger Telephone from gate goomty with SM /BWIP
15	Width of Level Crossing Gate	:	7.5 MTRS
16	Type of Road (NH/SH/Others)	:	Other
17	Name of Road	:	Village road
18	Metaled/Non Metaled	:	Metaled
19	Approach Road	:	Metaled
20	Width of the Road	:	5.50 MTRS.
21	Angle of Road Crossing (in case of the SKEW gates)	:	Nil
22	Road Gradient (if any)	:	(a) North/East side – 1 in 30 (b) South/West side –1 in 30
23	Road alignment (straight/curve)	:	(a) North/East side – Straight (b) South/West side - Straight
24	Provision of height gauge	:	Provided
25	Type of Barrier	:	Winch Operated Lifting barrier
26	Length of check Rail	:	9.5 MTRS.
27	Road surface in between LC gates.	:	CC BLOCK
28	Length of Rumble strip/speed breakers.	:	5.5 MTRS
29	Road Signs	:	Provided
30	Speed breakers indication board	:	Provided.
31	TVU	:	1811 on 10/2024
32	Census next due on	:	10/2027
33	Demarcation for placement of detonators.	:	Provided
34	No. of Gatekeepers working	:	02 (12 Hours shift)

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

3.2. EQUIPMENT:

ITEMS	QUANTITY/NUMBERS
1. LED based flashing tri colour hand signal lamp	3
2. Hand signal Flag Green	1 mounted on sticks
3. Hand Signal Flag Red.	3 mounted on sticks
4. Banner Flag Red	3
5. Posts for exhibiting red banner flag	2
6. Spare chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8. Gate Lamps	2
9. Tommy Bar	1
10. Mortar 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. Water pot/Bucket	1
16. Canister for Muster Roll	1
17. Set of spare spectacles of Gatekeeper wearing glasses.	1
19. Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate	1
19. Basket	1
20. Whistle	1
21. Wall clock	1
22. Small size chains with padlocks to be used in case of failure of boom lock.	2

3.3 LIST OF REGISTERS PROVIDED AT THE LC GATE LODGE: -

- Gate working instructions in Hindi / English.
- Gate working instructions in local vernacular language.
- Gatekeeper Rule Book in Local vernacular language.
- List for tools and books.
- Duty Rosters.
- Certificate of competency for working as Gatekeeper.
- Bio-Data particulars of Gatekeepers, including date of passing vision test, initial/refresher course, safety camp etc.

- viii) Accident Register.
- ix) Records of last census of road traffic at LC gate.
- x) Public complaint Book.
- xi) Inspection Book.

3.4 DUTIES OF GATEKEEPER:

1 ALERTNESS:

The Gate Keeper 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, Gate Keeper will stand in the manner indicated below:

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

3 ROUTINE DUTIES OF GATE KEEPER:

- i) Gatekeeper shall ensure that red banner flag by day and red light by night is placed across the track in case of emergency and obstruction on the track.
- ii) Gatekeeper shall ensure that all gate light and hand signal lights are lighted and kept burning continuously from sunset to sunrise.
- iii) Gatekeeper 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 gate 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) Gatekeeper shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gatekeeper shall also be prepared to repeat any signal which TMR may give to Loco Pilot.
- vii) If lifting barriers get damaged or becomes out of order, the Gatekeeper shall use the spare chain with disc and padlocks for securing the gate against road traffic.

- viii) Gatekeeper shall report to the nearest Station Master, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) Gatekeeper shall wear badge and prescribed uniform while on duty at level crossing gate.
- x) Gatekeeper shall ensure that he is having competency certificate in his possession while on duty.
- xi) Gatekeeper shall work the gate as per gate working instructions and remain well conversant with these instructions.
- xii) Gatekeeper shall ensure that equipments supplied at the gate is in good order and ready for immediate use.
- xiii) Gatekeeper shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gatekeeper must keep the road surface well-watered and rammed in case of non-metalead roads.
- xv) Gatekeeper must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi) Gatekeeper shall prevent tress passing by persons or cattle to the maximum extent.
- xvii) Gatekeeper on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the Level crossing gate.
- xviii) Before opening the gate, he shall ensure that the train has passed complete over the level crossing by observing the last vehicle indicator of the train.

4 ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN:

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

- i) He shall take prompt action to warn the Loco Pilot/TMR of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot/TMR by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot/TMR fails to take notice, Gate Keeper shall immediately inform the station Master/BWIP to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gate Keeper shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Loco Pilot/TMR 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, Gate Keeper shall immediately inform the Station Master/BWIP to take appropriate action, under exchange of private number.

5 ACTION IN AN EMERGENCY AT THE LC GATE:

- i) Place banner flag/red light lamp on the stave on track at 5M away from the check rail end.
- ii) Thereafter, if he is unable to remove the obstruction, Gate Keeper shall immediately inform the Station Master on duty by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts he shall first protect the gate and then inform on phone.

THE GATE KEEPER SHALL PROTECT THE LINE AS UNDER: -

(A) ON ELECTRIFIED SECTION:

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

(B) PROTECTION ON SINGLE LINE SECTION:

- i) If the line is obstructed the Gatekeeper shall plant a red banner flag by day and a red light by night 5 meters away from the direction on which train is expected to arrives first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gatekeeper shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gatekeeper shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 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 side, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

- vii) In case the gatekeeper 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 Loco Pilot 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 GATEKEEPER:

- i) At night, Gatekeeper 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 Gatekeeper 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 and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

3.5 ENGINEERING ITEMS:

- i) **Visibility :-**

Direction	Side	Visibility Distance
UP	Right	300 m.
	Left	300 m.
DN	Right	300 m.
	Left	300 m.

- ii) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- ii) Periodical Census of traffic has been taken and the latest TVU is 1811 on 10/2024.

3.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is a Non-interlocked 'C' Class Engineering L.C. Gate situated at Km.26/13-14 between LJR-BWIP stations. This gate is provided with winch operated coupled lifting barriers. The gatekeeper closes and opens the lifting barriers of gate manually by operating the winch. Telephone connection is provided between the L C. gate lodge and SM's office at SM/ BWIP station. The level crossing gate is normally closed to road traffic. The SM/ BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number. When the gatekeeper desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the SM/ BWIP for the passage of train or the whole of the train with last vehicle indicator has passed over the level crossing gate for which the gatekeeper has exchanged private number with the SM/BWIP. Before opening the

gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2 EXCHANGE OF PRIVATE NUMBERS.

- i) The normal position of level crossing gate being "Closed to Road Traffic" it should always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.
- ii) The SM/ BWIP before permitting each train to enter into the block section, shall ask Gatekeeper on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gatekeeper only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the SM/ BWIP in assurance of gate being closed and locked against road traffic.
- iii) The SM/ BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number.
- iv) When the gatekeeper desires to open the gate for passage of road traffic he should ensure that:
 - a) He has not exchanged any private number with the SM/ BWIP as per (ii) above.
 - b) If he has exchanged private number with the SM/ BWIP, the whole of the train with last vehicle indicator has passed over the level crossing gate and SM/ BWIP has not exchanged private number with him for any other movement immediately in rear of the train.

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

3.7. **FAILURE OF TELEPHONIC COMMUNICATION:**

When telephonic communication fails or he does not get any response from gatekeeper despite two or three attempts, the following procedure should be adopted:

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

3.8 **FAILURE OF LIFTING BARRIERS:-**

- i) When the gate cannot be closed due to failure of lifting barriers, the Gate Keeper will immediately inform, the Station Master on duty/BWIP under exchange private number, and ensure the lifting barriers of gate do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gate Keeper shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, Gate Keeper shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train.
- v) Station Master on duty/BWIP shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the station Master/LJR at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train into the block section from his end.
- vii) Station Master/BWIP will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.

- viii) Normal working will be resumed only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

3.9 OBSTRUCTION AT THE GATE:-

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gatekeeper shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gatekeeper shall advise the Station Master/BWIP on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Station Master/BWIP on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master/BWIP after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gatekeeper 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 gatekeeper under item No.3.4(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/BWIP who shall not start the trains unless he has been assured by the gatekeeper that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/BWIP shall also inform the Station Master/LJR 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 obstructions.
- ix) After the track has been cleared of all obstructions the gatekeeper shall inform the Station Master/BWIP accordingly, under exchange of private number.
- x) Gatekeeper shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the gate is not obstructed.
- xi) Station Master/BWIP shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

3.10 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 gatekeeper, the gatekeeper and Station Master/BWIP will adopt the procedure given under item No. 3.9 above. If the obstruction fouls the level Crossing Gate, gatekeeper must keep the gates closed against road traffic till the track is cleared of the obstruction.

3.11 **ACCIDENTAL ROLLING DOWN OF TRAIN:**

When the Gate Keeper observes that a train is rolling down or immediately after receipt of the information about accidental rolling down of the train the gatekeeper shall:

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

CERTIFICATE: -

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

4.0 GATE WORKING INSTRUCTIONS FOR “A” CLASS ENGG. INTERLOCKED LEVEL CROSSING GATE LJ-19 AT KM: 28/12-13 IN BETWEEN BWIP – LJR STATION.

4.1 GENERAL INSTRUCTIONS:

4.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

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

1.	Number of level crossing gate	:	LJ-19
2.	Engineering or Traffic Gate	:	Engineering
3.	Under control of Station Master or SSE(P.WAY)	:	SSE(P.WAY)
4.	Location at KM	:	28/12-13
5.	At station	:	----
6.	In between station	:	BWIP-LJR
7.	BG/MG/NG	:	BG
8.	Single line/Doubling Line/Multiple Line	:	Single line
9.	Normal position	:	Open to road traffic
10.	Interlocked/Non-interlocked	:	Interlocked
11.	Means of interlocking	:	Provision of gate stop signal.
12.	Provision of gate Signal at Kms	:	i) UP Gate Signal: At KM.28.900 ii) DN Gate Signal: At Km.28.540
13.	Signaling arrangement	:	Gate stop signal (MACL)
14.	Means of communications /Telephone with or without Voice logger	:	Magneto Telephone from gate goomty with SM office/BWIP.
15.	Width of Level Crossing Gate	:	7.5 M
16.	Type of Road (NH/SH/Others)	:	NH
17.	Name of Road	:	-----
18.	Metaled/Non Metaled	:	Metaled
19.	Approach Road	:	Metaled
20.	Width of the Road	:	5.5 M
21.	Angle of Road Crossing (in case of the SKEW gates)	:	NH
22.	Road Gradient (if any)	:	(a) North/East side – Level (b) South/West side – Level
23.	Road alignment (straight/curve)	:	(a) North/East side – Straight (b) South/West side - Straight
24.	Provision of height gauge	:	Provided
25.	Type of Barrier	:	Winch Operated Lifting barrier
26.	Length of check Rail	:	7.5 M
27.	Road surface in between LC gates.	:	CC Blocks
28.	Length of Rumble strip/speed breakers.	:	5.5 M
29.	Road Signs	:	Provided
30.	Speed breakers indication board	:	Provided.
31.	TVU	:	47894 on 10/2024
32.	Census next due on	:	10/2027
33.	Demarcation for placement of detonators.	:	Provided.

34.	No. of Gatekeepers working	:	02 (12 Hours shift)
35.	Nearest Railway Medical Assistance	:	TIG
36.	Nearest Private Medical Assistance available (if any)	:	BWIP
37.	List of equipment available Yes / No.	:	YES

4.2 **EQUIPMENTS:**

	ITEMS	QUANTITY/NUMBERS
1.	LED based flashing tri colour hand signal lamp	3
2.	Hand signal Flag Green	1 mounted on sticks
3.	Hand Signal Flag Red.	3 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate Lamps	2
9.	Tommy Bar	1
10.	Mortar 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.	Water pot/Bucket	1
16.	Canister for Muster Roll	1
17.	Set of spare spectacles of Gatekeeper wearing glasses.	1
19.	Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate	1
19.	Basket	1
20.	Whistle	1
21.	Wall clock	1
22.	Small size chains with padlocks to be used in case of failure of boom lock.	2

4.3 **LIST OF REGISTERS PROVIDED AT THE LC GATE LODGE:**

- Gate working instructions in Hindi / English.
- Gate working instructions in local vernacular language.
- Gatekeeper Rule Book in Local vernacular language.
- List for tools and books.
- Duty Rosters.
- Certificate of competency for working as Gatekeeper.

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

4.4 **DUTIES OF GATEKEEPER:**

1. ALERTNESS:

The Gate Keeper 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, Gate Keeper will stand in the manner indicated below:

- i) Gate Keeper will stand attentively in front of the gate lodge facing the approaching train.
- ii) In daytime, Gate Keeper shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, Gate Keeper 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 GATE KEEPER:

- i) Gatekeeper shall ensure that red banner flag by day and red light by night is placed across the track in case of emergency and obstruction on the track.
- ii) Gatekeeper shall ensure that all gate light and hand signal lights are lighted and kept burning continuously from sunset to sunrise.
- iii) Gatekeeper 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 gate 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) Gatekeeper shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gatekeeper shall also be prepared to repeat any signal which TMR may give to Loco Pilot.

- vii) If lifting barriers get damaged or becomes out of order, the Gatekeeper shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gatekeeper shall report to the nearest Station Master, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) Gatekeeper shall wear badge and prescribed uniform while on duty at level crossing gate.
- x) Gatekeeper shall ensure that he is having competency certificate in his possession while on duty.
- xi) Gatekeeper shall work the gate as per gate working instructions and remain well conversant with these instructions.
- xii) Gatekeeper shall ensure that equipments supplied at the gate is in good order and ready for immediate use.
- xiii) Gatekeeper shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gatekeeper must keep the road surface well-watered and rammed in case of non-metalled roads.
- xv) Gatekeeper must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi) Gatekeeper shall prevent trespass passing by persons or cattle to the maximum extent.
- xvii) Gatekeeper on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the Level crossing gate.
- xviii) Before opening the gate, he shall ensure that the train has passed complete over the level crossing by observing the last vehicle indicator of the train.
- xix) In the event of gate signal becoming defective the gatekeeper shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN:

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

- i) He shall take prompt action to warn the Loco Pilot/TMR of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot/TMR by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot/TMR fails to take notice, Gate Keeper shall immediately inform the station Master to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gate Keeper shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Loco Pilot/TMR 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, Gate Keeper shall immediately inform the Station Master to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LC GATE:

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

THE GATE KEEPER SHALL PROTECT THE LINE AS UNDER: -

(A) ON ELECTRIFIED SECTION:

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

(B) PROTECTION ON SINGLE LINE SECTION:

- i) If the line is obstructed the Gatekeeper shall plant a red banner flag by day and a red light by night 5 meters away from the direction on which train is expected to arrives first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gatekeeper shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gatekeeper shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 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 side, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gatekeeper 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 Loco Pilot 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 GATEKEEPER:

- i) At night, Gatekeeper 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 Gatekeeper 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 and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

4.5 ENGINEERING ITEMS:

i) **Visibility :-**

Direction	Side	Visibility Distance
UP	Right	300 m.
	Left	275 m.
DN	Right	275 m
	Left	300 m

- ii) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- iii) Periodical Census of traffic has been taken and the latest TVU is 47894 on 10/2024.

4.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is an interlocked 'A' Class Engineering L.C. Gate situated at Km 28/12-13 in between LJR and BWIP stations. Telephone communication is provided between the L C. gate lodge and SM's office of Bhawanipatna station. The gate is interlocked with Gate stop signals. The level crossing gate is of lifting barrier type operated by means of winch provided at the gate lodge. The normal position of the gate is open to road traffic. A four-lever ground frame is provided at the gate lodge. The key of

the LC remains in the winch when the gate is in open condition. When it is necessary to close the gate, for taking OFF the signals the SM/BWIP on duty shall inform the gatekeeper to close and lock the gate. The gatekeeper on duty shall then close the barriers of the LC gate by operating winch. Then key 'M' is obtained after closing the level crossing gate and releases GF-2. Lever GF-2 when reversed locks the level crossing boom and releases GF-3 or GF-4. Then after, the gatekeeper can reverse the GF-3 or GF-4 for taking OFF concerned UP or DN gate stop signal. GF-3 or GF-4 can be used to put back the concerned gate stop signal to "ON" position in case of emergency. GF-1 is spare lever.

After passage of the Train, the gatekeeper shall extract the control key 'M' after normalizing the GF-2. Then he will open the gate by inserting the Key 'M' into the winch for normal passage of road traffic. The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

WORKING OF SLIDING BOOM BARRIER IN CASE OF FAILURE/ DEFECTIVENESS OF LIFTING BARRIERS.

- i) Key 'S' when extracted from lock free EKT-4, Makes road signals danger & actuates road hotter key 'S' unlocks the siding barrier-1.
- ii) Sliding barrier-1 to be rolled across the road up to the lock post key(Chained with barrier).Releases the lock plunger & Key 'SB-1'.Key SB1 when extracted lock the sliding boom barrier-1.
- iii) Similar sliding barrier-2 after unlocking the padlock, to be rolled across the road up to the lock post.(Key chained with the barrier) along with Key SB-1 inserted releases the road up to the lock post & key 'SB-2' when extracted lock the sliding barrier-2 & key 'SB-1'
- iv) Finally released key'SB2' is to be transmitted electrically to SM through EKT-3.
- v) UP and DN signals can be cleared by reversing GF3 and GF4 respectively.

2 INTIMATION TO GATEKEEPER.:

- i) Before taking off UP departure signal, Station Master/BWIP shall advise the gatekeeper 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 also be given by the Station Master/ BWIP to the gatekeeper as soon as he receives train entering section advice from SM/LJR.
- iii) If the actual running time of the train from either end of the section is less than 10 minutes, Station Master/BWIP will convey this advice to the gatekeeper before obtaining/granting line clear.
- iv) It should be the duty of the gatekeeper to ensure that the gate is closed in time, so that there is no detention to the train of excessive detention to road traffic.

4.7. FAILURE OF TELEPHONIC COMMUNICATION:

When telephonic communication fails or he does not get any response from gatekeeper despite two or three attempts, the following procedure should be adopted:

- a) Station master/BWIP shall issue caution order to the Loco Pilot of the departing train.
- b) In the caution order, it shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
- c) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signalled by the gatekeeper. If hand signal is not seen, the Loco Pilot should be prepared to stop short of the gate and depute his Assistant Loco Pilot to see the condition of the gate. If gate is closed, ALP will give all right signal and if gate is not closed, the ALP must close the gate and then give all right signal. In the absence of the ALP, the LP may take the assistance of TMR.
- d) In case of an approaching train, the SM shall advise the SM at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- e) The SM at the dispatching end shall then issue a caution order to the LP before dispatching a train in the block section from his end.
- f) The SM shall advise the GK through gang man/patrol man or the LP of the first train that the telephone has become defective.
- g) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- h) Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

4.8 FAILURE OF LIFTING BARRIERS:-

- i) When the gate cannot be closed due to failure of lifting barriers, the Gate Keeper will immediately inform, the Station Master on duty/BWIP under exchange private number, and ensure the lifting barriers of gate do not foul the track. Then he shall resort to operate the sliding barrier to close against the road traffic. If both the lifting barrier and sliding barrier became defective, then he shall take the following action.
- 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) Gate Keeper shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, Gate Keeper shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train.
- v) Station Master on duty/BWIP shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the station Master/LJR at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train into the block section from his end.
- vii) Station Master/BWIP will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

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

4.9. FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATEKEY 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 gatekeeper must immediately inform the Station Master/BWIP 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 on duty/BWIP shall issue caution order to the Loco Pilot of a departing train.
- (iv) He shall also advise the Station Master/LJR at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train into the block section his end.
- (v) Station Master/BWIP shall advise S&T staff responsible for maintenance the key transmitter to repair the same at the earliest.
- (vi) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/fit memo for the same.

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

- (i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gatekeeper must immediately inform the Station Master/BWIP 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 gatekeeper shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- (iv) Station Master on duty/BWIP shall issue caution order to the Loco Pilot of a departing train.
- (v) He shall also advise the Station Master/LJR at the despatching end under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station Master/BWIP shall advise S&T staff responsible for maintenance the gate/key transmitter to rectify the same at the earliest.
- (vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/fit memo for the same.

4.11. DEFECTIVE GATE SIGNAL:

- (i) The gatekeeper 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, or
 - (c) The key can be extracted from the gate lever when the gate is in open condition.

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

4.12. OBSTRUCTION AT THE GATE:

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gatekeeper shall immediately normalize GS switch to put back concerned signals and then fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gatekeeper shall inform the Station Master / BWIP on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Station Master / BWIP on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master/ BWIP after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gatekeeper 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 Gatekeeper 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/ BWIP who shall not start the trains unless he has been assured by the Gatekeeper that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/ BWIP shall also inform the station Master /LJR 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 obstructions.
- ix) After the track has been cleared of all obstructions the gatekeeper shall inform the Station Master/ BWIP accordingly, under exchange of private number.

- x) Gatekeeper shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the gate is not obstructed.
- xi) Station Master/ BWIP shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.
- xiii) Station Master/ BWIP shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the Gatekeeper, if the gate is broken, but is clear of any obstruction.

4.13. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gatekeeper, the gatekeeper and Station Master will adopt the procedure given under item No. 4.12 above. If the obstruction fouls the level Crossing Gate, gatekeeper must keep the gates closed against road traffic till the track is cleared of the obstructions.

4.14. ACCIDENTAL ROLLING DOWN OF TRAINS:-

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

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

CERTIFICATE: -

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

5.0 GATE WORKING INSTRUCTIONS OF “C” CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE NO-LJ-22 AT KM: 34/11-12 IN BETWEEN BWIP – JNRD STATIONS.

5.1 GENERAL INSTRUCTIONS:

5.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

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

1.	Number of level crossing gate	:	LJ-22
2.	Engineering or Traffic Gate	:	Engineering
3.	Under control of Station Master or SSE(P.WAY)	:	SSE(P.WAY)
4.	Location at KM	:	34/11-12
5.	At station	:	----
6.	In between station	:	BWIP-JNRD
7.	BG/MG/NG	:	BG
8.	Single line/Doubling Line/Multiple Line	:	Single line
9.	Normal position	:	Closed to road traffic
10.	Interlocked/Non-interlocked	:	Non-Interlocked
11.	Means of interlocking	:	Nil
12.	Provision of gate Signal at Kms	:	Nil
13.	Signaling arrangement	:	Nil
14.	Means of communications /Telephone with or without Voice logger	:	Voice logger telephone from gate goomty with SM / BWIP
15.	Width of Level Crossing Gate	:	7.5 MTRS
16.	Type of Road (NH/SH/Others)	:	Other
17.	Name of Road	:	Village Road
18.	Metaled/Non Metaled	:	Metaled
19.	Approach Road	:	Metaled
20.	Width of the Road	:	5.50 MTRS.
21.	Angle of Road Crossing (in case of the SKEW gates)	:	-----
22.	Road Gradient (if any)	:	(a) North/East side – 1 in 80 (b) South/West side –1 in 80
23.	Road alignment (straight/curve)	:	(a) North/East side – Straight (b) South/West side - Straight
24.	Provision of height gauge	:	Provided
25.	Type of Barrier	:	Winch Operated Lifting barrier
26.	Length of check Rail	:	7.5 MTRS.
27.	Road surface in between LC gates.	:	CC BLOCK
28.	Length of Rumble strip/speed breakers.	:	5.5 MTRS
29.	Road Signs	:	Provided
30.	Speed breakers indication board	:	Provided.
31.	TVU	:	3242 on 10/2024
32.	Census next due on	:	10/2027
33.	Demarcation for placement of detonators.	:	Provided
34.	No. of Gatekeepers working	:	02 (12 Hours shift)

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

5.2. EQUIPMENT:

ITEMS	QUANTITY/NUMBERS
1. LED based flashing tri colour hand signal lamp	3
2. Hand signal Flag Green	1 mounted on sticks
3. Hand Signal Flag Red.	3 mounted on sticks
4. Banner Flag Red	3
5. Posts for exhibiting red banner flag	2
6. Spare chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8. Gate Lamps	2
9. Tommy Bar	1
10. Mortar 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. Water pot/Bucket	1
16. Canister for Muster Roll	1
17. Set of spare spectacles of Gatekeeper wearing glasses.	1
2 Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate	1
19. Basket	1
20. Whistle	1
21. Wall clock	1
22. Small size chains with padlocks to be used in case of failure of boom lock.	2

5.3 LIST OF REGISTERS PROVIDED AT THE LC GATE LODGE: -

- Gate working instructions in Hindi / English.
- Gate working instructions in local vernacular language.
- Gatekeeper Rule Book in Local vernacular language.
- List for tools and books.
- Duty Rosters.
- Certificate of competency for working as Gatekeeper.

- vii) Bio–Data particulars of Gatekeepers, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at LC gate.
- x) Public complaint Book.
- xi) Inspection Book.

5.4 DUTIES OF GATEKEEPER:

1. ALERTNESS:

The Gate Keeper 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, Gate Keeper will stand in the manner indicated below:

- i) Gate Keeper will stand attentively in front of the gate – lodge facing the approaching train.
- ii) In daytime, Gate Keeper shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, Gate Keeper 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 GATE KEEPER:

- i) Gatekeeper shall ensure that red banner flag by day and red light by night is placed across the track in case of emergency and obstruction on the track.
- ii) Gatekeeper shall ensure that all gate light and hand signal lights are lighted and kept burning continuously from sunset to sunrise.
- iii) Gatekeeper 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 gate 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) Gatekeeper shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gatekeeper shall also be prepared to repeat any signal which TMR may give to Loco Pilot.

- vii) If lifting barriers get damaged or becomes out of order, the Gatekeeper shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gatekeeper shall report to the nearest Station Master, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) Gatekeeper shall wear badge and prescribed uniform while on duty at level crossing gate.
- x) Gatekeeper shall ensure that he is having competency certificate in his possession while on duty.
- xi) Gatekeeper shall work the gate as per gate working instructions and remain well conversant with these instructions.
- xii) Gatekeeper shall ensure that equipments supplied at the gate is in good order and ready for immediate use.
- xiii) Gatekeeper shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gatekeeper must keep the road surface well-watered and rammed in case of non-metalled roads.
- xv) Gatekeeper must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi) Gatekeeper shall prevent tress passing by persons or cattle to the maximum extent.
- xvii) Gatekeeper on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the Level crossing gate.
- xviii) Before opening the gate, he shall ensure that the train has passed complete over the level crossing by observing the last vehicle indicator of the train.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN:

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

- i) He shall take prompt action to warn the Loco Pilot/TMR of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot/TMR by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot/TMR fails to take notice, Gate Keeper shall immediately inform the station Master/BWIP to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gate Keeper shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Loco Pilot/TMR 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, Gate Keeper shall immediately inform the Station Master/BWIP to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LC GATE:

- i) Place banner flag/red light lamp on the stave on track at 5M away from the check rail end.
- ii) Thereafter, if he is unable to remove the obstruction, Gate Keeper shall immediately inform the Station Master on duty by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts he shall first protect the gate and then inform on phone.

THE GATE KEEPER SHALL PROTECT THE LINE AS UNDER: -

(A) ON ELECTRIFIED SECTION:

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

(B) PROTECTION ON SINGLE LINE SECTION:

- i) If the line is obstructed the Gatekeeper shall plant a red banner flag by day and a red light by night 5 meters away from the direction on which train is expected to arrives first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gatekeeper shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gatekeeper shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 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 side, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gatekeeper 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 Loco Pilot 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 GATEKEEPER:

- i) At night, Gatekeeper 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 Gatekeeper 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 and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

5.5 ENGINEERING ITEMS:

i) Visibility :-

Direction	Side	Visibility Distance
UP	Right	300 m.
	Left	300 m.
DN	Right	300 m
	Left	300 m

- ii) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- iii) Periodical Census of traffic has been taken and the latest TVU is 3242 on 10/2024.

5.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is a Manned & Non-interlocked 'C'-Class Engineering L.C. Gate situated at Km 34/11-12 in between BWIP-JNRD Stations. This gate is provided with winch operated coupled lifting barriers and the gate is closed/opened by the gatekeeper manually by winch operation. Telephone communication is provided between the L C. gate lodge with SM office of BWIP station. The level crossing gate is normally kept closed and locked against road traffic. The Station Master/ BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number.

When the gatekeeper desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the Station Master/ BWIP for the passage of train or the whole of the train with last vehicle indicator has passed over the level crossing gate for which the gatekeeper has exchanged private number with the SM/ BWIP. Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2. EXCHANGE OF PRIVATE NUMBERS:

- (i) The normal position of level crossing gate being "Closed to Road Traffic" it should always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.
- (ii) The Station Master / BWIP before permitting each train to enter into the block section, shall ask Gatekeeper on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gatekeeper only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master / BWIP in assurance of gate being closed and locked against road traffic.
- (iii) The Station Master / BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number.
- (iv) When the gatekeeper desires to open the gate for passage of road traffic he should ensure that:
 - (1) He has not exchanged any private number with the SM / BWIP as per (ii) above.
 - (2) If he has exchanged private number with the SM/ BWIP, the whole of the train with last vehicle indicator has passed over the level crossing gate and Station Master / BWIP has not exchanged PN with him for any other movement immediately in rear of the train.

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

night, 5meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.

5.7. FAILURE OF TELEPHONIC COMMUNICATION:

When telephonic communication fails or he does not get any response from gatekeeper despite two or three attempts, the following procedure should be adopted:

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

5.8 FAILURE OF LIFTING BARRIERS:-

- i) When the gate cannot be closed due to failure of lifting barriers, the Gate Keeper will immediately inform, the Station Master on duty/BWIP under exchange private number, and ensure the lifting barriers of gate do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gate Keeper shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, Gate Keeper shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train.
- v) Station Master on duty/BWIP shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the station Master/JNRD at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train into the block section from his end.

- vii) Station Master/BWIP will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

5.9 OBSTRUCTION AT THE GATE:-

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gatekeeper shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gatekeeper shall advise the Station Master/BWIP on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Station Master/BWIP on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master/BWIP after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gatekeeper 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 gatekeeper under item No.3.4(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/BWIP who shall not start the trains unless he has been assured by the gatekeeper that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/BWIP shall also inform the Station Master/JNRD 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 obstructions.
- ix) After the track has been cleared of all obstructions the gatekeeper shall inform the Station Master/BWIP accordingly, under exchange of private number.
- x) Gatekeeper shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the gate is not obstructed.
- xi) Station Master/BWIP shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

5.10 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 gatekeeper, the gatekeeper and Station Master/BWIP will adopt the procedure given under item No.5.9 above. If the obstruction fouls the level Crossing Gate, gatekeeper must keep the gates closed against road traffic till the track is cleared of the obstruction.

5.11 ACCIDENTAL ROLLING DOWN OF TRAIN:

When the Gate Keeper observes that a train is rolling down or immediately after receipt of the information about accidental rolling down of the train the gatekeeper shall:

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

CERTIFICATE: -

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

6.0 GATE WORKING INSTRUCTIONS OF “C” CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE NO.LJ-24 AT KM 41/8-9 IN BETWEEN BWIP – JNRD STATIONS.

6.1 GENERAL INSTRUCTIONS:

6.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

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

1	Number of level crossing gate	:	LJ-24
2	Engineering or Traffic Gate	:	Engineering
3	Under control of Station Master or SSE(P.WAY)	:	SSE(P.WAY)
4	Location at KM	:	41/8-9
5	At station	:	----
6	In between station	:	BWIP-JNRD
7	BG/MG/NG	:	BG
8	Single line/Doubling Line/Multiple Line	:	Single line
9	Normal position	:	Closed to road traffic
10	Interlocked/Non-interlocked	:	Non-Interlocked
11	Means of interlocking	:	Nil
12	Provision of gate Signal at Kms	:	Nil
13	Signaling arrangement	:	Nil
14	Means of communications /Telephone with or without Voice logger	:	Voice logger telephone from gate goomty with SM / BWIP
15	Width of Level Crossing Gate	:	7.5 MTRS
16	Type of Road (NH/SH/Others)	:	Other
17	Name of Road	:	Village Road
18	Metaled/Non Metaled	:	Metaled
19	Approach Road	:	Metaled
20	Width of the Road	:	5.50 MTRS.
21	Angle of Road Crossing (in case of the SKEW gates)	:	-----
22	Road Gradient (if any)	:	(a) North/East side – Level (b) South/West side –Level
23	Road alignment (straight/curve)	:	(a) North/East side – Straight (b) South/West side - Straight
24	Provision of height gauge	:	Provided
25	Type of Barrier	:	Winch Operated Lifting barrier
26	Length of check Rail	:	7.5 MTRS.
27	Road surface in between LC gates.	:	CC BLOCK
28	Length of Rumble strip/speed breakers.	:	5.5 MTRS
29	Road Signs	:	Provided
30	Speed breakers indication board	:	Provided.
31	TVU	:	2262 on 10/2024
32	Census next due on	:	10/2027
33	Demarcation for placement of detonators.	:	Provided

34	No. of Gatekeepers working	:	02 (12 Hours shift)
35	Nearest Railway Medical Assistance	:	TIG
36	Nearest Private Medical Assistance available (if any)	:	BWIP
37	List of equipment available Yes / No.	:	YES

6.2. EQUIPMENT:

ITEMS	QUANTITY/NUMBERS
1. LED based flashing tri colour hand signal lamp	3
2. Hand signal Flag Green	1 mounted on sticks
3. Hand Signal Flag Red.	3 mounted on sticks
4. Banner Flag Red	3
5. Posts for exhibiting red banner flag	2
6. Spare chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8. Gate Lamps	2
9. Tommy Bar	1
10. Mortar 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. Water pot/Bucket	1
16. Canister for Muster Roll	1
17. Set of spare spectacles of Gatekeeper wearing glasses.	1
2 Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate	1
19. Basket	1
20. Whistle	1
21. Wall clock	1
22. Small size chains with padlocks to be used in case of failure of boom lock.	2

6.3 LIST OF REGISTERS PROVIDED AT THE LC GATE LODGE: -

- Gate working instructions in Hindi / English.
- Gate working instructions in local vernacular language.
- Gatekeeper Rule Book in Local vernacular language.
- List for tools and books.
- Duty Rosters.

- vi) Certificate of competency for working as Gatekeeper.
- vii) Bio-Data particulars of Gatekeepers, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at LC gate.
- x) Public complaint Book.
- xi) Inspection Book.

6.4 **DUTIES OF GATEKEEPER:**

1. **ALERTNESS:**

The Gate Keeper 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, Gate Keeper will stand in the manner indicated below:

- ii) Gate Keeper will stand attentively in front of the gate – lodge facing the approaching train.
- iii) In daytime, Gate Keeper shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iv) In nighttime, Gate Keeper shall hold lighted hand signal lamp with white light facing the track.
- v) He shall keep the whistle slung around his neck from a cord

3. **ROUTINE DUTIES OF GATE KEEPER:**

- i) Gatekeeper shall ensure that red banner flag by day and red light by night is placed across the track in case of emergency and obstruction on the track.
- ii) Gatekeeper shall ensure that all gate light and hand signal lights are lighted and kept burning continuously from sunset to sunrise.
- iii) Gatekeeper 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 gate 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) Gatekeeper shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery /box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gatekeeper shall also be prepared to repeat any signal which TMR may give to Loco Pilot.

- vii) If lifting barriers get damaged or becomes out of order, the Gatekeeper shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gatekeeper shall report to the nearest Station Master, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) Gatekeeper shall wear badge and prescribed uniform while on duty at level crossing gate.
- x) Gatekeeper shall ensure that he is having competency certificate in his possession while on duty.
- xi) Gatekeeper shall work the gate as per gate working instructions and remain well conversant with these instructions.
- xii) Gatekeeper shall ensure that equipments supplied at the gate is in good order and ready for immediate use.
- xiii) Gatekeeper shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gatekeeper must keep the road surface well-watered and rammed in case of non-metalled roads.
- xv) Gatekeeper must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi) Gatekeeper shall prevent tress passing by persons or cattle to the maximum extent.
- xvii) Gatekeeper on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the Level crossing gate.
- xviii) Before opening the gate, he shall ensure that the train has passed complete over the level crossing by observing the last vehicle indicator of the train.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN:

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

- i) He shall take prompt action to warn the Loco Pilot/TMR of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot/TMR by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot/TMR fails to take notice, Gate Keeper shall immediately inform the station Master/BWIP to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gate Keeper shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Loco Pilot/TMR 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, Gate Keeper shall immediately inform the Station Master/BWIP to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LC GATE:

- i) Place banner flag/red light lamp on the stave on track at 5M away from the check rail end.
- ii) Thereafter, if he is unable to remove the obstruction, Gate Keeper shall immediately inform the Station Master on duty by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts he shall first protect the gate and then inform on phone.

THE GATE KEEPER SHALL PROTECT THE LINE AS UNDER: -

(A) ON ELECTRIFIED SECTION:

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

(B) PROTECTION ON SINGLE LINE SECTION:

- i) If the line is obstructed the Gatekeeper shall plant a red banner flag by day and a red light by night 5 meters away from the direction on which train is expected to arrives first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gatekeeper shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gatekeeper shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 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 side, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

- vii) In case the gatekeeper 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 Loco Pilot 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 GATEKEEPER:

- i) At night, Gatekeeper 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 Gatekeeper 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 and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

6.5 ENGINEERING ITEMS:

i) **Visibility :-**

Direction	Side	Visibility Distance
UP	Right	300 m.
	Left	300 m.
DN	Right	300 m
	Left	300 m

- ii) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- iii) Periodical Census of traffic has been taken and the latest TVU is 2262 on 10/2024.

6.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is a Manned & Non-interlocked 'C'-Class Engineering L.C. Gate situated at Km 41/8-9 in between BWIP-JNRD Stations. This gate is provided with winch operated coupled lifting barriers and the gate is closed/opened by the gatekeeper manually by winch operation. Telephone communication is provided between the L C. gate lodge with SM office of BWIP station. The level crossing gate is normally kept closed and locked against road traffic. The Station Master/ BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number. When the gatekeeper desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the Station Master/ BWIP for the passage of train or the whole of the train with last vehicle indicator has passed over the level crossing gate for which the gatekeeper has exchanged private number with the SM/

BWIP. Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2. EXCHANGE OF PRIVATE NUMBERS:

- (i) The normal position of level crossing gate being "Closed to Road Traffic" it should always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.
- (ii) The Station Master / BWIP before permitting each train to enter into the block section, shall ask Gatekeeper on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gatekeeper only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master / BWIP in assurance of gate being closed and locked against road traffic.
- (iii) The Station Master / BWIP shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gatekeeper supported by exchange of private number.
- (iv) When the gatekeeper desires to open the gate for passage of road traffic he should ensure that:
 - (1) He has not exchanged any private number with the SM / BWIP as per (ii) above.
 - (2) If he has exchanged private number with the SM/ BWIP, the whole of the train with last vehicle indicator has passed over the level crossing gate and Station Master / BWIP has not exchanged PN with him for any other movement immediately in rear of the train.

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

6.7. **FAILURE OF TELEPHONIC COMMUNICATION:**

When telephonic communication fails or he does not get any response from gatekeeper despite two or three attempts, the following procedure should be adopted:

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

6.8 **FAILURE OF LIFTING BARRIERS:-**

- i) When the gate cannot be closed due to failure of lifting barriers, the Gate Keeper will immediately inform, the Station Master on duty/BWIP under exchange private number, and ensure the lifting barriers of gate do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gate Keeper shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, Gate Keeper shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train.
- v) Station Master on duty/BWIP shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the station Master/JNRD at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train into the block section from his end.
- vii) Station Master/BWIP will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.

- viii) Normal working will be resumed only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

6.9 OBSTRUCTION AT THE GATE:-

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gatekeeper shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gatekeeper shall advise the Station Master/BWIP on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Station Master/BWIP on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master/BWIP after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gatekeeper 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 gatekeeper under item No.6.4(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/BWIP who shall not start the trains unless he has been assured by the gatekeeper that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/BWIP shall also inform the Station Master/JNRD 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 obstructions.
- ix) After the track has been cleared of all obstructions the gatekeeper shall inform the Station Master/BWIP accordingly, under exchange of private number.
- x) Gatekeeper shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the gate is not obstructed.
- xi) Station Master/BWIP shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

6.10 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 gatekeeper, the gatekeeper and Station Master/BWIP will adopt the procedure given under item No. 6.9 above. If the obstruction fouls the level Crossing Gate, gatekeeper must keep the gates closed against road traffic till the track is cleared of the obstruction.

6.11 ACCIDENTAL ROLLING DOWN OF TRAIN:

When the Gate Keeper observes that a train is rolling down or immediately after receipt of the information about accidental rolling down of the train the gatekeeper shall:

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

CERTIFICATE: -

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

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

2.1.1 **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) :-**

SN	Point No.	Colour	Description
1	21	BLACK	Crossover point between Main line and Loop line at Junagarh end.
2	22	BLACK	Crossover point between Main line and Loop line at LJR end.
3	23	BLACK	DS point on TWS line at Junagarh end isolating TWS line from L1.
4	24	BLACK	DS point on ORL at LJR end isolating Sick siding from ORL.

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 (horizontal) will start flashing till the point is correctly set to reverse at site and WHITE indication(diagonal) 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.
- 1.2.3 **DESCRIPTION OF CRANK HANDLE BUTTONS:-** All motor operated points in the yard have been grouped into two 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	21A & B, 22 A & B.
2	CH-2	BLUE	24
3	CH-3	BLUE	23

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:-**

Sl. No.	BUTTON NO.	COLOUR	DESCRIPTION
01	C2	RED With white dot	DN Calling on Signal for Line Nos.1 & 2 (LJR end)
02	S2	RED	DN Home Signal for Line Nos.1 & 2 (LJR end)
03	C1	RED With white dot	UP Calling on Signal for Line Nos.1 & 2 (Junagarh end)
04	S1	RED	UP Home Signal for Line Nos.1 & 2 (Junagarh end)
05	S10	RED	DN Starter on Line No. 1(Loop Line)
06	S11	RED	UP Starter on Line No. 2(Main Line)
07	S12	RED	DN Starter on Line No. 2(Main Line)
08	S13	RED	UP Starter on Line No. 1 (Loop Line)
09	S19	RED	UP Advanced starter for dispatching a train towards LJR.
10	S18	RED	DN Advanced starter for dispatching a train towards Junagarh.
11	SH 3	YELLOW	Shunt signal for shunting towards line no. 1 & 2 (Junagarh end)
12	SH 4	YELLOW	Shunt signal for shunting towards line no. 1 & 2 (LJR end)
13	SH 6	YELLOW	Shunt signal in Sick siding for shunting towards line no. 1
14	SH 13	YELLOW	Shunt signal below starter signal on line No-1 for forward shunting towards Sick siding.
15	SH 10	YELLOW	Shunt signal below starter signal on line No-1 for forward shunting towards Tower wagon Siding.

16	SH 5	YELLOW	Shunt signal for shunting towards line no. 1 from TWS (JNRD end).
17	C10	RED With white dot	Calling on Signal below Starter Signal No-10 for movement towards Junagarh end.
18	C12	RED With white dot	Calling on Signal below Starter Signal No-12 for movement towards Junagarh end.
19	C11	RED With white dot	Calling on Signal below Starter Signal No-11 for movement towards Lanjigarh Road end.
20	C13	RED With white dot	Calling on Signal below Starter Signal No-13 for movement towards Lanjigarh Road end.

1.3.2. **SIGNAL INDICATIONS:** -(S&T/SBP/DRG/SWR discrepancies dt:- 18.6.2020 as per IRSEM Part-II Para No.21.03.03(b).

- (a) Indication that a stop signal is at 'ON' shall be given by a red light and a permissive signal is at 'ON' shall be given by a yellow light on the corresponding signal symbols on the panel.
 - (b) Indication that stop/permissive signal is 'OFF' shall be given normally by a green, yellow or double yellow light as signal is seen in the field, on the corresponding signal symbol on the panel. However, in case of a domino panel where indication of all aspects is not provided, any 'OFF' aspect can be shown by green along with the following flashing indications for conditions as enumerated below:-
 - i) Failure of green; green flashes red* blank;
 - ii) Failure of yellow; green flashes, red lit;
 - iii) Failure of double yellow, both green and red * flash; &
 - iv) Failure of red*, green not lit (blank), red* flashing.
- * To be read as yellow for a permissive signal.

1.4 **ROUTE BUTTONS:** - Route buttons are provided separately on each running line on the panel for initiation of route (viz. L1UN1, L1 UN, L2 UN). Common route buttons are also provided for taking off starters (viz.: 19AUN & 18 AUN). An individual route button is provided for taking off Advanced starters (Viz.:19UN & 18 UN). SDGUN has been provided for shunting in the siding, For clearing the signals. TWSUN has been provided for shunting of Tower wagons from siding to L1. 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 also.

2.1 **DESCRIPTION OF ROUTE BUTTONS:-**

SN	Button No.	Colour	Description
1	L2UN	WHITE	Route button for UP & DN Home/Calling-on, Shunt signals SH3A & SH4B for Main line.
2	L1 UN	WHITE	Route button for UP & DN Home/Calling on for loop Line setting overlap towards main line.
3	L1 UN1	WHITE	Route button for Up & DN Home/Calling- on, shunt signals SH6. SH3B & SH4A on loop line setting overlap up to the end of Over run line.
4.	19AUN	WHITE	Common route button for UP starter No.11, 13, C11& C13.
5.	18AUN	WHITE	Common route button for UP starter No.10, 12, C10& C12.
6.	18UN	WHITE	Route button for DN Adv. Starter No. 18
7.	19UN	WHITE	Route button for UP Adv. Starter No. 19
8.	SDGUN	WHITE	Route button of SH13 for shunting towards siding.
9	TWSUN	WHITE	Route button of SH 10 for shunting towards Tower wagon siding.

2.2 **DESCRIPTION OF KEYS, COUNTERS , INDICATIONS AND OTHER BUTTONS.**

SN	BUTTON NO.	COLOUR	DESCRIPTION
1	SM's Emergency Point Key		This key is required to be inserted and turned to right whenever the point is to be operated in track circuit failure condition. This key shall be in the personal custody of SM on duty.
2	SM's Panel operation Key		This key is required to be inserted and turned to right for any operation of Points, Signals etc. This key shall be in the personal custody of SM on duty.
3	Emergency Point operation push button	Black colour with Red dot	This is to be pressed for emergency operation of point in association with SM's emergency point key when concerned point zone track circuit has failed.

4	Emergency Point operation counters.		This registers the emergency operation of points.
5	Emergency route release counters.		This registers the emergency route release operation.
6	Emergency Route Release Button	White with Red dot	For Emergency Route Release
7	Group Trans Button	White colour button with Black dot	To be pressed for transferring the control to concerned Crank Handle along with concerned Button.
8	Group Release Button	White colour button with Black dot	To be pressed for releasing the control from the concerned Crank Handle along with concerned Push Button
9	Point Normal push button	Black colour with Red dot	This is to be pressed to initiate Normal setting of points along with concerned button for individual operation of points
10	Point Reverse push button	Black colour with Red dot	This is to be pressed to initiate Reverse setting of points along with concerned button for individual operation of points
11	Signal Cancellation Push Button	Red colour button	For cancellation of a signal, which is already taken off.
12	Signal Lamp Failure /Point Failure Buzzer Muting Button	Red colour with White dot	To be pressed for acknowledging Signal Lamp Failure/Point Failure Buzzer.
13	Button held buzzer		This button comes to operation when any of push buttons is stuck up.
14	Signal/Point failure buzzer		This button comes to operation when signal/Point failure occurs.

15	Button Held Buzzer ack. Button	White colour button with Black dot	For muting the button held buzzer, which starts buzzing when a button is held up.
16	Calling on counter		This registers to record the operation of Calling-on signal.

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 BWIP-LJR and BWIP-JNRD section to check the complete arrival of trains. The system is interlocked with respective Block Instruments. When the Axle counter section indication provided on the reset box panel (one for each section) for sections indicates 'RED' i.e. occupied even after the complete arrival of trains, the Block instrument of the respective section can be normalized after ensuring complete arrival of trains by means of physical verification of last vehicle for stopping as well as run through trains.

4.0 **(A) POWER SUPPLY ARRANGEMENT FOR THE SIGNALLING INSTALLATION**

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

- i) Normally supply from AT connected to OHE Traction distribution [230 V 50 Hz].
- ii) Stand by supply from Odisha State Electricity Board (OSEB) [Single phase 230V-50Hz].
- iii) Normal power supply [Single phase 230V-50Hz] to the Signaling & Interlocking installation at the station is drawn from the traction power sources. Whenever traction power supply fails SS/SM on duty shall operate the rotary change over switch provided in the CLS power panel at SM's office connecting the power supply from the healthy sources to the installation.
- iv) The SS/SM on duty however maintains the record of AT power supply/ local supply and he must promptly report the failure of AT supply immediately through the section controller and to the concerned Electrical Staff and S&T maintenance staff.
 - a) A change over switch is provided in the SM's office with the three power supplies viz UP AT, DN AT supply and local power supply for changing the switch to the required supply position. The availability of the supply is indicated by luminous indicator above the circuit breaker for each supply.
 - b) Normally the switch will be kept towards **AUTO** position. Whenever the power block is to be given on the line, on duty SS/SM must ascertain the power is available on the local supply and other AT and change over the switch to desired position.

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

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

- i) Power supply to the signaling installation is fed through IPS installed in the S&T power supply room. The IPS is normally fed through UP AT/DN AT traction power selected by SS/SM on duty. Standby power supply is through OSEB local supply. One changeover switch is provided in the SM's room for selection of output of either traction power supply or local power supply. The available traction/local supply is fed to the IPS through auto- change over switch provided in IPS.
- ii) The IPS system is connected with Battery as a back-up power source for safe working during transition of power and in case when there is no 230V AC supply available due to any reason.
- iii) In the event of the failure of all the sources of 230V 50Hz AC supply, the signalling system shall be fed by power generated by back-up battery bank connected to IPS for a approx. time of 06 to 08 hours. The health of battery bank is monitored through one IPS monitoring panel provided in the SM's room which shall be display the voltage 110V DC [Battery Bank provided as back-up source of power supply]. Depending upon the health of the Battery Bank and the system, the following indication/alarm will appear on the IPS monitoring Panel, their implications and action to be taken by SS/SM on duty is tabulated below.

	Instruction	Health of Battery Bank/ Equipment.	Visual Indication	Audio Indication	Action to be taken by SS/SM on duty
A	-	50%DOD (depth of discharge)	Red	Alarm	Alarm shall be acknowledged by SS/SM on duty
B	-	60% DOD	Red	Alarm	-do-

C	System Shut down	70% DOD	Red	Alarm	Feed to signals gets cut off however all DC-DC converters continue to work. Audio alarm will continue till power supply is restored.
D	Call S&T Staff	Equipment fault	Red	Alarm	If any of the modules of IPS fails this alarm will appear on the SM's panel. Alarm shall be acknowledged by on duty for audio cut-off.

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

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

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

- 5.0 **EMERGENCY ROUTE RELEASE COUNTER:** - This counter is provided to register the number of operations made for emergency cancellation of route. The SM on duty must record the last number registered on the counter while taking over/ handing over duty.
- 6.0 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) / EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):-** This panel interlocking is based on the principle of ' DEAD 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. Then the emergency route release button (white with red dot) positioned on the top of panel to be pressed by breaking the seal and subsequently the concerned signal button pertaining to the route is to be pressed without releasing the emergency route release button. The concerned S&T staff should be advised immediately to get the emergency route operation button resealed after rectification of fault if any.

- 7.0 **EMERGENCY POINT OPERATION (BLACK WITH RED DOT):-** Emergency point operation facility is provided to operate point from the panel in the event of failure of track circuit controlling the point. A push button (BLACK WITH RED DOT) is provided on the top of panel. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit, shall insert SM's emergency point operation key in, turn it and shall push the emergency Point operation button by breaking the seal along with relevant point button simultaneously. Then retaining the point button in pressed condition, 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 and the counter number will increase by next number. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose. The concerned S&T staff should be advised immediately to get the emergency point operation button resealed after rectification of fault if any.
- 8.0 **BUTTON HELD ACKNOWLEDGEMENT BUTTON (WHITE WITH RED DOT):-** All push button are self-restoring type. A button held acknowledgement push button (white with red dot) along with a white 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
- 9.1 **TRACK CIRCUITS: -**
The station yard is fully track circuited from five rail length in rear of the UP Home signal to DN Home signal beyond 7 seven rail length at either end. Track circuits 1 AT & 2AT are calling-on track circuits. Track circuits 21AT, 21BT, 22AT, 22/24T are point track circuits. L1T1, L1T2, L1T3, L2T1, L2T2, L2T3 are berthing track circuits. Other track circuits namely 1T, 2T, 18 AT, 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 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.

- 10.0 **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 authorized person to operate the panel and the panels 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'.
- 11.0 **CRANK HANDLE CONTROL KEY AND OPERATION:-**The yard has been divided into Three crank handle regions. CH 1 controls Point No. 21 & 22. CH 2 controls point No. 24. Similarly CH 3 controls Point No. 23. All the above crank handle shall be operated by the procedure detailed in main SWR.
- 12.0 **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.
- 13.0 **TAKING OFF CALLING-ON SIGNAL:** - Miniature colour light Calling-on signal is provided below the Home signals in terms of GR 3.13(6)(b). A Calling on signal shows no light in the 'ON' position. A calling on signal is taken 'OFF' for reception of a train when the Home signal above cannot be taken 'OFF' due to failure of track circuit or any other reason, for admission of train on blocked line & for shunting purpose. The Calling on signal cannot be taken 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 received shall be set by operating by point push button and group button individually or by route by signal and route button pressing or by crank handling in the event of failure of operation of points through panel. After the route is set, the calling on signal button C1 or '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 60 seconds, the calling on signal clears i.e., a yellow light glows at the concerned calling on signal on the panel. For loop line route button UN1 shall be used irrespective of the setting of the overlap point.

Miniature colour light Calling-on signals are provided below the Starter signals in terms of GR 3.13(2). A Calling on signal shows no light in the 'ON' position. The calling on signals below Starter Signal No. 10/12 is taken 'OFF' for dispatch of a train up to Advanced Starter Signal S-18 towards Junagarh end. Similarly the calling on signals below Starter Signal No. 11/13 is taken 'OFF' for dispatch of a train up to Advanced Starter Signal S 19 towards Lanjigarh Road end.

NOTE:

- i) Before taking "OFF" Calling-on signal during failure of track circuit, the clearance of track over which the train is intended to be received must be verified physically.
- ii) SM on duty to ensure that no through signals are given while receiving a train on Calling-on signal.

- 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.
- 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.
- 14.2 **RELEASE / CANCELLATION OF ROUTE:** - Normally when a train is received on any route and dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released.
- 14.3 **REPLACEMENT OF SIGNALS TO 'ON':** - Signals are replaced to 'ON' automatically by the passage of a train past the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the respective signal button and the signal cancellation button (RED) to be pressed simultaneously.
- 14.4 **INTERLOCKING OF SIGNALS/POINTS:-** All running line points are fitted with facing point locks in the point machine and are electrically detected by the relevant Home signals and starters.
- 14.4.1 UP & DN Advanced starter signals are interlocked with block instrument in sending position i.e. train going to position. The same cannot be taken off unless the concerned block instrument is in line clear position (TGT).
- 14.4.2 The Block instrument cannot be made normal unless the respective Home signal is put back to 'ON'. However, the Home signal can be taken off in case of failure of the block instrument.
- 14.4.3 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.
- 14.4.4 In event of failure of Block instrument, trains will be worked on PLCT.

15.0 **PILOTING OF TRAINS:** - In the event of failure of Home signal and Calling ON signals 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 for details refer SR 3.69.06 & SR 3.70.03.

15.1 **SHUNTING:** For shunting, OFF aspect of starter signals shall be used. For back shunting, shunt signals provided on each side of the yard shall be used. For shunting in the siding the shunt signal provided in the siding shall be used and for shunting towards siding shunt signal below starter signal on L/1 shall be used.

16.0 **NON RUNNING LINE**

SICK SIDING CUM TRACK MACHINE SIDING:-

The sick siding cum track machine siding (CSL-82, SH to DE) takes off from ORL of line No.-1 with one side entry. The entrance point of Siding is isolated by derailing switch No, 24 which is operated from Panel. Whenever shunting is to be performed in siding, the concern shunt signals SH13 below starter signal No.13 and SH 6 shall be used. The reception signals 2A,1B, C2A,C1B shunt signals SH-4A, SH3B, SH6 and starter signal 13 are electrically interlocked in such a way that these signals cannot be taken 'OFF' when SH13 is taken off for shunting in the siding. Likewise, signals 2A, 1B, C2A, C1B, SH3B, SH4A, S13, and SH13 are locked in their normal position when shunt signal SH6 is taken off for dispatching a train from the siding.

16.1 **TOWER WAGON SIDING:-**

The Tower Wagon Siding (TWS) takes off from Line No. 1 at Junagarh end of the yard with single side entry. The Tower wagon Siding is isolated from line No. 1 by DS point No. 23. The SM on duty is to press the SH-10 GN button along with TWS-UN button simultaneously to receive the train on Tower wagon siding. Similarly to dispatch the train from Tower wagon siding, SH-5 GN button along with L1/1 UN button to be pressed.

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 signaling and interlocking system. When a route is not released after passage of a train or the Crank handle is in locked condition due to any failure, the "CH key" can also be extracted from the CH location box by applying emergency Crank Handle operation. The concerned signal has to be cancelled then the procedure is same for transmitting the CH key. In key "in" and lock condition, when the CH button and group trans button are pressed simultaneously, both the lock indication and key "in" indication start flashing. After 120 seconds the lock

indication disappears and the key in indication continues to flash. At this position the key can be extracted from the RKT in the CH location box by pressing the push button

switch provided inside the CH location box. The procedure for receiving the CH key is same like the normal operation of Crank handle.

- 19.0 **INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:** - When a train is stabled on a running line for a long duration i.e more than 10 hours, the use of the said running line after clearance for passing the trains at the station shall be done with a lot of care and diligence. Station Master on duty shall carefully observe the proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If the Station Master on duty is not satisfied with the proper functioning of the track circuits on which the train 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 favorable 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 4.15 of main SWR shall 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 key even when lock indication of crank handle key appears on the panel, press Group Trans button and crank handle button. After 120 seconds, key from RKT can be extracted. For further operation 12.0 of Appendix 'B' shall be followed.

- 21.0 **LOCKING OF RELAY ROOM:** - Refer para No 4.16 of main SWR.
- 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, 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 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) and RB letter No. 2021/SIG/21/safety performance, dtd:10.06.2023 & amendment issued vide letter No: 2023/TT-IV/9/2, dtd:16.06.2023.
- 26.0 **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.
- 27.0 **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 S&T installation as defective and pass trains over the affected interlocking equipment according to extant instructions as contained in SR 3.77.

- 28.0 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.
- 28.1 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.
- 28.2 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.
- 28.3 When the crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody rests with the Station Master on duty, till it is replaced back in RKT.
- 28.4 The case of failure of motor operated points should be promptly reported to the concerned Signal maintainer or JE/SE/SSE (Sig.) for rectification.
- 28.5 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.
- 28.6 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.

- 28.7 The Emergency Crank Handle Register is to be maintained vide OM 02.19 Note (d) by the SM on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.
- 29.0 **SUSPENSION OF LAST STOP SIGNALS:** - When TLBI between BWIP-JNRD/BLOCK PANEL between BWIP-LJR fails the concerned advanced starter signal will be treated as suspended and trains shall be worked on PLCT.
- 29.1 The SM on duty shall not grant 'LINE CLEAR' unless he has ensured that the lamps of fixed signals, which apply, to the train are burning. If the signal lights cannot 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 .
- 30.0 **SIGNAL LIGHTS:** - The 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.
- 31.0 **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.
- 32.0 **NORMAL POWER SUPPLY:** - Normal Power supply is through AT and the standby sources are Local supply and DG sets. All controls have been provided with Battery backup.
- 32.1 **POWER FAILURE AND REPORTING SUCH FAILURES:** - Normal power supply to the Signalling and Interlocking installations at this station is drawn from AT and the standby sources are Local supply and DG sets.
- 32.2 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.
- 33.0 **AXLE COUNTER AS LAST VEHICLE CHECKING DEVICE (LVCD):-**
- (a) Axle Counter as LVCD has been provided for the section BWIP-LJR and BWIP-JNRD as last vehicle checking device. The axle counter will also have control over the UP and DN last stop signals and block instrument of respective direction of BWIP station.
- (b) The occupation and clearance of the axle counter section is indicated by RED and GREEN indication respectively provided on the panel.
- (c) UP last stop signal of BWIP cannot be taken OFF if axle counter of block section BWIP-LJR fails. Similarly DN last stop signal of BWIP cannot be taken OFF if axle counter of block section BWIP-JNRD fails. On the other hand, on arrival of a train at station if the axle counter continues to show occupied the block instruments of concerned block section cannot be turned to line closed position.
- 33.1 **NORMALISATION OF AXLE COUNTER AND BLOCK WORKING BY RESETTING OF AXLE COUNTER.**
- (A) After the train has been received by the receiving station or after a block back operation or when no train has entered into the block section and the axle counter displays RED, then the following procedure shall be adopted to reset the axle counter. Resetting operation of the axle counter is non co-operative.

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

- (i) Procedure laid down in GR 4.17 & relevant SRs thereto shall be followed for the purpose.
- (ii) By checking the train register, the detail of the train passed through the block section and finding out from the station at other end of the concerned block section or from Controller that last train has passed and arrived complete. SM on duty shall exchange private number with the SM at other end of the concerned block section or with the Controller or from whom the complete arrival has been confirmed.
- (iii) If the failure has occurred after arrival of a train, SM on duty shall also obtain intact position from the guard of stopping train or by exchanging all right signal with the guard of through train, so that he can ensure that the train has arrived completely before resorting to reset of LVCD axle counter.63-A

(C) RESETTING PROCEDURE:-

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

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

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

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

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

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

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

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

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

34.0 **TELECOMMUNICATIONS: -**

- (i) Telephone attached to single line Block Panel with UFSBI of BWIP-LJR and Tokenless Block Instruments of BWIP-JNRD block sections.
- (ii) Station to Station fixed telephone (Hot line) has been provided
- (iii) Station has been provided with auto telephone connected with Railway Exchange.
- (iv) BSNL telephone has been provided.
- (v) The station is connected to BLGR-SPRD control circuit by a control telephone.
- (vi) Station to station 25 Watt VHF communication has been provided
- (vii) Telephone has been provided between Station and both end crank handle locations.
- (viii) Telephone has been provided between Station and Engg. L.C Gates at KM 28.720 [OHE KM: 28/12-13], KM 26.685 [OHE KM: 26/13-14], Km 19.098 (19/0-1) [OHE KM: 19/2-3], KM 17.249 [OHE KM: 17/5-6] in BWIP-LJR section and KM 34.684 [OHE KM: 34/11-12] & KM 41.515 [OHE KM: 41/8-9] in BWIP-JNRD section.
- (ix) Telephone has been provided between Station Master & TPC.

Note: (i) For obtaining line clear, VHF should be used as a last alternative and not as a sole means of communication.

- (ii) VHF and Walkie Talkie sets should not be used for unnecessary discussions with Loco Pilots, Guards or any other staff.
- (iii) The on duty SM shall use the above electrical communication instruments stated in Para- 35.0 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.6.02.06.

35.0 **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 SR 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 SR 6.02.06 (1) (b) and Chapter-III Part-I of Block Working Manual.
- 3) In the event of failure/suspension of Block instrument 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 SR 6.02.06(1) (c) and Chapter-III Part-I of Block Working Manual.
- 4) In the event of failure / suspension of block instrument or block telephone attached to the block instrument, or station to station fixed telephone or Railway auto telephone or BSNL phone or control telephone line clear shall be obtained on the VHF set exchanging ID number supported by Private Number provided that the instructions contained in SR 14.01.02 are followed vide SR 6.02.06(i)(d), Chapter-III part-I of Block Working Manual
- 5) In the event of total interruption of all communications, trains shall be worked vide SR 6.02.04.

36.0 WORKING OF AUTOMATIC FIRE DETECTION AND ALARM SYSTEM:

- a) In case of any alarm in any particular area due to fire or dust-Zone number on the LCD display can be seen, note down the zone No. displayed in control panel.
- b) The moment the smoke detector detects any smoke particles, the RED LED will blink along with the alarm.
- c) Once you find the zone number rush to that particular area where the detector gives alarm.
- d) Once you reach the area where the detector is giving the alarm, check whether the alarm is due to the fire or for any other reason.
- e) Then call immediately to the staff of concerned department.
- f) Call the fire station if required.
- g) Take action to extinguish the fire by the fire extinguishers available in the station.
- h) To alert the people in case of emergency press "*" sign of the fire which is present inside the key pad together for few seconds. This will enable you to hear the panel alarm.
- i) To reset the panel follow the instructions provided by S&T official in station master's room near the fire alarm panel.
- j) The control panel will get reset and siren muted.
- k) If the power fails on this will enable us to see the red indicator on the panel.
- l) In case of failure in power and if the battery is fully charged, the panel can function effectively as long as the charge in the battery is present.

APPENDIX - 'C'

ANTI COLLISION DEVICE (RAKSHA KAVACH)

NIL

APPENDIX - 'D'**1.0 STATION SUPERINTENDENT (IN-CHARGE):-**

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

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

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

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

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

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

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

He is responsible for booking all staffs working under him for PME and Refresher Course / Safety camp in their due time. His Special attention is drawn out to chapter II of General and Subsidiary Rules and GR 5.01 to 5.08 with relevant Subsidiary Rules, Chapter – 2 of Operating Manual.

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

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

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

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

His special attention is drawn to chapter No.II of G & SR (Amendment) 2012 and GR 5.01 to 5.08 with relevant SRs. He shall follow the instruction laid down in SR 3.68.01© & (d) and SR 14.07.01 and BWM 2.09 (e). He shall conduct surprise night inspection, safety meetings and fire drills. He shall maintain good public relation as well as look after passenger's amenities and be helpful to travelling public.

2. **SS/SM**

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

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

He is responsible for train passing during his shift. He shall promptly bring to the notice of SS all irregularities and accidents in course of his shift duties. During the absence of SS the duties of Station Superintendent will devolve on him. He shall follow GR 3.49, SR 3.68.01 (c) & (d), SR 14.07.01. His special attention is drawn to chapter II of G & SR (Amendment) 2000 and SR 5.01 to 5.08 with relevant SRs. He shall carry out the instructions given to him by the SS.

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 SS is responsible to see that all the staff are conversant with the Station Working Rules and their signature obtained in the Assurance register, after he is satisfied that they have thoroughly understood the working rules of the station. In case of Group 'D' staff, their signature/thumb impression must be obtained after explaining 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 personal custody of the Station Manager.
- 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 **HANDING OVER AND TAKING OVER CHARGE:** The SS/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/SS/Station Master coming on duty while taking over charge. This will not, however, relieve any one of the 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.
- 7.0 **TRAFFIC POINTSMAN:**
- He shall work under the instructions of SM on duty and follow the GR 02.05 to 2.11 and other relevant rules laid down in GR and SR. He shall remain responsible for:
- (i) Delivery of authority to proceed and caution order etc. to the driver of train.
 - (ii) Correct setting and locking and crank handling of points for reception/dispatch and shunting operation under the supervision of Station Master/Guard.

- (iii) Piloting and hand signaling of trains when necessary.
- (iv) Knowledge of hand signals, detonators and their use.
- (v) Protection of line in emergency and fog signaling.
- (vi) Exchange of signals with the Driver and Guard of passing trains as directed by the Station Master.
- (vii) Cleaning, Oiling and lighting of lamps.
- (viii) Loading/unloading of parcels, luggage, Guard boxes and packages to and from the train and watching the packages and other materials by properly stacking in the station premises.
- (ix) Dusting of station office, filling up the fire buckets with sand/water and getting train interact arrival register (T/1410) signed by the Guard as and when required.
- (x) Serving messages and any other duties entrusted to them by the SS/SM from time to time.
- (xi) Uses of emergency crank handle for setting of points.
- (xii) To supervise shunting as per SR 5.13.03.
- (xiii) They must be thoroughly conversant with the GR 3.38, 3.46, 3.77(I), 5.09, 3.52 to 3.60, 3.62, 5.13, 5.15, 5.16, 5.21, 5.23 & SRs there to and their special attention is drawn to chapter No.II of G & SR (Amendment) 2000 also.

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 DN line clear tickets and educated in distinguishing other operational forms and documents, delivered to Loco pilots and Guards and must also know how and when to ring the station bell.

Correction slip No.02
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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.

S N	Description	Quantity
1.	Detonators	10 in tin case
2.	Battery operated LED based flashing Hand Signal lamps	04 Nos.
3.	Hand signal flags	04 sets.
4.	Safety chains with pad locks	06 Nos.
5.	Wedges & Skids	08 + 02 Nos.
6.	Fire buckets (with sand and water)	06 Nos.
7.	Clamps with padlocks	06 Nos.
8.	Reminder collars	04Nos.
9.	"Motor Trolley on Line" boards	02 Nos.
10.	Block Suspension Board	02 Nos
11.	First aid Box	01 No.
12.	Stretcher	01No.
13.	Fire extinguisher	02 No.
14	Blanket	01 No.

S.SAINI
DSTE(SIG)/SBP

LINGARAJ GARTIA
DOM(G)/SBP

APPENDIX - 'F'**RULES FOR WORKING OF DK STATIONS, HALTS, IBH, IBS AND OUTLYING SIDING****PASSENGER HALTS:-****Section BWIP-LJR:-**

There are two passenger halts in LJR-BWIP section. One located at KM 9.040 [OHE KM: 8/16-9/2] from LJR named as G. Ramchandrapur PH and the second located at KM 17.352 [OHE KM: 17/8-17/10] from LJR named as Depur PH.

Section BWIP-JUNAGARH:-

There is one passenger halt in JUNAGARH-BWIP section named as KUTRUKHAMAR PH and it is located at KM 41.275 [OHE KM: 41/3-41/7] from Lanjigarh Road station.

STATION WORKING RULES FOR 25KV AC ELECTRIC TRACTION

BHAWANIPATNA (BWIP) STATION**1. GENERAL & SUBSIDIARY RULES:**

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

2. GENERAL SAFETY PRECAUTIONS:

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

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

- a) A sectioning diagram No. LJRE/OHE/RE/BWIP/2022/01 indicating schematically the lines, which have been equipped with, for electric traction is exhibited. The diagram also indicates different electrical sections (Elementary Sections) the Controlling Switches or interrupters), insulated overlaps and section insulators where the overhead equipment is electrically separated. The limits of an electrical section (Sub-Sector or Elementary section) are indicated by the relevant section. A copy of this diagram is also enclosed with these special working rules and will form part of the same.
- b) For all-purpose connected with Train movements and Power Blocks, this diagram is the only authorized document to be referred to the normal position of various switches is indicating on the diagram.

4. UNWIRED TRACKS:

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

5. OPERATING OF SWITCHES:

- a) All switching operations shall be carried out in accordance with the instructions of the Traction Power Controller except in respect of switching operations for local blocks, which may be carried out by authorized traction staff, after they have been granted local blocks by the Station Master in accordance with S.R. 17.04.09 and ACTM para No. 20600,20601 of Vol.II. Part.I.
- b) "In case of emergency, authorized and trained station staff may open Isolator switches under specific instructions of the Traction Power Controller (G.R. 17.04.14-(b) with exchanging of Private Nos. to perform the operations of the following isolator switches as well as any other isolators within the station limit. Hence every station master shall be fully aware of the location of the isolator switches provided for the control of power supply of OHE at or near the station and shall be conversant with correct method of operating and closing the same (Competency certificate is provided after getting assurance)

Sl. No.	Isolator No.	Loc. No.	Sl.No.	Isolator No.	Loc. No.
1.	SM-502	29/13	3	SS-601	BWIP/1009
2.	SM-503	30/16			

6. POSITION OF SWITCH HANDLES (ISOLATORS):

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

7. LOCATION OF KEYS OF SWITCHES AND OHE KEY REGISTER:

The keys for the padlocks of various isolator Switches are kept in the ASM's Office in a box with a glass mounted cover (17.04.13). The Station Master shall daily check the keys of switches of the isolators and report any defects or deficiency to the Traction Power Controller. In the event of breaking of glass box the procedure stipulated in SR 17.04.13 (b) has to be strictly followed. If operation (open/close) of isolators is required for the purpose of loading/unloading, the opening time & closing time of isolators with its purpose is to be clearly mentioned in this register.

8. PROCEDURE AND PRECAUTIONS FOR OPERATING ISOLATORS:

The procedure for operation of isolator switches have been given in G.R. 17.04.15 and S.R 17.04.14 (b) Isolator switches shall not be opened when carrying any load. Before opening/closing, on duty SM will get confirmation from TPC supported by Private number. The procedure stipulated in SR 17.04.15(c) must be followed.

9. POWER BLOCK:

- a) The detailed procedure for obtaining power block has been given in G.R. 17.04.02, 17.03.03 & 17.04.04 and ACTM para 20603,20604,20611,20612 & 20613 which must be rigidly followed except in case of emergency.
- b) The sequence of switching operations for granting and cancelling the Power Block for a particular section, are included in the Annexure. These shall be strictly followed by all staff. Failure to follow the sequence indicated is likely to lead to dangerous consequences. The protection of dead section is achieved by blocking the Concerned line in the VDU and placing red button collars on concerned buttons operating points and / or signals.

10. PROTECTION AT THE TIME OF POWER BLOCK:

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

11. SECTION INSULATORS:

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

12. BREAKDOWN OF TRACTION OVERHEAD EQUIPMENT:

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

13. REGISTER OF MESSAGES:

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

14. MOVEMENT OF DIESEL ENGINES OR TRAINS HAULED BY SUCH ENGINES:

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

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

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

15. ELECTRIC LOCOMOTIVES:

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

16. ESM:

Any direct contact or close proximity to 25 KV line conductors is dangerous, the station ESM climbing up the Signal post for removing or fixing or cleaning the signal should not carry any long article which may accidentally touch or come in close proximity to live conductors. The ESM shall also be wanted against bringing any part or body near live conductors.

17. CRANES:

No crane shall be worked on or near Traction Overhead equipment, unless such equipment is first made dead and earthed and an authorized representative of the OHE section is present (S.R. 17.04.07 (a) & (b)).

18. WORK ON ROOF OF ROLLING STOCK:

No person shall climb on the top of the Engine or Tenders or on the roofs of carriages, or wagons, when those vehicles are located beneath Overhead equipment except, when a regular 'Permit to work' has been obtained from authorized Traction Staff and the overhead equipment has been made dead and earthed (GR 17.05(02)) and ACTM Para 10402 & 10403 of Vol.I.

19. BLOCK INSTRUMENT OR ANY OTHER ELECTRICAL SIGNALLING EQUIPMENT:

The Station master on duty must always watch for any unusual working in the Block instrument or any other signalling equipment, which may arise due to voltage, induced from traction system. The Block instrument or the signalling Equipment must be suspended whenever there is any signs of unusual working and the nearest signal and Telecom, maintenance Inspector may be contacted to inspect and certify the same. In the event of a break of the OHE, the Station Master must immediately check up whether all Block and signalling equipment are working normal before permitting any train movement.

20. TELECOMMUNICATION CIRCUITS:

Refer Para 5.0 of main body and Appendix "B" of this SWR.

The details of the Telecommunication facilities available on the electrified sections and the use of the same have been given at ACTM Para 10213, 10429 of Vol. I and Para 20703 of Vol. II part I.

21. ELECTRIC SHOCK:

The Station Master shall exhibit prominently the instructions issued regarding the treatment to persons suffering from electric shock in the Station/Yard Office and shall ensure that all Class-III staff are familiar with those instructions (shock treatment) chart provided in SM's office.

22. FIRE:

Regarding fire on or adjacent to any electrical equipment refer G R (6:10) and SR there to.

23. Nothing in these rules amends or supersedes any General or subsidiary rules or instructions included in AC Traction Manual. These working rules shall be read as supplement to the aforesaid Rules Books and also to the existing Station Working Rules of the Station.**24. AMENDMENTS OR SUPPLEMENTARY CORRECTION SLIPS:**

Any amendment to these Working Rules or any of the Annexure will be notified by a correction slip to the Station Working Rules. The correction slips will be serially numbered and it is the responsibility of SM in charge of a station to bring the contents to the notice of all staff concerned and take their acknowledgement.

25. CONTINUOUS WATCH BY INSPECTING STAFF:

The Inspecting staff of Operating, telecommunication and Traction Departments shall make regular checks at all points to which these special working rules are supplied to ensure that the rules are corrected up-to-date and the staff concerned are fully conversant with the rules and abide by them.

NOTE: Whenever the codes 'GR' & 'SR' appear in these special working rules, please refer to the General and Subsidiary Rules for 25 KV AC Electric Traction, chapter-XVII.

EAST COAST RAILWAY**TRACTION - DISTRIBUTION****SAFETY PRECAUTIONS AND ESSENTIAL INSTRUCTION FOR RUNNING AND OPERATING STAFF WORKING ON AC TRACTION AREA****DO(S) AND DON'T(s)****A. FOR ALL STAFF****a) DO(s)**

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

b) DON'T(s)

1. Do not approach within a range of 2 meters (approximately 7 ft.) of any traction wires or live equipment.
2. Do not work on or near traction wires or any live equipment unless they have been made dead, earthed and permit-to-work obtained from an authorized traction staff.
3. Do not permit unauthorized persons to operate any equipment even if it be for making it dead.
4. Do not disturb any Earthing, bonding or Traction Wires.

5. Do not enter any switching station or remote control centre unless specially permitted and accompanied by authorized traction staff.
6. Do not attempt to turn the person in contact with live traction wire either by touching him or with the help of wooden bamboo pole or by grabbing his clothing or with the help of rubber gloves or any other means. Under such conditions, contact the TPC, ensure switching off power supply and remove the person in contact with the live traction wire by using wooden bamboo pole or by grabbing his clothes or with rubber gloves if available only after ensuring from TPC that the power supply has been switched off.
7. Do not forget to give artificial respiration to the victim.

B. FOR RUNNING STAFF:

a) DO(s)

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

b) DON'T(s)

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

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

1. Ensure all staff is conversant with safety precautions.
2. Ensure that no electric loco is stabling with its panto-raised position in the power block section.
3. Report defects in traction wires of any electric locomotive or electric Multiple Unit Promptly to the traction Power controller.
4. Points and signals of the concerned line which give access to the sections under power Block is to be blocked by blocking the concerned line in VDU and placing red button collars on concerned buttons operating points and/or signals.
5. Observe procedures given in station working rules of 25 KV AC Electric Traction while operating isolator switches.
6. Ensure safe custody of isolator switch keys.
7. Ensure the section is protected by traction staff from all directions by banner flag during power block.
8. Suspend working of block and signals if single of unusual working are noticed. Always checkup block instruments at signalling equipment when any breakdown in traction wires occurs.
9. Instruct S & T staff to see that while he goes up the signal post he does not carry any long rod or articles likely to be brought within the danger zone of 2 Mtrs. (Approximately 7 feet) of the traction wires.

c) DON'T(s)

1. Do not permit an electric locomotive or multiple units with raised pantograph to approach any section under power block beyond Power Block working Limit Board or near section insulators.
2. Do not permit any crane to work adjacent to live traction wires.
3. Do not permit your staff to approach live traction wires within the danger zone of 2 meters (approximately 7 feet).
4. Do not permit electric locomotive with raised pantograph to enter any unwired section.
5. Do not take off signals for direct reception for any electric engine or train, if there is a power block within the adequate distance of the signal.

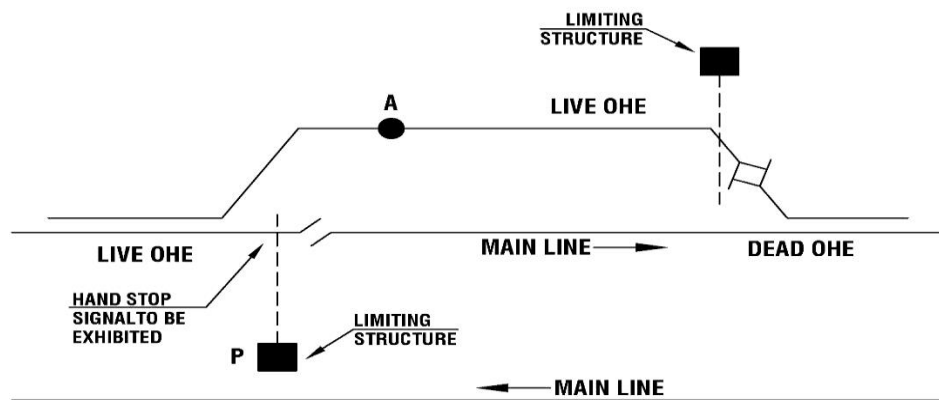
PROTECTION OF DEAD SECTION

The protection of a dead section is achieved by the following means:

1. a) In the normal running direction movements of trains are generally controlled by Signals. Protection is obtained by placing a Power block cap on the signal knob controlling the concerned signals and relevant route buttons or blocking the concerned route on the VDU.
- b) If the points and signals are locally operated they should be locked and the key, controlling the lever or lever frames should be kept with the Cabin Station master on duty. When the signal cabin of lever frames are controlled electrically by Station Master or Cabin Station Master on duty, shall place the warning caps on the relevant slides of Electric slide instrument or on the relevant keys of Electric transmitters or interlocked keys, boxes as the case may be.
- c) This action must be taken care by Cabin Station Master or the Station Master on duty as case may be, in respect of each and every movement prescribed in the Station Working Rules and after completion, confirmation should be given to the Section Controller to enable him to agree for the power block to be issued by the TPC.
- d) In a large yard several warning cap may be required, sufficient number of warning cap should be kept in cabin. The exact number provided is indicated in the SWR.
- e) Once a warning cap is placed on the signal knob it shall not be removed except after exchange of messages with private number.

SHUNTING MOVEMENT TOWARDS DEAD SECTION

- 1) a) In case where no signal exists for controlling the entry of an electric train into the dead section the station master should arrange a hand stop signal to be exhibited at the point up to which alone the electric locomotive is allowed to proceed.
- b) If it is necessary for an electric locomotive to carry on shunting movement towards the dead section the red warning cap placed on knob may be removed to permit the movement provided that a hand stop signal is exhibited and driver is specifically instructed not to move the loco beyond the point.
- 2) An example of the operation is given figure as shown below:



As per protection of Dead Section Para above the knobs controlling the signals should have red warning caps placed on them to give protection to the dead section. However, if it is essential to carry out at shunting operation with an electric locomotive situated at point 'A' on the loop line to move into the main though the turn out this may be permitted provided that the shunting movement is carried out only up to limiting mast 'P' short of the overlap span where a hand signal is to be exhibited to prevent all movement beyond the point 'P'.

- 3) Train or shunting movements by other than electric locomotives. i.e by steam or diesel loco's may be permitted to enter the dead section. Provided that the Station Master ensures by personal inspection that the train formation does not include an electric locomotive or OHE inspection Car or EMU with pantograph raised and after issuing necessary caution order. The Red warning Caps may be permitted to be removed to allow such movements.

HANDLING OF ISOLATOR SWITCHES

1. The Duplicate keys for all outdoor switches shall be kept in locked glass fronted key box duly padlocked under the custody of SM on duty or with Competent OHE officials concerned persons stationed conveniently near the switches as the case may be. The keys shall be issued on demand only to authorised persons whose signatures for receipt shall be obtained in a book maintained for the purpose. The list of authorised OHE Officials who can withdraw the duplicate keys from the SM on duty is displayed at station duly signed by an officer of the Traction Distribution Department. These keys shall be handed over to the authorised officials by the SM or only after obtaining the permission from TPC.
2. In the event of breakage of the glass of the key box the key or keys shall be kept in safe custody of the SM on duty until the glass is replaced. The Traction power controller will keep a record where such keys are kept so that in an emergency he will be able to direct the parties concerned.
3. In an emergency the SM shall operate isolator switches as per specific direction of the Traction Power Controller under exchange of private numbers.
4. Should the traction Power controller wish to give any isolator switch opened or closed he shall as the Junior Engineer's / TRD or SM or any authorised person to carry out the required switching operation. The person concerned shall after carrying out the orders lock the switch either in "Open" or "Closed" position, as the case may be and inform the Traction Power Controller of the action taken. He shall not part with the key until receipt of further orders from the Traction Power Controller. A record of every such operation shall be maintained by TPC as well as by the SM in the power block register in RED ink.
5. Every Station manager or SM on duty shall be fully aware of the location of the isolator switches provided for the control of power supply to Over Head Equipment at the Station and shall be conversant with the correct method of opening and closing of the same in an emergency.

Details of Isolators to be operated by station master/ assistant station master/ points men during emergency under instructions of Traction Power Controller (TPC).

(Authority: Advanced Correction Slip No.24, dated 10.01.2013 to Railways Manual of AC Traction (ACTM), Vol-II, Part-I, Para: 20970-5 issued vide ED/(EEM)/Rly. Board's L/No.2001/Elect(G)/138/4 Pt.-I dated 10.01.2013 in consultation with Traffic Transportation Directorate of Railway Board)

INSTRUCTIONS FOR ISOLATOR SWITCH OPERATION

OPERATION OF SWITCHES:

- i) All switching operations shall be carried out in accordance with the instructions of the Traction Power Controller (TPC) except in respect of switching operations for local blocks which may be carried out by authorized traction staff after they have been granted local blocks by the Station master on duty in accordance with GR 17.04 and ACTM VOL II Part I Para 20600 and 20601.
- ii) In times of emergency, authorized and trained station staff may open isolator switches under specified instructions of the Traction Power controller (TPC).
- iii) Every station masters, assistant station masters, cabin assistant station masters / Switchman shall be fully aware of the location of isolator switches provided for the control of Power supply to the overhead equipment at or near his station / cabin and shall be conversant with the correct method of opening and closing the same in an emergency (ACTM VOL II Part I Para 20624).

POSITION OF SWITCH HANDLES:

1. When an Isolator is in CLOSED position, the operating handle of the Isolator is at the TOP.
2. When an Isolator is in OPEN position, the operating handle of the isolator is at the BOTTOM.

NOTE: The operation handle of every isolator switch shall always be kept locked either in the open or closed position. Any loss shall be reported immediately to the OHE Section Charge man, Chief Traction Foreman (OHE) and TPC.

PROCEDURES AND PRECAUTIONS FOR OPERATING ISOLATORS:

The procedure for operation of Isolator switches has been give in SR 17.02 (XVIII) which must be rigidly observed. Isolator switch may be opened only after ensuring

1. If the isolator switch is on the main line that the adjacent Interrupters at the feeding end / ends of the isolator switch has / have been opened.
2. Always use hand gloves and shoes while operating switches.
3. The switch must be operated in a jerk to avoid the arc formation.

