EAST COAST RAILWAY
WALTAIR DIVISION

STATION WORKING RULES
OF
SITANAGARAM (SNM)

EAST COAST RAILWAY

WALTAIR DIVISION

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INDEX OF CORRECTION SLIPS

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EAST COAST RAILWAY

WALTAIR DIVISION

STATION WORKING RULES OF SITANAGARAM [BROAD GAUGE]

Date of Issue: -

Date brought in force:

NOTE: -

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

1. **STATION WORKING RULE DIAGRAM:**

(i)The Station Working Rule Diagram No: SI/WRD/23080 ALT "H"

(ii) CSTE/East Coast Railway Signal Interlocking Plan No: SI/23080 ALT "H"

2. **DESCRIPTION OF STATION**

2.1 GENERAL : LOCATION:

a)	Name of the station	:	SITANAGARAM
b)	Class of station	:	'B' class
c)	Section	:	Vizianagaram-Raipur
d)	Double line/Single line	:	Double line
e)	Electrified/Non Electrified	:	Electrified
f)	Railway	:	East Coast Railway
g)	Route	:	'D' Special
h)	Situated at	:	Km:401/27-29(UP), 401/28-30(DN)
i)	Reckoned from	:	Raipur
j)	Number of cabins	:	Centrally operated Domino type panel along with VDU.

2.2 **BLOCK Stations IBH. IBS on either side and their distances :-**

Block section	Distance	Direction
VBL (Bobbili)	11.3km	VZM end
PVP (Parvitipuram)	12.8km	RGDA end
SNM-PVP IB	UP Lines DN lines	Km 394.437 Km 393.670
SNM-VBL IB	UP Lines DN lines	Km 407.911 Km 408.156
OUT LYING SIDINGS/D.K.STATION		NIL
PASSENGER HALT		NIL

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

Between Stations	The Point from which the 'Block Section' Commences	The Point at which the 'Block Section' ends
SNM-VBL (UP Direction)	1 From UP Advn. starter signal no. 13 of SNM.	Up IB signal No.15 of SNM+400M
	2 From UP IB signal No.15 of SNM.	Up to Point No.31A of VBL.
SNM-PVP (DN Direction)	1 From DN Advn. starter signal no. 14 of SNM.	DN IB signal No.16 of SNM + 400M.
	2 From DN IB signal No.16 of SNM.	Up to 2T1 Track circuit.

2.4 **GRADIENTS**

(a) **From the centre of the station building towards Bobbili**:

Chainage in Mtrs. From CSB		**Stretch**	**Gradient**
From	**To**		
0.000	CH: 786.2	786.2	1 in 400 falling on UP line
CH: 786.2	CH: 850.4	64.2	Level on UP line
CH: 850.4	CH:1141	291.6	1 in 200 raising on UP line
CH: 1141	CH: 1400	259	Level on UP line
CH: 1400	CH: 2243.3	843.3	1 in 180 falling on UP line
CH:2243.3	Into section	----	Level on UP line
CH:0.000	CH:879.09	879.09	1 in 400 falling on DN line
CH:879.09	CH:1149.35	270.26	1 in 1370 falling on DN line
CH:1149.35	CH:1400	251.35	Level on DN line
CH:1400	CH:1800.125	400.125	1 in 275 falling on DN line
CH:1800.125	CH:2243.33	443.205	1 in 353 falling on DN line
CH:2243.33	Into section	----	Level on DN line

b) **From the centre of the station building towards Parvatipuram**:

Chainage in Mtrs. From CSB		**Stretch**	**Gradient**
From	**To**		
0.000	CH: 446.98	446.98	1 in 400 raising on UP line
CH:446.98M	CH 542.80	95.82	1 in 131 raising on UP line
CH: 542.80M	CH: 1516	973.2	1 in 150 raising on UP line
CH: 1516	CH: 1751	235	1 in 1100 raising on UP line
CH: 1751	CH:2185	434	1 in 900 raising on UP line
CH:2185	CH:2790	605	Level on UP line
CH:2790	Into section	---	1 in 300 falling on UP line
0.000	CH:446.98	446.98	1 in 126 raising on DN line
CH:446.98	CH:541.08	94.1	1 in 150 raising on DN line
CH:541.08	CH:1516	974.92	1 in 150 raising on DN line
CH:1516	CH:1751	235	1 in 1100 falling on DN line
CH:1751	CH:1956	205	1 in 900 raising on DN line
CH:1956	CH:2461	305	1 in 220 raising on DN line
CH:2461	Into section	---	1 in 220 raising on DN line

(C) IBS ZONE:

Down line FOR SECTION SNM – PVP:

Km From	Km To	Gradient
From Section	395.904	1 in 160 F
395.904	394.274	1 in 1100 F
394.274	393.924	1 in 160 F
393.924	393.524	1 in 200 F
393.524	392.429	Level
392.429	Into section	1 in 550 R

Up Line FOR SECTION SNM - PVP:

Km From	Km To	Gradient
From Section	396.243	LEVEL
396.243	394.750	1 In 150 R
394.750	394.659	Level

394.659	394.196	1 in 166 R
394.196	393.846	Level
393.846	392.620	1 in 600 F
392.620	391.850	1 in 150 F
391.850	Into section	Level

(D) IBS ZONE:

DN line for section SNM-VBL:-

Km from	Km to	Gradients
From section	405.185	1 in 320R
405.185	406.149	Level
406.149	406.385	1 in 435R
406.385	406.735	1 in 150R
406.735	407.283	Level
407.283	407.535	1 in 1000F
407.535	407.685	1 in 490R
407.685	407.883	1 in 315R
407.883	408.434	1 in 150R
408.434	410.484	1 in 362R
10.484	Into section	1 in 150R

UP line for section SNM-VBL:-

Km from	Km to	Gradients
From section	405.179	1 in 150R
405.179	406.083	1 in 300R
406.083	406.430	Level
406.430	407.170	1 in 150R
407.150	407.621	Level
407.621	410.492	1 in 150R
410.492	Into section	Level

2.5 **LAY OUT:**

A. Number of running lines: 4 (Four)

Running line/Non running line	Electrified/Non Electrified
Route-1 (DN loop)	Electrified
Route-2 (DN main)	Electrified
Route-3 (UP Main)	Electrified
Route-4 (common loop)	Electrified
Engineering siding	Electrified

B. Number of non running lines:1 (One)

ENGINEERING SIDING:

Engineering siding takes off from line no.4 of the yard and is isolated by derailing switch. The entrance points and derailing switches are operated individually by arc levers in succession. Hand plunger locks fitted at the entrance point unlocked by key 'P' released from RKT provided in location box through control no. 27 from panel. When control 27 is transmitted from panel S1/C1, S4/C4, SH3 and SH-6 signals of line no.4 will be locked in their normal position.

C. PLATFORMS:

i) One low level passenger platform on line no1 is provided with a measurement of 425.0 M X 6.1M.

ii) Line No.4 & Engineering siding are provided with a Rail Level Platform with a measurement of 425.0 M x 6.1M.

2.5.1 **RUNNING LINES,DIRECTION OF MOVEMENT & HOLDING CAPACITY**

(a) DIRECTION OF TRAFFIC:-The trains coming from Parvatipuram end are UP trains and the trains coming from Bobbili end are DN trains.

(b) RUNNING LINES AND THEIR HOLDING CAPACITIES:

Line No 1	DN loop	740.37 M	Electrified	From Starter to SB
Line No 2	DN Main line	763.7 M	Electrified	From Starter to SB
Line No 3	UP Main line	763.7 M	Electrified	From Starter to SB
Line No 4	Common loop line	724.8 M	Electrified	From Starter to Starter

2.5.2 **NON RUNNING LINES AND THEIR CAPACITY:**

1	Engineering Siding	491 Meters	Electrified	From Glued joint to glued joint

2.5.3 **ANY SPECIAL FEATURES IN THE LAYOUT:**

Nil

2.6 **LEVEL CROSSINGS**:

Details of Level Crossing Gates are mentioned in Appendix 'A'.

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

i) System of working: Absolute block system:

Trains are worked under Absolute block system in accordance with GR 7.01(1) (a), 8.01(1) (a) &(c), 8.01(2) (b), 8.03(2) (a), (b), (c) (ii), 14.01 to 14.07, 14.08(b) (iv), 14.09 to 14.13 and BWM chapter-IV part I.

ii) Block instruments:

Double line Block instruments are provided for Block section SNM-PVP and SNM-VBL vide GR 14.01(a) and the 'OFF' aspect of IB Home signal is the authority for the Loco pilots of all trains to enter into the block section vides GR 14.08(b) (iv).

The Station Master on duty is responsible of the Block instruments and the keys of the instruments must be under personal custody of the SM on duty vide GR 5.01(4), 14.12(1) 9A) (1) and GR 5.08.

iii) Co-operative/Non Co-operative: Non Co-operative.

iv) Provision of block telephone: Telephone attached to block instrument connecting the adjacent block stations concerned.

v) Custody of keys of block instrument: Block instrument is provided with double locking. One key will be with SM and other key will be with S&T maintainer.

4.0 **SYSTEM OF SIGNALLING AND INTERLOCKING:**

4.1.0 a) Standard of Interlocking:

This Station is provided with Standard-III Electronic Interlocking.

b)Type of signals:

Multiple Aspect Colour Light Signals. The aspects and indications of the MACLS is governed by GR.3.08 (4) (b).

c) The Station is provided with central Electronic Interlocking (EI). All signals and points are electrically operated from the central Panel / VDU provided at SM's Office.

d) Method of operation:

Central Panel/VDU is provided in the Station Master's office to electrically control all signals and points.

e) Provision of Axle counter/Track circuits on running lines:

Track circuits are provided in the yard as 1AT, $1T_1$, $1T_2$, 2AT, 15T UP IBS, 16 T DN IBS, 14AT, 14T, 21AT, 21BT, 23AT, 23BT, 25BT, L1T1, $L1T_2$, $L1T_3$, $L2T_1$, $L2T_2$, $L2T_3$, $L3T_1$, $L3T_2$, $L3T_3$, L4T1,

$L4T_2$,$L4T_3$,22AT, 22BT, 24T,26AT,26BT, 13AT, 13T, $4T_1$, $4T_2$ and 4AT. HASSDAC are provided for SNM-VBL on UP line as UDAXT, DN line as DRAXT and SNM-PVP on UP line as URAXT, DN line as DDAXT. Analog axle counter provided in rear of S2/C2 towards VBL end due to presence of Girder Bridge. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel/VDU at SM's office. When a signal is cleared the route indication 'Yellow' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.

Axle Counter :

For section: SNM-PVP:- A pair of digital axle counter is provided between **SNM-PVP** on DN line, one just beyond DN advanced starter No.14 of SNM and another one on 14AXT for proving DN IB section between **SNM-PVP** and one just beyond DN IB Home signal No. 16 of SNM and another near DN BSLB of PVP for proving DN LVV for section SNM-PVP. Another pair of digital axle counter is provided between PVP-SNM on UP line, one just beyond Up advanced starter No.13 of PVP and another one on 11AXT for proving UP IB section between SNM-PVP and one just beyond UP IB Home signal No. 13 of PVP and another near UP BSLB of SNM for proving UP LVV for section SNM-PVP.

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

For section SNM-VBL:-

A pair of digital axle counter is provided between SNM-VBL on UP line, one just beyond UP advance starter signal no 30 and another one on 13AXT for proving UP IB section between SNM-VBL and one just be on UP home signal no 15 of SNM and another near first facing point of VBL for proving UP LVV for section SNM-VBL. Another pair of digital axel counter is provided between VBL-SNM on DN line, one just be on DN advance starter signal no 24 of VBL and another one on 24AXT for proving DN IB section between VBL-SNM and one just be on DN home signal no 26 of VBL and another near first facing point of SNM for proving DN LVV for section VBL- SNM.

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

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the last vehicle has arrived complete at the receiving station by exchanging Private Number then resetting to be complied with. (Details of resetting procedure given in APPENDIX-'B' under para 26.0 of this SWR).

In case of failure of Axle Counter/ Track circuit the clearance of loop lines and concerned point zone and main lines will be ensured by physical check by the SM on duty and train shall be admitted as per GR.3.69 and SR there to.

NOTE:

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

Axle counter will exhibit Red Light when track is occupied and White light when track is clear. There will be no track indication when any route is not set.

f) Calling-on signals/IBS: Calling-on signals are provided below Home signals (i.e. in both Up & Down directions) as per GR.3.13 (1) (b), (2) (3) (4) & (6) (b). IBS is not applicable to this station.

g) The control Panel is provided with SM's key which shall always remain in the custody of the Station Master on duty for control of points, signals and crank handles control etc in terms of SR 3.36.03(a).

h) A two position switch is provided on the control panel through which SM on duty can select the mode of operation (i.e. from Panel or VDU). The position of all points, signals and running lines are available in the Panel/VDU. Remainder Block collars are provided for use on push button which shall be placed on the point button and /or route button to prevent operation of the button in case of concerned line is blocked. The VDU is provided with SM's key user name and password which shall always remain with the personal memory of the Station Master on duty.

i) **CRANK HANDLE:** When any point fails to operate normally by the Route Setting operation through Panel/VDU it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-2.19.

CH-1	21A/B
CH-2	22A/B;
CH-3	23A/B, 26A/B
CH-4	24A/B, 25A/B.

(The details of standby operation from VDU is given under Appendix-'B')

These crank handles are interlocked with the signaling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals are not taken 'OFF' and the route is not locked for whatever reasons. Crank Handle can be released by pressing common 'TRANS' push button and concerned Crank handle control push button simultaneously. When the keys are taken out no signal can be taken 'OFF' over the particular route on the points nominated by the crank handle. This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points.

The failure of motor operated points must be ensured by physical checking that there is no obstruction. SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency Crank handle register shall be maintained by the SM on duty at the station as per Para 2.19 of the Operating Manual. Correct setting, clamping and padlocking of the points devolve on the SM on duty.

In case of failure of motor point, it should be promptly reported to the concerned signal maintainer/signal inspector for immediate rectification.

4.1.1 TAKING OFF CALLING-ON SIGNAL:

Miniature color 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 and Yellow light when taken "OFF". A calling-on signal, will be taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line. Before taking 'OFF' Calling on signal during failure of track circuit the route and clearance of the track over which the train will be admitted must be checked physically by SM

on duty. Calling-on signal C-4 can be taken off after 2minutes time delay on occupation of track circuit 4AT or 2AT. Calling-on signal C-2 is released by 4 A/B/C or C-4 A/B/C.
(The detailed procedure is given in Appendix-B)

4.1.2 SHUNT SIGNALS: Shunt back signals Sh-3 (A-D) and Sh-6 (A-B) are provided at PVP end and VBL end respectively for back shunting purpose.

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

Relay room is provided with two independent locks. The key of one lock shall be in the personnel custody of Station Master on duty and the key of other lock shall be in the custody of S&T Maintainer. In the event of necessity such as for attending failure, or regular maintenance, on being requisitioned by S&T maintainer, SM shall hand over the key to the Maintainer with proper acknowledgement in the Relay room key register. On completion of the work, maintainer shall lock the relay room by using both the keys separately and designated key should be handed over to the Station Master. The details of the transaction is to be properly recorded in the Relay room key register maintained at the station and duly signed by the SM and Maintainer respectively vide OM 2015 Para No. 13.16.

4.3 **(A)POWER SUPPLY**

i) CLS Auto Change Over panel with Auto change over switch is provided in the SM's room with the three power supplies viz UP AT, DN AT and local power supply for changing the switch to the required supply position. Luminous indicator's are provided above the circuit breaker for each supply to indicate the availability of the supplies.

ii) Normally the rotary switch will be kept towards UP AT or DN AT position. Whenever the power block is to be given on the line, the on duty SM must ascertain the power is available on the other AT e.g if power block is to be given on the UP line, DN AT must be available and vice versa.

iii) During the non-availability of both the AT supplies SM on duty shall keep the rotary change over switch towards the local supply to feed available local supply to the Installation.

iv) In case of failure of one of the AT supply without any power block, on duty SM has to check whether the Miniature Circuit Breaker has tripped. (Three Miniature Circuit Breakers are provided in the changeover switch board, one for each supply and their normal position is UP and when tripped, it goes to DN). In case of failure of both AT supplies, the local supplies shall be utilized by operating the switch. If the Miniature Circuit Breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and a message shall be given to the AEEE/GEN and CTFO/GEN for prompt rectification.

v) For IPS system that provides power supply /back up to the signaling system of EI. Selection output is taken from CLS Auto change over Panel.

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 SM/SS for the following fault conditions:-

a) 50% DOD (Depth of Discharge) of Battery. In this condition Audio/Visual alarm comes which can be acknowledged with audio cut off.

b) 60% DOD (Depth of Discharge), which warns for emergency. The Alarm for this condition is same as for condition 1.

c) 70% DOD (Depth of Discharge), which signals system, shut down. In this condition Signal feed cut off and all DC-DC converters continue working. Audio alarm will continue till power supply restored.

d) Any of the Module fails, which calls for "Call S&T".

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

5. **TELECOMMUNICATIONS :**

a. Telephone attached to Double line Block Instruments is connected to adjacent stations on either side.
b. Hot line communication is provided between adjacent stations i.e., PVP and VBL Stations.
c. The station is connected to VZM-Tie line 'B' cabin control Circuit.
d. Telephone communication is provided between Station Master on duty to UP CH location.
e. Telephone communication is provided with Lc gate RV-290, RV-291, RV-292, RV-295, RV-299 & RV-297.
f. 25w VHF set is provided at the station**.**
g. The station is connected to 2AXT zone verification box in the location box provided near S-4.
h. Auto phone is provided at the station.
i. Provision of TPC (Traction Power Control) and TLC (Traction Loco Control) for the VZM-SPRD "B" Cabin Section.
j. The communication is provided with station and DN IB post at KM: 393/26-24 between SNM-PVP.
k. A magneto phone is provided on UP IB post at KM: 407.911 between SNM-VBL.

6. SYSTEM OF TRAIN WORKING:

6.1 **DUTIES OF TRAIN WORKING STAFF**

The movement of trains is controlled by section controller on duty whose orders shall be complied with provided they do not contravene any provisions of General Rules, Subsidiary Rules, Station Working Rules, Block working manual and any 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 Stations and shall be responsible to ensure that there is no undue delay to train operation in general.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:

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

Complement of Staff Staff working in each shift

SS/SM	1
POINTS MAN	1

The above staff shall work as per roster issued from time to time by Divisional Railway Manager (P) and these rosters shall be conspicuously displayed in the Station Supdt's office.

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

The SM on duty is responsible to ascertain the clearance of the nominated line between first facing point and advanced starter signal in each direction.

6.1.3 **ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER**

Any staff before taking of independent charge of duties connected to train working or any staff who is away from his duty for the period of 15days or more shall sign in the assurance register which is token of having understood the contents. However, in the event of any corrections or modifications in the SWR is involved, the assurance of the staff who even is entrusted the work of train passing duty shall be obtained afresh in the assurance register by the in-charge of the station before they are allowed to work vide SR 5.01.02.

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

a. The conditions laid in GR 8.03(2)(a) (b) (c) (ii) shall be complied with the SM on duty before line is considered clear and line clear is granted.

b. Before granting a line clear for a train the SM on duty shall personally ensure that the reception signals pertaining to a train are in the 'ON' position and burning properly vide GR 3.49(4).

c. Line shall not be considered clear and line clear shall not be granted to an UP train unless:

i) Whole of the last preceding UP train has arrived completely.

ii) UP Home signal /calling-on signal No. 1A/B and/or C-1A/B is put back to 'ON' and

iii) Line is clear up to BSLB.

iv) Ensure about the closure of all intervening LC gates.

d. Line shall not be considered clear and line clear shall not be granted to a DN train unless:

i) Whole of the last preceding DN train has arrived completely.

ii) DN Home signal /calling-on signal No. 4A/B/C and/or C-4A/B/C is put back to 'ON'and

iii) Line is clear up to point No. 22A.

iv) Ensure about the closure of all intervening LC gates.

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:

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station etc., the points in rear should be immediately set against the blocked line except when shunting or any other movement is required to be done immediately in that direction on that line vide GR 3.38(2). Lever/block collars placed on the concerned lever/button of the blocked line vide SR 5.04.01 and SR 3.51.06 shall be followed.

Safety point alarm:

1. On complete arrival of a train at the station, the SM has to set the points immediately against the occupied line.
2. In case of 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.
3. 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.
4. On setting the points against the occupied line, the RED indication will disappear.

If all the lines of a station happen to be blocked, when line clear has been granted to a train, the points should be set for the line occupied by a stabled load or a goods train in that order so that, in case of mishap, the chance of causalities are minimized [Refer SR.3.51.06 (b)]. In case of all the lines are occupied by Coaching train, points should be set for a loop line to negotiate with the speed of incoming train would be reduced which in turn, would minimize the consequences/causalities.

6.2.1.2 RECEPTION OF TRAIN ON BLOCKED LINE:

Under unavoidable circumstances, whenever trains are to be admitted on an obstructed line, it is necessary that the trains re piloted 'IN' on a written authority given by the station master on duty and delivered by a competent railway servant to the driver of the train or by taking 'OFF' of calling 'ON' signal and the rules laid down in GR 5.09 and SRs 5.09.01 and GR 3.69 shall be followed.

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

Reception of trains on a non signaled line is governed by GR 5.10 and SR 5.10.01.

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:

Dispatch of trains from non signaled line is governed by GR 5.11 and SR 5.11.01.

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

To dispatch a train from common loop GR 5.12 and SR 5.12.1 shall be observed.

6.2.1.6 ANY OTHER SPECIAL CONDITIONS SHOULD BE MENTIONED GIVING REFERENCE TO THE G&SR: NIL

6.3 <u>CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:-</u>

i) Conditions for taking off approach signals are governed by GR 3.40(1) (a), 3.40(3) (b) and relevant SRs there to.

ii) calling-on signal may be taken off for the admission of train in the event of failure of Home signal in terms of SR 3.69.02(a) or for the admission of a train on obstructed line in terms of GR 5.09 and SRs thereto.

<u>ADEQUATE DISTANCE</u>: (SIGNAL OVERLAP)

To take off the Home signals for admission of a train, the adequate distance (overlap) as mentioned below shall be kept clear. [Refer GR.3.40 (3) (b) and SR thereto]

CLEARANCE OF ADEQUATE DISTANCE (SIGNAL OVERLAP)

FOR UP TRAINS		
Line No.	From	To
1.	Up common loop starter Signal No.9	Up advanced starter signal No.13 or up to the end of the Sand Hump.
2.	UP Main line starter signal No.11	Up advanced starter signal No.13.
FOR DOWN TRAINS		
1.	DN loop starter Signal No.8	DN advanced starter signal No.14 or up to the end of the sand hump.
2.	DN Main line starter signal No.12	DN advanced starter signal No.14.
3.	DN common loop starter Signal No.10	DN advanced starter signal No.14 or up to the end of the sand hump.

Remarks: However when a route is set leading to the Main line the overlap beyond the starter in that particular direction shall extend up to the advanced starter of the station in that direction.

6.3.1 <u>RESPONSIBILITY OF STATION MASTER FOR RESTORATION OFSIGNALS TO "ON":</u>

Station master should ensure that signal is put back to 'ON' after passage of the train as per GR 3.36(2) (B), and SR 4.17.01.

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

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

1.	Reception of an Up train on line No.4 setting overlap to Sand Hump.	AND	Dispatch of another UP train from line No.3
2.	Reception of a DN train on line No. 4 setting overlap to sand hump.	AND	Dispatch of another DN train either from line No.1 or 2.

3	Reception of a DN train on line No.1 setting overlap to sand hump.	AND	a) Dispatch of another DN train either from line No.2 or 4.

6.5 COMPLETE ARRIVAL OF TRAINS:

(a) The entire block section between SNM-PVP (SNM DN IB & DN IB PVP) and SNM-VBL (SNM UP IB & UP IB VBL) on both Up and Down Lines are monitored by HASSDAC system and the position of the block section whether 'Occupied' or 'Clear' is indicated on Panel/VDU at SM's office. As soon as train enters in to that block section the RED indication appears on Panel/VDU. After whole train clears the block section GREEN indication appears on the Panel/VDU. This confirms the complete arrival of train and the SM on duty shall give 'Train out of Block Section' report on seeing the section clear indication GREEN on the Panel/VDU.

If a train passes through the station without confirming the last vehicle indicator, the Station Master on duty shall advise the station in advance to stop the train for last vehicle verification and he need not to withhold closing of block section in rear. He shall obtain confirmation under exchange of private number about the complete arrival of the train with its last vehicle from the station in advance and subsequent trains may be dispatched.

In case of failure of HASSDAC the SM on duty shall obtain Complete Arrival Certificate from the guard of the train in the Complete Arrival Register (T/1410) maintained at the station for stopping train. For through passing train the SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide SR 4.16.05 that the train arrived complete.

In case a train passes incomplete, action shall be taken as per SR.4.17.02, the "Train out of Block Section" report shall be withheld to the station in rear until complete arrival Certificate is received from the station in advance supported by a private number.

(b) **IB AXLE COUNTERS**: As per procedure detailed in Appendix-B Para No.7 (b) & (c).

6.5.1 DESPATCH OF TRAINS:

(a) To dispatch 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/VDU. He shall suspend all non-isolated shunting and then shall take "OFF" the concerned route starter and advanced starter signal. The 'OFF' aspect of the advanced starter is the authority to proceed into the block section. As soon as the train passes the advanced starter signal, the SM will then send the train entering given section signal to the station in advance.[Refer GR 3.38, 3.42, SR 3.36.04(b), 3.42.04 and BWM 2.07.5(a)]

(b)ISSUE OF CAUTION ORDERS:

Whenever in consequent of the line being under repairs or for any other reasons special precautions are necessary, a caution order detailing the kilometer and speed at which train should run with reasons for taking such precautions shall be handed over to the Guard and Loco pilot in terms of GR 4.09 and SRs thereto.

6.6 TRAINS RUNNING THROUGH:

The procedure detailed in Para 6.4, 6.5 shall be observed. The Station Master is responsible to observe/watch the condition of the vehicles on a passing train and shall wave green hand signal horizontally until anything wrong is noticed on train. For this purpose the Station Master on duty shall stand in such a position that he sees a clear view of the passing train and that his hand signals can clearly be seen by the Loco Pilot and Guard of the train.

He shall also depute the TPM on duty to the other side, for passing the train. The TPM on duty shall wave Green hand signal horizontally. He shall show danger hand signal if he notices anything is wrong and reports the same to the SM on duty.

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 and Subsidiary Rule. [Ref GR 3.42, 4.17 4.42, & SR 4.42.02 (b) (i), (ii), (iii), c & (d)]

6.7 WORKING IN CASE OF FAILURE:

PROCEDURE TO BE FOLLOWED FOR WORKING OF TRAINS DURING FAILURE /SUSPENSION OF INTERLOCKING /SIGNALS/ POINTS:

a. **TRACK CIRCUITS**:

In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.

b. **DEFECTIVE POINTS:**

Procedure prescribed in GR3.77 and relevant SRs shall be followed.

c. **FAILURE OF SIGNALS AND INTERLOCKING:**

In the event of failure of approach stop signals, GR 3.70 and SRs thereto shall be followed.

d. **AXLE COUNTER:**

If the axle counter fails between the block sections, resetting procedure will be adopted as per Para 26.0 of SWR (APP-B) if the axle counter indication does not appear 'GREEN & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional Signal Maintainer /JE/SE (signal) for rectification. If the 2AXT axle counter fails towards VBL end, resetting procedure will be adopted as per procedure.

6.9 PROVISIONS FOR WORKING OF TROLLIES/ MOTORTROLLIES/MATERIAL LORRIES ETC"

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

i) Trolleys, Motor Trolleys, Lorries which are not insulated shall not be allowed to run except on Line clear.

ii) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly.

iii) In all other respects the Working of a light motor trolley shall confirm 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.

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

(7) BLOCKING OF THE LINES:

Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points at either end should immediately be set against the blocked line except during shunting movement. 'Line Block' is to be activated on VDU by SS/SM on duty. A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained.

The stable load or loose vehicles are to be secured to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01]

(8) SHUNTING

8.1 GENERAL PRECAUTIONS.

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block working Manual [Refer GR 3.46, 3.52 to 3.56, 5.13,5.14,5.16 to 5.23, 8.05,8.06, 8.14 and 8.15] with relevant SRs and OM 7.01, 7.07, 7.08, 5.1(2) (B) shall be followed.

NOTE: For any non signaled movement physical verification of the clearance of the crossover points shall be ensured by the Guard/SM on duty for supervising shunting operations.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

i) Shunting is not permitted in face of approaching train towards PVP end.

ii) Due to 1 in 160 DN gradient on DN line near DN IB Signal, no goods train shall be allowed in the rear of a coaching train, if the block section ahead is occupied by a passenger train.

iii) Due to 1 in 150 rising gradient on UP line near UP IB Signal, no passenger train shall be allowed in the block section in rear, if the block section ahead is occupied by a goods train.

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 shunting is prohibited at both ends of the yard vide SR 5.21.01 (c).

8.4 SHUNTING ON SINGLE LINE: NOT APPLICABLE

8.5 SHUNTING ON DOUBLE LINE:

SHUNTING OUT SIDE THE HOME SIGNAL:

The procedure of block back/block forward given in BWM 5.15(1) (b) shall be followed. When line clear has been given, no shunting shall be permitted in the block section in rear. Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and it blocked back vide GR 8.06.

Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and block forward vide GR 8.06(3).

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

-NIL-

9.0 ABNORMAL CONDITION:

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

(i) During partial interruption of communication between the adjacent block station, SR 6.02.06 shall be observed.

(ii) In the event of occupation of block section due to accident or obstruction SR 6.02.05 shall be observed.

(iii) In the event of trains delayed in the block section, GR 6.04 and relevant SRs shall be followed.

(iv) Failure/passing of Intermediate block stop signal at 'ON' position: Nil.

(v) Failure of Axle counter block/BPAC: Procedure to be followed vide GR 14.13 & 14.14.

(vi) Failure of MTRC: Nil.

(b) i. **Procedure for emergency operation of points by Crank Handle.-**

PANEL OPERATIONS:

The detailed Procedure for emergency operation of points by Crank Handle of motor operated points shall be followed.

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading

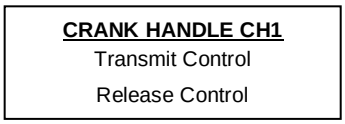
over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'TRANS' push button and concerned Crank handle control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor trolley or light Diesel/electrical engine or tower wagon, indicating the occupancy of the track. It is necessary that SM on duty satisfies himself that the said vehicle has cleared point zone track circuits by observing the track indications of the track on either side of the cross over by positively checking the entrance and exit track circuits are showing occupancy and clearance in accordance with the train movement.

VDU OPERATIONS:

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

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



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

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

ii. **Procedure for emergency operation of points with point zone axle counter/Track circuits failure and emergency route release:**

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to

be pressed for operating the point to 'NORMAL or REVERSE. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose. Each such emergency operation of points is registered by next higher number in the counter provided for this purpose. SM shall ensure sealing of Emergency point operation button after completion of each such operation by S&T staff.

Rules regarding locking of points and damaged points vide GR 3.39 and GR 3.77 to be followed.

(c) Certification of clearance of track before Calling–On Signal operation in initiated:-

Before taking off Calling –On signal during failure of track circuit/axle Counter, the route and the clearance of the track over which train would pass to be verified by SM on duty.

(d) Reporting of failure of points, Track circuits/axle counter and interlocking:-

Whenever there is a failure of points, Track circuits/axle counter or any interlocking gear at station, the failure should be reported by SM on duty to the concerned Signaling Maintenance Staff on duty responsible for attending to the failure and only after receipt of the written memo from the Signaling Maintainer for rectification of the fault, SM should restore the normal working. The entries in failure register to be done with message to the section controller.

9.1 TOTAL FAILURE OF COMMUNICATION:

a) In the event of total failure of communication trains shell be worked in accordance with the rules laid in 6.02.03
b) During partial interruption of communication the laid down in SR 6.02.06 shell be followed.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

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

Last stop signal of the station shall not be taken off but an authority to pass the last stop signal at 'ON' shall be issued on T/369 (3b) noting the private number & the identification number received from the block station in advance on form T/D/602 vide SR 6.02.01.

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

In the event of necessity to send a train to assist the crippled trains, SR 6.02.05 shall be followed.

10. VISIBILITY TEST OBJECT:

The lights of signal No.9 for UP direction on Line No.4 and Signal No.8 for DN direction of line No.1 are ear marked to serve as visibility test object during day and night vide GR 3.61.2(b)(iii)

11. ESSENTIAL EQUIPMENT AT THE STATION:

(Details are given in Appendix-'E')

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

In case of thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco Pilot of an approaching train the locality of a signal, the SM on duty at station shall arrange for signaling in terms of General Rules 3.61 and Subsidiary Rules thereto. The assurance of the staff shall be obtained in the month of OCTOBER every year in the Fog Signal Register vide SR.3.61 as a token of their acknowledgement in fog signaling Rules.

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 labor but regular employees of the railway.

12.1 STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

12.2 INSTRUCTIONS:

This register contains the following parts.

Part. - I: Particulars of fog signal men posted at the station from time to time.

Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.

Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.

Part – IV: Particulars of issue and testing of fog signals at the station.

a. In charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects.

b. 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.

APPENDICES:

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

APPENDIX-A

WORKING OF LEVEL CROSSING GATE No.RV-295 between SNM-VBL

1. **GENERA**L:

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	:	RV-295
2	Engineering or Traffic Gate	:	Engineering gate (”B’ Class)
3	Under control of Station Master/ Permanent Way inspector	:	SSE [P]/VBL
4	Location at KM	:	403/33-35,(UP), 403/34-36(DN)
5	At Station	:	---
6	In between station	:	SNM-VBL
7	BG/MG/NG	:	BG
8	Single line/Double line/Multiple line	:	Double Line
9	Normal Position	:	Open to Road Traffic
10	Inter Locked/Non-Interlocked	:	Interlocked
11	Means of interlocked	:	Gate signals
12	Provision of Gate signal at KMs	:	403/40-42(UP), 403/23-25(DN)
13	Signaling arrangement	:	MACLS
14	Means of communication- Telephone/ Bell etc	:	Telephone connected with SNM station
15	Width of level crossing gate	:	9 Mtrs
16	Type of road {NH/SH/Other}	:	Others
17	Name of road	:	Municipal Road
18	Metalled/Non-Metalled	:	Non-Metalled
19	Approach road	:	Non-Metalled
20	Width of the road	:	7.0 Mtrs
21	Angle of road crossing [In case of the skew gates]	:	90^0
22	Road gradients {if any} North-East side South-West side	:	 1 in 30 1 in 30
23	Road alignment {Straight/Curve}	:	curve
24	Provision of height gauge	:	Provided
25	Type of Barriers	:	Lifting Barriers/Sliding Boom
26	Length of check rail	:	9.0 Mtrs
27	Road surface in L-Xing gate	:	Tar road
28	Length of Rumble strip /speed breakers	:	7.0 Mtrs
29	Road signs	:	Provided
30	Speed breaker indication board	:	Provided
31	TVU	:	24646/03-10-2018
32	Censes next due on	:	02-10-2021
33	Demarcation for placement of detonators	:	Provided
34	No. of Gate men working	:	TWO
35	Nearest Railway Medical Assistance	:	VBL
36	Nearest private Medical Assistance {If Any}	:	Bobbili
37	List of equipment available Yes/No	:	Yes

1.2 **EQUIPMENTS**:

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

1.3 **RECORDS TO BE KEPT AT GATE LODGE**:

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

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

1.4 DUTIES OF GATEMEN:

[1] **ALERTNESS**:

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

[2]**POSITION DURING PASSAGE OF TRAINS**.

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

i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.

ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.

iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.

iv) He shall keep the whistle slung around his neck from a cord.

[3] **ROUTINE DUTIES OF GATEMAN**:

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

ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if it is necessary to leave the gate in emergency, he must close and lock the gates against road traffic, before leaving the gate.

iii) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.

iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, handing chains, hanging battery, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

v) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.

vi) If lifting barriers get damages or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

vii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.

viii) At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot report the defect at the next station.

ix) Gateman shall wear badge and prescribed uniform while on duty at level Crossing gate.

x) Gateman shall ensure that he is having competency certificate in his possession while on duty.

xi) Gateman shall work the gate as per gate working instructions and remain well conversant with this instruction.

xii) Gateman shall ensure that equipment supplies at the gate are in good order and ready for immediate use.

xiii) Gateman shall see that the channel for the flange of the wheel is kept clean.

xiv) Gateman shall keep the road surface well watered and rammed in case of un-metalled roads.

xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

xvi) Gateman 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.

xvii) Gateman shall prevent trees passing by persons or cattle to the maximum extent.

[4] **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN**:

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

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

ii) He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

iii) If Loco pilot/guard fails to take notice, gateman shall not stop, immediately inform the station master if connected on telephone, to take appropriate action under exchange of private number.

iv) In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains parting.

v) He shall endeavours to attract the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and DN motion as high and as low as possible.

vi) In case of trains does not stop, gate man shall immediately inform the station master, if connected on telephone, to take appropriate action under exchange of private number.

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

i) In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.

ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the station master on duty, if connected on telephone, regarding the defects/obstructions at the gate, under exchange of private number.

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

The gateman shall protect the line as under:

A] ON DOUBLE LINE SECTION:

i) If the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.

ii) Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.

iii) Gateman shall then proceed to protect the gate along with detonators, and red flags by day and red hand signal lamp by night.

iv) Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs on BG and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs on BG from the level crossing gate and place 3 detonators on the track 10 Mtrs apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.

v) Thereafter he shall proceed on the other line, showing red hand signal, similarly place the detonators as described in Para above and return to the site of obstruction, picking up the intermediate detonator on his way back.

vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at the distance as far away as he can go.

viii) Thereafter, he shall stop the approaching train by waving his `red flag by day red hand signal lamp by night repeatedly.

B) Other action to be taken by Gateman:

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

ii) If the gate is broken by a road vehicle, which is fouling the track, or if lifting barriers/leaf gates or any other obstruction at the gate, the Gateman shall take immediate action.

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

6. Mode of Operation:

Working of 'B' class LC Gate at KM 403/11-12 (RV-295)

1. Key 'G' is obtained from the winch after closing the Gate releases lever 2 GF.
2. 2GF when reversed effects Boom locking and releases Key 'G1'
3. Key 'G1' inserted in EKT 1 and turned.
4. Key 'G1' in with lever 3GF and 4GF releases concerned UP Gate Stop Signal (1GS) and DN Gate Stop Signal (2GS) respectively.
5. Key 'G1' can be extracted from EKT1 after putting back lever 3GF and 4GF.
6. Dead approach locking with time delay of 60 sec's is to be provided.
7. In case if any damage to LC gate and sliding barrier the Gate man shall immediately arrange to raise back concerned signals.
8. After passage of UP/DN trains, LC shall be released automatically after sequential occupation and clearance of Track circuits.
9. In case of failure leading to Non-extraction of normal key used for operation, an emergency key provided in EKT-4 (In locked and sealed Red Box) for opening of LC gate. Extraction of emergency key shall put back both UP/DN signals to ON.
10. Sliding boom arrangement is provided as stand by option during failure of normal working of LC gate.
11. Approach warning to be provided which is effective from DN IBS track of VBL in DN direction and UP Adv. Starter track of UP direction.

7. Working of LC Gate:

i) Immediately after departure of the train, Station Master shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.

ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the Station Master to the gateman, under exchange of private number, as soon as he receives train entering section advice from the dispatching station.

iii) If the actual running time of the train from either end of the section is less than 10 minutes, Station Master will convey this advice to the gateman before obtaining/granting line clear.

iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

8. **Failure of Telephonic Communication**:

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

i) If the telephone falls at the gate connected with the station at the despatching end, Station Master shall issue a caution order to the Loco Pilot of the departing train.

ii) Station Master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.

iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.

iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.

v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.

vi) Station Master will also advise the gateman through/Patrolman/Loco Pilot of the first train that the telephone has become defective.

vii) Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.

viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

9. **Working of sliding boom barrier (in case of failure/Defectiveness of lifting barrier)**

Key 'S' when extracted from lock free EKT-3 makes road signal danger and activates road hooter. Key 'S' unlocks sliding barrier 1.

1 Sliding barrier 1 to be rolled across the road up to the lock post key (Chained with barrier). Releases the lock plunger and key SB 1. Key SB 1 when extracted lock the sliding barrier 1.

2 Similarly after unlocking the pad lock sliding barrier 2 to be rolled across the road up to the lock post key (chained with barrier). Along with key SB 1 inserted, releases the lock plunger and key SB 2 when extracted locks the sliding barrier 2 and key SB 1.

3 Finally released key SB 2 is transmitted electrically through EKT 2, to clear UP/DN signals after operation of concerned switches (3GS & 4GS) for UP/DN signals respectively.

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

i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.

ii) If Emergency Key is available at the gate lodge/cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.

iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.

iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.

v) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.

vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train in the block section from his end.

vii) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

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

ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

11. **Failure of the Gate Key with the gate in open condition**:

i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.

ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/despatch of trains as prescribed for non-interlocked gates, should be adopted.

iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.

iv) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.

v) He shall also advise the Station Master at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.

vi) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

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

viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

12. **Defective Gate Signals**:

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

ii) If the Gate or the Gate Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position.

iii) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.

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

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

vi) Station Master on duty will issue a caution order to the Loco Pilot of a departing train.

vii) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train in the block section from his end.

viii) Station Master shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.

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

13. **Obstruction at the Gate**:

i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.

ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.

iii) Immediately after this, the gateman shall advise the Station Master on duty regarding the defects/obstructions at the gate, under exchange of private number.

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

v) Gateman shall then rush with detonators, fuses and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).

vi) Thereafter he shall protect the gate from the other direction also.

vii) He shall note down the particulars of the road vehicle, name of the Loco Pilot, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.

viii) The Station Master shall also inform the Station Master at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.

ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, of the gate is broken, but is clear of any obstruction.

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

xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

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

14. **Obstruction on the Track near Level Crossing Gate**:

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

WORKING OF LEVEL CROSSING GATE No.RV-290 between SNM-VBL

1. GENERAL:

1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

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

1	Number of Level Crossing Gate	:	RV 290
2	Engineering or Traffic Gate	:	Engineering Gate ("C"Class)
3	Under control of Station Master/ Permanent Way inspector	:	SSE/P/VBL
4	Location at KM	:	396/33-397/1(UP), 396/34-397/02(DN)
5	At Station	:	---
6	In between station	:	SNM-PVP
7	BG/MG/NG	:	BG
8	Single line/Double line/Multiple line	:	Double Line
9	Normal Position	:	Open to Road Traffic
10	Inter Locked/Non-Interlocked	:	Interlocked
11	Means of interlocked	:	Interlocked
12	Provision of Gate signal at KMs	:	Up Line : 396/27-25 Dn Line : 397/8-10
13	Signaling arrangement	:	MACLS
14	Means of communication- Telephone/ Bell etc	:	Telephone
15	Width of level crossing gate	:	8.5Mtrs
16	Type of road {NH/SH/Other}	:	Others
17	Name of road	:	Municipal Road
18	Metalled/Non-Metalled	:	Non
19	Approach road	:	Non
20	Width of the road	:	5.50 M.
21	Angle of road crossing [In case of the skew gates]	:	90°
22	Road gradients {if any} North-East side South-West side	:	 (a)North east side 1 in 30. (b) South-west side 1 in 30
23	Road alignment {Straight/Curve} North-East side South-West side	:	Curve
24	Provision of height gauge	:	Provided.
25	Type of Barriers	:	Lifting Barrier/Sliding Boom
26	Length of check rail	:	7.50 Mtrs
27	Road surface in L-Xing gate	:	Tar raod
28	Length of Rumble strip /speed breakers	:	5.50 Mtrs
29	Road signs	:	provided
30	Speed breaker indication board	:	Provided
31	TVU	:	37663/ 10-2018
32	Census next due on	:	10/2021
33	Demarcation for placement of Detonators	:	Provided
34	No. of Gatemen working	:	Two
35	Nearest Medical Assistance	:	VBL
36	Nearest Private Medical Assistance available (if any)	:	Bobbili
37	List of equipment available Yes/No	:	Yes

1.2 **EQUIPMENTS**:

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

1.3 **RECORDS TO BE KEPT AT GATE LODGE**:

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

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

1.4 DUTIES OF GATEMEN:

[1] **ALERTNESS**:

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

[2] **POSITION DURING PASSAGE OF TRAINS**.

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

i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.

ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.

iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.

iv) He shall keep the whistle slung around his neck from a cord.

[3] **ROUTINE DUTIES OF GATEMAN**:

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

ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if it is necessary to leave the gate in emergency, he must close and lock the gates against road traffic, before leaving the gate.

iii) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.

iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, handing chains, hanging battery, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

v) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.

vi) If lifting barriers get damages or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

vii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.

viii) At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier/leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot report the defect at the next station.

ix) Gateman shall wear badge and prescribed uniform while on duty at level Crossing gate.

x) Gateman shall ensure that he is having competency certificate in his possession while on duty.

xi) Gateman shall work the gate as per gate working instructions and remain well conversant with this instruction.

xii) Gateman shall ensure that equipment supplies at the gate are in good order and ready for immediate use.

xiii) Gateman shall see that the channel for the flange of the wheel is kept clean.

xiv) Gateman shall keep the road surface well watered and rammed in case of un-metalled roads.

xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

xvi) Gateman 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.

xvii) Gateman shall prevent trees passing by persons or cattle to the maximum extent.

[4] **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN**:

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

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

ii) He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

iii) If Loco pilot/guard fails to take notice, gateman shall not stop, immediately inform the station master if connected on telephone, to take appropriate action under exchange of private number.

iv) In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains parting.

v) He shall endeavours to attract the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and DN motion as high and as low as possible.

vi) In case of trains does not stop, gate man shall immediately inform the station master, if connected on telephone, to take appropriate action under exchange of private number.

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

i) In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.

ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the station master on duty, if connected on telephone, regarding the defects/obstructions at the gate, under exchange of private number.

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

The gateman shall protect the line as under:

A] ON DOUBLE LINE SECTION:

i) If the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.

ii) Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.

iii) Gateman shall then proceed to protect the gate along with detonators, and red flags by day and red hand signal lamp by night.

iv) Gateman shall precede exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs on BG and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs on BG from the level crossing gate and place 3 detonators on the track 10 Mtrs apart. Having thus

protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.

v) Thereafter he shall proceed on the other line, showing red hand signal, similarly place the detonators as described in Para above and return to the site of obstruction, picking up the intermediate detonator on his way back.

vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at the distance as far away as he can go.

viii) Thereafter, he shall stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

B) Other action to be taken by Gateman:

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

ii) If the gate is broken by a road vehicle, which is fouling the track, or if lifting barriers/leaf gates or any other obstruction at the gate, the Gateman shall take immediate action.

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

6. Mode of Operation:

Working of 'C' class LC Gate RV-290 (Electrically Operated)

i) For closure and opening of LC gate barriers, gate working rules based on users manual to be followed.

i) After the gate is closed and locked, when switch 'GS1' and 'GS2' is reversed will clear UP & DN gate stop signal respectively.

ii) For opening of LC gate, after passage of train, switch 'GS1' and 'GS2' is put back to normal.

iii) In case of emergency, Gate man will inform to SM/SNM with exchanging PN. Then key 'B' (Chained with crank handle) is extracted from EKT (Electro mechanically free), provided with gate lodge (In locked & sealed red box with glass cover). For manual operation of lifting barriers by crank handling.

iv) Extraction of key-'B' shall put back all the relevant signals to 'ON'

v) Dead approach locking of 60 seconds with back locking is provided.

7. Working of LC Gate:

i) Immediately after departure of the train, Station Master shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.

ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the Station Master to the gateman, under exchange of private number, as soon as he receives train entering section advice from the dispatching station.

iii) If the actual running time of the train from either end of the section is less than 10 minutes, Station Master will convey this advice to the gateman before obtaining/granting line clear.

iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

8. **Failure of Telephonic Communication**:

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

i) If the telephone falls at the gate connected with the station at the despatching end, Station Master shall issue a caution order to the Loco Pilot of the departing train.

ii) Station Master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.

iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.

iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.

v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.

vi) Station Master will also advise the gateman through/Patrolman/Loco Pilot of the first train that the telephone has become defective.

vii) Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.

viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

9. **Working of sliding boom barrier (in case of failure/Defectiveness of lifting barrier)**

1 Key 'S' when extracted from lock free EKT-1 makes road signal danger and activates road hooter. Key 'S' unlocks sliding barrier 1.

2 Sliding barrier 1 to be rolled across the road up to the lock post key (Chained with barrier). Releases the lock plunger and key SB 1. Key SB 1 when extracted lock the sliding barrier 1.

3 Similarly after unlocking the pad lock sliding barrier 2 to be rolled across the road up to the lock post key (chained with barrier). Along with key SB 1 inserted, releases the lock plunger and key SB 2 when extracted locks the sliding barrier 2 and key SB 1.

4 Finally released key SB 2 is to be inserted in EKT-2 in conjunction switch 'GS' reversed for taking 'OFF' concerned signals.

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

i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.

ii) If Emergency Key is available at the gate lodge/cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.

iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.

iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.

v) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.

vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train in the block section from his end.

vii) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

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

ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

11. **Failure of the Gate Key with the gate in open condition**:

i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.

ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/despatch of trains as prescribed for non-interlocked gates, should be adopted.

iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.

iv) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.

v) He shall also advise the Station Master at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.

vi) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

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

viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

12. **Defective Gate Signals**:

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

ii) If the Gate or the Gate Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position.

iii) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.

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

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

vi) Station Master on duty will issue a caution order to the Loco Pilot of a departing train.

vii) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train in the block section from his end.

viii) Station Master shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.

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

13. **Obstruction at the Gate**:

i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.

ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.

iii) Immediately after this, the gateman shall advise the Station Master on duty regarding the defects/obstructions at the gate, under exchange of private number.

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

v) Gateman shall then rush with detonators, fuses and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).

vi) Thereafter he shall protect the gate from the other direction also.

vii) He shall note down the particulars of the road vehicle, name of the Loco Pilot, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.

viii) The Station Master shall also inform the Station Master at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.

ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, of the gate is broken, but is clear of any obstruction.

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

xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

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

14. **Obstruction on the Track near Level Crossing Gate**:

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

WORKING OF LEVEL CROSSING GATES No. RV-292

1. **GENERAL**:

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	:	RV-292
2	Engineering or Traffic Gate	:	Engineering gate “C” Class
3	Under control of Station Master/ Permanent Way inspector	:	SSE [P]/VBL
4	Location at KM	:	400/5-7(UP), 400/6-8(DN)
5	At Station	:	---
6	In between station	:	PVP-SNM
7	BG/MG/NG	:	BG
8	Single line/Double line/Multiple line	:	Double Line
9	Normal Position	:	Closed to Road Traffic
10	Inter Locked/Non-Interlocked	:	Non-Interlocked
11	Means of interlocked	:	Non-interlocked
12	Provision of Gate signal at KMs	:	Nil
13	Signaling arrangement	:	Nil
14	Means of communication- Telephone/ Bell etc	:	Telephone connected with SNM station
15	Width of level crossing gate	:	7.50Mtrs
16	Type of road {NH/SH/Other}	:	Others
17	Name of road	:	Village
18	Metalled/Non-Metalled	:	C.C. Block
19	Approach road	:	Metal
20	Width of the road	:	5.50Mtrs
21	Angle of road crossing [In case of the skew gates]	:	90^0
22	Road gradients {if any} North-East side South-West side	: 	 1 in 30 1 in 30
23	Road alignment {Straight/Curve}	:	straight
24	Provision of height gauge	:	straight
25	Type of Barriers	:	Lifting Barriers
26	Length of check rail	:	7.50Mtrs
27	Road surface in L-Xing gate	:	level
28	Length of Rumble strip /speed breakers	:	5.50 Mtrs
29	Road signs	:	Provided
30	Speed breaker indication board	:	Provided
31	TVU	:	37663/2018
32	Censes next due on	:	10/2021
33	Demarcation for placement of detonators	:	MARKED
34	No. of Gate men working	:	TWO
35	Nearest Railway Medical Assistance	:	RAYAGADA
36	Nearest private Medical Assistance {If Any}	:	PARVATIPURAM
37	List of equipment available Yes/No	:	Yes

1.2 **EQUIPMENTS**:

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

1.3 **RECORDS TO BE KEPT AT GATE LODGE**:

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

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

1.4 **DUTIES OF GATEMEN**:

[1] **ALERTNESS**:

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

[2] **POSITION DURING PASSAGE OF TRAINS**:

During passage of trains, gate man will stand in the manner indicated below: -

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

[3] **ROUTINE DUTIES OF GATEMAN**:

i) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunshine.
ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
iii) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, handing chains, hanging battery, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
v) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.
vi) If lifting barriers get damages or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
vii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position.
viii) At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot report the defect at the next station.
ix) Gateman shall wear badge and prescribed uniform while on duty at level Crossing gate.
x) Gateman shall ensure that he is having competency certificate in his possession while on duty.
xi) Gateman shall work the gate as per gate working instructions and remain well conversant with this instruction.
xii) Gateman shall ensure that equipment a supply at the gate is in good order and ready for immediate use.
xiii) Gateman shall see that the channel for the flange of the wheel is kept clean.
xiv) Gateman shall keep the road surface well-watered and rammed in case of un-metalled roads.
xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
xvi) Gateman 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.
xvii) Gateman shall prevent trees passing by persons or cattle to the maximum extent.

[4] **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN**:

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

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

ii) He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

iii) If Loco pilot/guard fails to take notice, gateman shall not stop, immediately inform the station master if connected on telephone, to take appropriate action under exchange of private number.

iv) In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains parting.

v) He shall endeavours to attract the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and DN motion as high and as low as possible.

vi) In case of trains does not stop, gate man shall immediately inform the station master, if connected on telephone, to take appropriate action under exchange of private number.

[5] **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING**:

i) In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.

ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the station master on duty, if connected on telephone, regarding the defects/obstructions at the gate, under exchange of private number.

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

The gateman shall protect the line as under:

A] ON DOUBLE LINE SECTION:

i) If the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.

ii) Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.

iii) Gateman shall then proceed to protect the gate along with detonators, and red flags by day and red hand signal lamp by night.

iv) Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs from the level crossing gate and place 3 detonators on the track 10 Mtrs apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.

v) Thereafter he shall proceed on the other line, showing red hand signal, similarly place the detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at the distance as far away as he can go.

viii) Thereafter, he shall stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

[B] OTHER ACTION TO BE TAKEN BY GATE MAN:

i) At night gate man shall light two hand signal lamps and take action to exhibit red light and protect the lines as per described in sub para [A] above.

ii) If the gate is broken by the road vehicle which is fouling the track, or if lifting barrier or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gate man shall take immediate action.

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

[**6] Mode of Operation**:

i. The normal position of the 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 before permitting each train to enter into the block section shall ask GK on the telephone by giving a Private Number whether; gate is closed against road traffic for the passage of train. The GK only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the SM in assurance of gate being closed & locked against road traffic.

iii. The SM shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.

iv. When the gateman desires to open the gate for passage of road traffic he should ensure that:

(1) He has not exchanged any private number with the station as per (ii) above, or

(2) If he has exchanged PN with the SM, the whole of the train with last vehicle indicator has passed over the level crossing gate and the SM has not exchanged PN with him for any other movement immediately in rear of that train or on the adjacent line.

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.

[7] **Exchange of Private Number**:

(i) Gateman must seek permission from Station Master for opening the gate.

At L.C gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gate man shall exchange private number with SM and confirm that the train has passed completely from his gate,

thereafter; the SM may allow the gate man to open the gate. In such situation the SM before dispatching or giving line clear for any other train in the block section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the gate man is taken through exchange of private number.

(ii) Suitable entries shall be made by the Station Master in the Train Signal Register, Private Number Book and Log Book in red ink.

(iii) After passage of road traffic, the gateman shall close the gate and confirm this to Station Master under exchange of private number.

(iv) Before any train is allowed to enter the block section again, the Station Master must ensure that private number from the gateman has been received in token of his having closed the gate.

(v) Gate once closed for road traffic must on no account be opened unless this is authorized by the Station Master, under exchange of private number.

[8] **Failure of Telephonic Communication:**

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

(i) Station Master at the dispatching end shall issue a caution order to the drive of the departing train.

(ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.

(iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signalled by the gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and depute his Assistant Loco Pilot to see the condition of the gate. IF the gate is closed, the Assistant Loco Pilot will give the all right signal and if the gate is not closed the Assistant Loco Pilot must close the gate and then give all right signal. In the absence of the Assistant Loco Pilot, the Loco Pilot may take the assistance of Assistant Guard / Guard.

(iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.

(v) The Station Master at the dispatching end shall then issue a caution order to the LP before dispatching a train in the block section from his end.

(vi) Station Master shall also advise the gateman through gang man / patrolman or Loco Pilot of the first train that the telephone has become defective.

(vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.

viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

[9] **Failure of Lifting Barriers** :

(i) When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers do not foul the track.

(ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.

(iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.

(iv) After securing the gate against road traffic, he shall show green hand signal flag by day and green light by night to the drive of the approaching train.

(v) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.

(vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the drive before dispatching a train in the block section from his end.

(vii) He should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the same at the earliest.

(viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection / fit memo for the same.

[10] **Obstruction at the Gate**:

(i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.

(ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding defects / obstruction at the gate, under exchange of private number.

(iii) Station Master on duty shall be advised to put the reception / departure signals back to 'ON' position, if taken 'OFF' for a train.

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

(v) He shall then rush with detonators, fuses and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).

(vi) Thereafter he shall protect the gate from the other direction also.

(vii) He shall note down the particulars of the road vehicle, name of the Loco Pilot, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers are not fouling the track.

(viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not do dispatch any train in the block section from his end, until the track has been cleared of all obstruction.

(ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

(x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.

(xi) Gateman shall secure the gate against road traffic by means of safety cabins and padlocks and there after exhibit green hand signal of the gate is not obstructed.

(xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

(xiii) Normal working will be resumed only after maintenance staff to rectify the defective lifting barriers and issue reconnection / fit memo for the same.

[11] **Obstruction on the Track near Level Crossing**:

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

WORKING OF LEVEL CROSSING GATES No.RV-297

1. **GENERAL**:

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	:	RV-297
2	Engineering or Traffic Gate	:	Engineering gate “C” Class
3	Under control of Station Master/ Permanent Way inspector	:	SSE [P]/VBL
4	Location at KM	:	405/7-9(UP), 405/8-10(DN)
5	At Station	:	---
6	In between station	:	SNM-VBL
7	BG/MG/NG	:	BG
8	Single line/Double line/Multiple line	:	Double Line
9	Normal Position	:	Closed to Road Traffic
10	Inter Locked/Non-Interlocked	:	Non-Interlocked
11	Means of interlocked	:	Non-interlocked
12	Provision of Gate signal at KMs	:	NO
13	Signaling arrangement	:	NO
14	Means of communication- Telephone/ Bell etc	:	Telephone with SNM station
15	Width of level crossing gate	:	7.50Mtrs
16	Type of road {NH/SH/Other}	:	Others
17	Name of road	:	village
18	Metalled/Non-Metalled	:	C.C. Block
19	Approach road	:	Metal
20	Width of the road	:	5.50Mtrs
21	Angle of road crossing [In case of the skew gates]	:	90^0
22	Road gradients {if any} North-East side South-West side	:	 1 in 30 1 in 30
23	Road alignment{Straight/Curve} North/ east side (ii) South/west side	:	 straight straight
24	Provision of height gauge	:	Yes
25	Type of Barriers	:	Lifting Barriers
26	Length of check rail	:	9.5Mtrs
27	Road surface in L-Xing gate	:	level
28	Length of Rumble strip /speed breakers	:	5.5Mtrs
29	Road signs	:	Provided
30	Speed breaker indication board	:	Provided
31	TVU	:	6283/NOV-2018
32	Censes next due on	:	NOV/2021
33	Demarcation for placement of detonators	:	Provided
34	No. of Gate men working	:	TWO
35	Nearest Railway Medical Assistance	:	RAYAGADA
36	Nearest private Medical Assistance {If Any}	:	VBL
37	List of equipment available Yes/No	:	Yes

1.2 EQUIPMENTS:

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

1.3 **RECORDS TO BE KEPT AT GATE LODGE**:

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

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

1.4 **DUTIES OF GATEMEN**:

[1] **ALERTNESS**:

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

[2] **POSITION DURING PASSAGE OF TRAINS**:

During passage of trains, gate man will stand in the manner indicated below: -

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

[3] **ROUTINE DUTIES OF GATEMAN**:

i) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunshine.
ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
iii) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, handing chains, hanging battery, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
v) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.
vi) If lifting barriers get damages or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
vii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position.
viii) At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot report the defect at the next station.
ix) Gateman shall wear badge and prescribed uniform while on duty at level Crossing gate.
x) Gateman shall ensure that he is having competency certificate in his possession while on duty.
xi) Gateman shall work the gate as per gate working instructions and remain well conversant with this instruction.
xii) Gateman shall ensure that equipment a supply at the gate is in good order and ready for immediate use.
xiii) Gateman shall see that the channel for the flange of the wheel is kept clean.

xiv) Gateman shall keep the road surface well-watered and rammed in case of un-metalled roads.

xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

xvi) Gateman 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.

xvii) Gateman shall prevent trees passing by persons or cattle to the maximum extent.

[4] **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN**:

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

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

ii) He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

iii) If Loco pilot/guard fails to take notice, gateman shall not stop, immediately inform the station master if connected on telephone, to take appropriate action under exchange of private number.

iv) In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains parting.

v) He shall endeavours to attract the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and DN motion as high and as low as possible.

vi) In case of trains does not stop, gate man shall immediately inform the station master, if connected on telephone, to take appropriate action under exchange of private number.

[5] **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING**:

i) In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.

ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the station master on duty, if connected on telephone, regarding the defects/obstructions at the gate, under exchange of private number.

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

The gateman shall protect the line as under:

A] ON DOUBLE LINE SECTION:

i) If the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.

ii) Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.

iii) Gateman shall then proceed to protect the gate along with detonators, and red flags by day and red hand signal lamp by night.

iv) Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs from the level crossing gate and place 3 detonators on the track 10 Mtrs apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.

[**6] Mode of Operation**:

i. The normal position of the 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 before permitting each train to enter into the block section shall ask GK on the telephone by giving a Private Number whether; gate is closed against road traffic for the passage of train. The GK only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the SM in assurance of gate being closed & locked against road traffic.

iii. The SM shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.

iv. When the gateman desires to open the gate for passage of road traffic he should ensure that:

(1) He has not exchanged any private number with the station as per (ii) above, or

(2) If he has exchanged PN with the SM, the whole of the train with last vehicle indicator has passed over the level crossing gate and the SM has not exchanged PN with him for any other movement immediately in rear of that train or on the adjacent line.

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.

[7] **Exchange of Private Number**:

(i) Gateman must seek permission from Station Master for opening the gate.

At L.C gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gate man shall exchange private number with SM and confirm that the train has passed completely from his gate, thereafter; the SM may allow the gate man to open the gate. In such situation the SM before dispatching or giving line clear for any other train in the block section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the gate man is taken through exchange of private number.

(ii) Suitable entries shall be made by the Station Master in the Train Signal Register, Private Number Book and Log Book in red ink.

(iii) After passage of road traffic, the gateman shall close the gate and confirm this to Station Master under exchange of private number.

(iv) Before any train is allowed to enter the block section again, the Station Master must ensure that private number from the gateman has been received in token of his having closed the gate.

[8] **Failure of Telephonic Communication:**

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

(i) Station Master at the dispatching end shall issue a caution order to the drive of the departing train.

(ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.

(iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signalled by the gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and depute his Assistant Loco Pilot to see the condition of the gate. IF the gate is closed, the Assistant Loco Pilot will give the all right signal and if the gate is not closed the Assistant Loco Pilot must close the gate and then give all right signal. In the absence of the Assistant Loco Pilot, the Loco Pilot may take the assistance of Assistant Guard / Guard.

(iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.

(v) The Station Master at the dispatching end shall then issue a caution order to the diver before dispatching a train in the block section from his end.

(vi) Station Master shall also advise the gateman through gang man / patrolman or Loco Pilot of the first train that the telephone has become defective.

(vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.

(viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

[9] **Failure of Lifting Barriers** :

(i) When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers do not foul the track.

(ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.

(iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.

(iv) After securing the gate against road traffic, he shall show green hand signal flag by day and green light by night to the drive of the approaching train.

(v) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.

(vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the drive before dispatching a train in the block section from his end.

(vii) He should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the same at the earliest.

(viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection / fit memo for the same.

[10] **Obstruction at the Gate**:

(i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.

(ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding defects / obstruction at the gate, under exchange of private number.

(iii) Station Master on duty shall be advised to put the reception / departure signals back to 'ON' position, if taken 'OFF' for a train.

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

(v) He shall then rush with detonators, fuses and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).

(vi) Thereafter he shall protect the gate from the other direction also.

(vii) He shall note down the particulars of the road vehicle, name of the Loco Pilot, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers are not fouling the track.

(ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

(x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.

(xi) Gateman shall secure the gate against road traffic by means of safety cabins and padlocks and there after exhibit green hand signal of the gate is not obstructed.

(xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

(xiii) Normal working will be resumed only after maintenance staff to rectify the defective lifting barriers and issue reconnection / fit memo for the same.

[11] **Obstruction on the Track near Level Crossing**:

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

v) Thereafter he shall proceed on the other line, showing red hand signal, similarly place the detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at the distance as far away as he can go.

viii) Thereafter, he shall stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

[B] OTHER ACTION TO BE TAKEN BY GATE MAN:

i) At night gate man shall light two hand signal lamps and take action to exhibit red light and protect the lines as per described in sub para [A] above.

ii) If the gate is broken by the road vehicle which is fouling the track, or if lifting barrier or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gate man shall take immediate action.

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

WORKING OF LEVEL CROSSING GATES No.RV-291

1. **GENERA**L:

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	:	RV-291
2	Engineering or Traffic Gate	:	Engineering gate “C” Class
3	Under control of Station Master/ Permanent Way inspector	:	SSE [P]/VBL
4	Location at KM	:	398/29-31(UP), 398/30-32(DN)
5	At Station	:	SNM
6	In between station	:	SNM-PVP
7	BG/MG/NG	:	BG
8	Single line/Double line/Multiple line	:	Double Line
9	Normal Position	:	Closed to Road Traffic
10	Inter Locked/Non-Interlocked	:	Non-Interlocked
11	Means of interlocked	:	Non-interlocked
12	Provision of Gate signal at KMs	:	NO
13	Signaling arrangement	:	NO
14	Means of communication- Telephone/ Bell etc	:	Telephone with SNM station
15	Width of level crossing gate	:	7.50Mtrs
16	Type of road {NH/SH/Other}	:	Others
17	Name of road	:	village
18	Metalled/Non-Metalled	:	C.C. Block
19	Approach road	:	Metal
20	Width of the road	:	5.50Mtrs
21	Angle of road crossing [In case of the skew gates]	:	90^0
22	Road gradients {if any} North-East side South-West side	: 	 1 in 30 1 in 30
23	Road alignment{Straight/Curve} North/ east side (ii) South/west side	: 	 straight straight
24	Provision of height gauge	:	Yes
25	Type of Barriers	:	Lifting Barriers
26	Length of check rail	:	7.50Mtrs
27	Road surface in L-Xing gate	:	level
28	Length of Rumble strip /speed breakers	:	5.5Mtrs
29	Road signs	:	Provided
30	Speed breaker indication board	:	Provided
31	TVU	:	10919/ 08/2018
32	Censes next due on	:	08/ 2021
33	Demarcation for placement of detonators	:	Marked
34	No. of Gate men working	:	TWO
35	Nearest Railway Medical Assistance	:	RAYAGADA
36	Nearest private Medical Assistance {If Any}	:	PARVATIPURAM
37	List of equipment available Yes/No	:	Yes

1.2 EQUIPMENTS:

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

1.3 **RECORDS TO BE KEPT AT GATE LODGE**:

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

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

1.4 **DUTIES OF GATEMEN**:

[1] **ALERTNESS**:

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

[2] **POSITION DURING PASSAGE OF TRAINS**:

During passage of trains, gate man will stand in the manner indicated below: -

i) Gate man will stand attentively in front of the gate-lodge facing the approaching train.

ii) In daytime, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.

iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.

iv) He shall keep the whistle slung around his neck from a cord.

[3] **ROUTINE DUTIES OF GATEMAN**:

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

ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.

iii) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.

iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, handing chains, hanging battery, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

v) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.

vi) If lifting barriers get damages or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

vii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position.

viii) At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot report the defect at the next station.

ix) Gateman shall wear badge and prescribed uniform while on duty at level Crossing gate.

x) Gateman shall ensure that he is having competency certificate in his possession while on duty.

xi) Gateman shall work the gate as per gate working instructions and remain well conversant with this instruction.

xii) Gateman shall ensure that equipment a supply at the gate is in good order and ready for immediate use.

xiii) Gateman shall see that the channel for the flange of the wheel is kept clean.

xiv) Gateman shall keep the road surface well-watered and rammed in case of un-metalled roads.

xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

xvi) Gateman 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.

xvii) Gateman shall prevent trees passing by persons or cattle to the maximum extent.

[4] **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN**:

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

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

ii) He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

iii) If Loco pilot/guard fails to take notice, gateman shall not stop, immediately inform the station master if connected on telephone, to take appropriate action under exchange of private number.

iv) In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains parting.

v) He shall endeavours to attract the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and DN motion as high and as low as possible.

vi) In case of trains does not stop, gate man shall immediately inform the station master, if connected on telephone, to take appropriate action under exchange of private number.

[5] **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING**:

i) In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.

ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the station master on duty, if connected on telephone, regarding the defects/obstructions at the gate, under exchange of private number.

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

The gateman shall protect the line as under:

A] ON DOUBLE LINE SECTION:

i) If the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.

ii) Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.

iii) Gateman shall then proceed to protect the gate along with detonators, and red flags by day and red hand signal lamp by night.

iv) Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs from the level crossing gate and place 3 detonators on the track 10 Mtrs apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.

v) Thereafter he shall proceed on the other line, showing red hand signal, similarly place the detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at the distance as far away as he can go.

viii) Thereafter, he shall stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

[B] OTHER ACTION TO BE TAKEN BY GATE MAN:

i) At night gate man shall light two hand signal lamps and take action to exhibit red light and protect the lines as per described in sub para [A] above.

ii) If the gate is broken by the road vehicle which is fouling the track, or if lifting barrier or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gate man shall take immediate action.

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

[**6] Mode of Operation**:

i) The SM before permitting each train to enter into the block section shall ask GK on the telephone by giving a Private Number whether; gate is closed against road traffic for the passage of train. The GK only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the SM in assurance of gate being closed & locked against road traffic.

ii) The SM shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.

iii) When the gateman desires to open the gate for passage of road traffic he should ensure that:

(1) He has not exchanged any private number with the station as per (ii) above, or

(2) If he has exchanged PN with the SM, the whole of the train with last vehicle indicator has passed over the level crossing gate and the SM has not exchanged PN with him for any other movement immediately in rear of that train or on the adjacent line.

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.

[7] **Exchange of Private Number**:

(i) Gateman must seek permission from Station Master for opening the gate.

At L.C gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gate man shall exchange private number with SM and confirm that the train has passed completely from his gate, thereafter; the SM may allow the gate man to open the gate. In such situation the SM before dispatching or giving line clear for any other train in the block section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the gate man is taken through exchange of private number.

(ii) Suitable entries shall be made by the Station Master in the Train Signal Register, Private Number Book and Log Book in red ink.

(iii) After passage of road traffic, the gateman shall close the gate and confirm this to Station Master under exchange of private number.

(iv) Before any train is allowed to enter the block section again, the Station Master must ensure that private number from the gateman has been received in token of his having closed the gate.

(v) Gate once closed for road traffic must on no account be opened unless this is authorized by the Station Master, under exchange of private number.

[8] **Failure of Telephonic Communication:**

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

(i) Station Master at the dispatching end shall issue a caution order to the drive of the departing train.

(ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.

(iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signalled by the gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and depute his Assistant Loco Pilot to see the condition of the gate. IF the gate is closed, the Assistant Loco Pilot will give the all right signal and if the gate is not closed the Assistant Loco Pilot must close the gate and then give all right signal. In the absence of the Assistant Loco Pilot, the Loco Pilot may take the assistance of Assistant Guard / Guard.

(iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.

(v) The Station Master at the dispatching end shall then issue a caution order to the diver before dispatching a train in the block section from his end.

(vi) Station Master shall also advise the gateman through gang man / patrolman or Loco Pilot of the first train that the telephone has become defective.

(vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.

(viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

[9] **Failure of Lifting Barriers** :

(i) When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers do not foul the track.

(ii) He shall immediately fix red banner flag by day and red light by night on the post at

that end first from which the train is approaching and then at the other end.

(iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.

(iv) After securing the gate against road traffic, he shall show green hand signal flag by day and green light by night to the drive of the approaching train.

(v) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.

(vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the drive before dispatching a train in the block section from his end.

(vii) He should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the same at the earliest.

(viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection / fit memo for the same.

[10] **Obstruction at the Gate**:

(i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.

(ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding defects / obstruction at the gate, under exchange of private number.

(iii) Station Master on duty shall be advised to put the reception / departure signals back to 'ON' position, if taken 'OFF' for a train.

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

(v) He shall then rush with detonators, fuses and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).

(vi) Thereafter he shall protect the gate from the other direction also.

(vii) He shall note down the particulars of the road vehicle, name of the Loco Pilot, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers are not fouling the track.

(viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not do dispatch any train in the block section from his end, until the track has been cleared of all obstruction.

(ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

(x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.

(xi) Gateman shall secure the gate against road traffic by means of safety cabins and padlocks and there after exhibit green hand signal of the gate is not obstructed.

(xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

(xiii) Normal working will be resumed only after maintenance staff to rectify the defective lifting barriers and issue reconnection / fit memo for the same.

[11] **Obstruction on the Track near Level Crossing**:

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

WORKING OF LEVEL CROSSING GATES NO.RV-299

1. GENERAL :

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	:	RV-299
2	Engineering or Traffic Gate	:	Engineering gate “C” Class
3	Under control of Station Master/ Permanent Way inspector	:	SSE [P]/VBL
4	Location at KM	:	407/1-2
5	At Station	:	---
6	In between station	:	SNM-VBL
7	BG/MG/NG	:	BG
8	Single line/Double line/Multiple line	:	Double Line
9	Normal Position	:	Closed to Road Traffic
10	Inter Locked/Non-Interlocked	:	Non-Interlocked
11	Means of interlocked	:	Non-interlocked
12	Provision of Gate signal at KMs	:	NO
13	Signaling arrangement	:	NO
14	Means of communication- Telephone/ Bell etc	:	Telephone connected with SNM station
15	Width of level crossing gate	:	7.50Mtrs
16	Type of road {NH/SH/Other}	:	Others
17	Name of road	:	Municipal Road
18	Metalled/Non-Metalled	:	Non-metalled
19	Approach road	:	Non-metalled
20	Width of the road	:	5.50Mtrs
21	Angle of road crossing [In case of the skew gates]	:	90^0
22	Road gradients {if any} North-East side South-West side	:	 North-East side: 1 in 30 South-West side: 1 in 30
23	Road alignment{Straight/Curve} North/ east side (ii) South/west side	:	 straight straight
24	Provision of height gauge	:	Yes
25	Type of Barriers	:	Lifting Barriers
26	Length of check rail	:	7.50Mtrs
27	Road surface in L-Xing gate	:	Curve
28	Length of Rumble strip /speed breakers	:	5.5Mtrs
29	Road signs	:	Provided
30	Speed breaker indication board	:	Provided
31	TVU	:	516/ No-2018
32	Censes next due on	:	Nov- 2021
33	Demarcation for placement of detonators	:	Marked
34	No. of Gate men working	:	TWO
35	Nearest Railway Medical Assistance	:	VBL
36	Nearest private Medical Assistance {If Any}	:	VBL
37	List of equipment available Yes/No	:	Yes

1.2 EQUIPMENTS:

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

1.3 **RECORDS TO BE KEPT AT GATE LODGE**:

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

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

1.4 **DUTIES OF GATEMEN**:

[1] **ALERTNESS**:

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

[2] **POSITION DURING PASSAGE OF TRAINS**:

During passage of trains, gate man will stand in the manner indicated below: -

i) Gate man will stand attentively in front of the gate-lodge facing the approaching train.

ii) In daytime, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.

iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.

iv) He shall keep the whistle slung around his neck from a cord.

[3] **ROUTINE DUTIES OF GATEMAN**:

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

ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.

iii) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.

iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, handing chains, hanging battery, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

v) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie-talkie or in any other way.

vi) If lifting barriers get damages or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

vii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position.

viii) At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot report the defect at the next station.

ix) Gateman shall wear badge and prescribed uniform while on duty at level Crossing gate.

x) Gateman shall ensure that he is having competency certificate in his possession while on duty.

xi) Gateman shall work the gate as per gate working instructions and remain well conversant with this instruction.

xii) Gateman shall ensure that equipment a supply at the gate is in good order and ready for immediate use.

xiii) Gateman shall see that the channel for the flange of the wheel is kept clean.

xiv) Gateman shall keep the road surface well-watered and rammed in case of un-metalled roads.

xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

xvi) Gateman 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.

xvii) Gateman shall prevent trees passing by persons or cattle to the maximum extent.

[4] **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN**:

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

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

ii) He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

iii) If Loco pilot/guard fails to take notice, gateman shall not stop, immediately inform the station master if connected on telephone, to take appropriate action under exchange of private number.

iv) In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains parting.

v) He shall endeavours to attract the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and DN motion as high and as low as possible.

vi) In case of trains does not stop, gate man shall immediately inform the station master, if connected on telephone, to take appropriate action under exchange of private number.

[5] **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING**:

i) In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.

ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the station master on duty, if connected on telephone, regarding the defects/obstructions at the gate, under exchange of private number.

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

The gateman shall protect the line as under:

A] ON DOUBLE LINE SECTION:

i) If the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.

ii) Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.

iii) Gateman shall then proceed to protect the gate along with detonators, and red flags by day and red hand signal lamp by night.

iv) Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs from the level crossing gate and place 3 detonators on the track 10 Mtrs apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.

v) Thereafter he shall proceed on the other line, showing red hand signal, similarly place the detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at the distance as far away as he can go.

viii) Thereafter, he shall stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

[B] OTHER ACTION TO BE TAKEN BY GATE MAN:

i) At night gate man shall light two hand signal lamps and take action to exhibit red light and protect the lines as per described in sub para [A] above.

ii) If the gate is broken by the road vehicle which is fouling the track, or if lifting barrier or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gate man shall take immediate action.

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

[**6] Mode of Operation**:

The normal position of the 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.

i) The SM before permitting each train to enter into the block section shall ask GK on the telephone by giving a Private Number whether; gate is closed against road traffic for the passage of train. The GK only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the SM in assurance of gate being closed & locked against road traffic.

ii) The SM shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.

iii) When the gateman desires to open the gate for passage of road traffic he should ensure that:

(1) He has not exchanged any private number with the station as per (ii) above, or

(2) If he has exchanged PN with the SM, the whole of the train with last vehicle indicator has passed over the level crossing gate and the SM has not exchanged PN with him for any other movement immediately in rear of that train or on the adjacent line.

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.

[7] **Exchange of Private Number**:

(i) Gateman must seek permission from Station Master for opening the gate.

At L.C gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gate man shall exchange private number with SM and confirm that

the train has passed completely from his gate, thereafter; the SM may allow the gate man to open the gate. In such situation the SM before dispatching or giving line clear for any other train in the block section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the gate man is taken through exchange of private number.

(ii) Suitable entries shall be made by the Station Master in the Train Signal Register, Private Number Book and Log Book in red ink.

(iii) After passage of road traffic, the gateman shall close the gate and confirm this to Station Master under exchange of private number.

(iv) Before any train is allowed to enter the block section again, the Station Master must ensure that private number from the gateman has been received in token of his having closed the gate.

(v) Gate once closed for road traffic must on no account be opened unless this is authorized by the Station Master, under exchange of private number.

[8] **Failure of Telephonic Communication:**

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

(i) Station Master at the dispatching end shall issue a caution order to the drive of the departing train.

(ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.

(iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signalled by the gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and depute his Assistant Loco Pilot to see the condition of the gate. IF the gate is closed, the Assistant Loco Pilot will give the all right signal and if the gate is not closed the Assistant Loco Pilot must close the gate and then give all right signal. In the absence of the Assistant Loco Pilot, the Loco Pilot may take the assistance of Assistant Guard / Guard.

(iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.

(v) The Station Master at the dispatching end shall then issue a caution order to the diver before dispatching a train in the block section from his end.

(vi) Station Master shall also advise the gateman through gang man / patrolman or Loco Pilot of the first train that the telephone has become defective.

(vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.

(viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

[9] **Failure of Lifting Barriers** :

(i) When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers do not foul the track.

(ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.

(iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.

(iv) After securing the gate against road traffic, he shall show green hand signal flag by day and green light by night to the drive of the approaching train.

(v) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.

(vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the drive before dispatching a train in the block section from his end.

(vii) He should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the same at the earliest.

(viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection / fit memo for the same.

[10] **Obstruction at the Gate**:

(i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.

(ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding defects / obstruction at the gate, under exchange of private number.

(iii) Station Master on duty shall be advised to put the reception / departure signals back to 'ON' position, if taken 'OFF' for a train.

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

(v) He shall then rush with detonators, fuses and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).

(vi) Thereafter he shall protect the gate from the other direction also.

(vii) He shall note down the particulars of the road vehicle, name of the Loco Pilot, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers are not fouling the track.

(viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not do dispatch any train in the block section from his end, until the track has been cleared of all obstruction.

(ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

(x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.

(xi) Gateman shall secure the gate against road traffic by means of safety cabins and padlocks and there after exhibit green hand signal of the gate is not obstructed.

(xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

(xiii) Normal working will be resumed only after maintenance staff to rectify the defective lifting barriers and issue reconnection / fit memo for the same.

[11] **Obstruction on the Track near Level Crossing**:

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

APPENDIX 'B'

DETAILS OF SIGNALLING AND INTERLOCKING INSTALLATION AND COMMUNICATION ARRANGEMENTS AT SITANAGARAM STATION

1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALATION:

This is a 'B' Class Station with Standard-III interlocking with route setting type panel. The points and signals etc are power operated from a composite miniature 'DOMINO TYPE' central panel and VDU installed in the Station Master's office. This Station is equipped with multi aspect colour light signaling. The SGE type Double Line block instruments are provided in the SM panel room for section SNM-PVP & SNM-VBL.

1.1. DISCRIPTION OF PANEL:

The yard layout is depicted on the panel/VDU and the panel/VDU is fixed parallel to the track so that when the Station Master faces the panel/VDU, the yard drawing on the panel/VDU corresponds to the actual field lay out. A Visual Display Unit (Computer) is provided in the SM's office as a standby option.

(The description and the function of Visual Display Unit is given in APPENDIX-'B1')

1.2. POINT PUSH BUTTONS:

Points are normally operated automatically along with route setting operation. However required points can also be operated individually. For this point push buttons BLACK in colour are fitted over the point layout on the panel board. The individual operation of electric point machine is controlled by these point push buttons in conjunction with the point group button (Black with Red dot) (Normal) or (Reverse) as per requirement, fitted on the top of the panel board.

1.2.1 When a point is set and locked correctly in NORMAL position, a 'white' steady strip light indication on straight line appears suggesting that the point is in NORMAL position.

1.2.2 When a point is set and locked in REVERSE position, a white steady strip light indication in reverse appears suggesting that the point is in REVERSE position.

1.2.3 When the points of any route have been correctly set and relevant signal is taken 'OFF', 'RED' indication appears near the points indicating that the concerned points are locked either in NORMAL or REVERSE.

1.2.4 When the points are neither set nor locked either in NORMAL or in REVERSE correctly, the normal and reverse indication will not be there but the indication will start flashing till such time the point is housed and 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 indication will flash during point operation also.

1.2.5 All points over running lines are operated by electric point machines.

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

1.2.7 DESCRIPTION OF POINT PUSH BUTTON:

SL. NO	POINT BUTTON NO.	COLOUR	DESCRIPTION
1	21 A/B	Black	Emergency Cross over point between UP & DN Main lines at PVP end.
2	22 A/B	Black	Emergency Cross over point between UP & DN Main

			lines at VBL end.
3	23 A/B	Black	Cross over point between UP Main Line and common loop line at PVP end.
4	24 A/B	Black	Cross over point between DN Main line and DN loop line No.1 at VBL end.
5	25	Black	Cross over point between DN Main line and DN loop line No.1 at PVP end.
6	26	Black	Cross over point between UP Main line and common loop at VBL end.
7	27	Black	Cross over point between common loop and Engineering siding takes off from both the ends.
7	Point Group button(Normal)	Black with Red dot	Common button for normal operation of points.
8	Point Group button(Reverse)	Black with Red dot	Common button for reverse operation of points.

1.2.8 DESCRIPTION OF POINT GROUP BUTTON:

There are two point group buttons (Black with red dot) at the top of panel one for Normal and one for Reverse operation of points. The button is operated in conjunction with point button to operate the concerned point to the required setting.

1.3 SIGNAL PUSH BUTTON:

These are Red colored push buttons on the panel near that stop signals on the panel. These are operated in conjunction with Route button (White colored) to take 'OFF' the signal.

1.3.1 <u>DESCRIPTION OF SIGNAL BUTTONS:</u>

SL NO	BUTTON NO.	COLOUR	DESCRIPTION
1	C1	Red with white dot	UP calling 'ON' signal for Line No. 3& 4.
2	S1	Red	UP Home signal for Line No. 3& 4.
3	C4	Red with white dot	DN calling 'ON' signal for Line No.1, 2 & 4.
4	S4	Red	DN Home signal for Line No. 1, 2 & 4.
5	SH3	Yellow	Shunt Signal for line no. 1, 2, 3 & 4.
6	SH6	Yellow	Shunt Signal for Line No. 3 & 4.
7	S-8	Red	DN loop starter signal for line no.1
8	S-9	Red	UP common loop starter signal for line no.4
9	S-10	Red	Down common loop starter signal for line no.4
10	S-11	Red	UP Main line starter signal for line no.3
11	S-12	Red	Down main line starter signal on line no.2
12	S-13	Red	UP advanced starter signal
13	S-14	Red	DN advanced starter signal.
14	C-2	Red with white dot	DN calling on signal released by signal 4.
15	S-2	Red	DN Home signal released by signal 4
16	S-16	Red	DN IB Home signal
17	S-15	Red	UP IB Home signal

1.3.2 SIGNAL INDICATION:

The aspects of the signals as obtained at any time are shown on the panel/VDU on the signal indication along side of the track. The ON aspect inactions of stop signals are RED and OFF aspect indications GREEN on panel. The ON aspect of distant signal is yellow and OFF aspect is Green on the panel.

1.4 ROUTE BUTTONS:

1.4.1 Route buttons are provided separately on each running line on the panel for initiation of route. Common route buttons are also provided for taking off starters. An individual route button is provided for taking 'OFF' advanced starter for clearing the signal. It is necessary to operate the signal button and the concerned route button simultaneously for taking OFF concerned signal.

1.4.2 DESCRIPTION OF ROUTE BUTTONS:

SL. NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	L1/1 UN	White with Black dot	Common route button for DN Home signal, DN Calling-on signal, shunt signals SH-3 for line No.1 setting overlap on sand hump.
2	L1/2 UN	White	Route button for DN Home signal for line No.1 setting overlap on Main line.
3	L-2 UN	White	Common Route button for DN Home signal, DN Calling-On signal and shunt signal SH-3 for line No. 2 DN Main line.
4	L3 UN	White	Common route button for UP Home signal, UP Calling-On signal and shunt signal SH-3, SH-6 for line No. 3 UP Main line.
5	L4/1 UN	White with Black dot	Common route button for UP & DN Home signal, UP & DN calling on signal, UP & DN shunt signal for line no. 4 setting overlap on sand hump.
6	L4/2 UN	White	Common route button for UP & DN Home signal for line no. 4 setting overlap on DN main line.
7	14A-UN	White	Common route button for DN starters 8, 10, 12.
8	13A-UN	White	Common route button for UP starters 9, 11.
9	14 UN	White	Route button for DN advanced starter no.14
10	13 UN	White	Route button for UP advanced starter no.13
11	2 UN	White	Common route button for DN Home signal no. 2 & DN calling on signal.
12	16 UN	White	Route button for DN IB home signal.
13	15 UN	White	Route button for UP IB home signal.

1.5 CRANK HANDLE PUSH BUTTONS

SL. No	**Button No**	**Color**	**CONTROL POINTS**
1	CH-1	Blue	To be pressed to extract Crank Handle Key for operation of point No 21A/B.
2	CH-2	Blue	To be pressed to extract Crank Handle Key for operation of point 22A/B.
3	CH-3	Blue	To be pressed to extract Crank Handle Key for operation of point 23A/B, 26A/B.

4	CH-4	Blue	To be pressed to extract Crank Handle Key for operation of point 24A/B, 25A/B.
4	CH-4	Blue	To be pressed to extract Crank Handle Key for operation of point 24A/B, 25A/B.

1.6 MISCELLANEOUS PUSH BUTTONS

SL.No	Button No	Colour	Description
1	SM's EMERGENCY POINT OPERATION KEY	---	This key is to be inserted and operated in the event of Emergency point operation
2	SM's PANEL KEY	---	To lock the control panel to prevent unauthorized operation
3	PANEL PC SWITCH	---	To give control of operation from panel to PC and vice versa
4	ACK FOR SYSTEM FAILURE	GREEN WITH RED DOT	To be pressed to silence system failure buzzer
5	GROUP TRANS PUSH BUTTON	WHITEWITH BLACK DOT	To be pressed to initiate slot of crank handle or LC gate operation along with concerned slot/Crank Handle/L.C.Gate button.
6	GROUP RELEASE PUSH BUTTON	WHITE WITH BLACK DOT	To be pressed to withdraw/Normalize the control of slot of crank handle or LC gate operation along with concerned slot/Crank Handle/L.C.Gate push button.
7	POINT GROUP NORMAL PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate' NORMAL setting of point along with concerned point push button
8	POINT GROUP REVERSE PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate' REVERSE' setting of point along with concerned point push button
9	EMERGENCY ROUTE RELEASE PUSH BUTTON	WHITE WITH RED DOT	To be pressed for emergency Route Release
10	SIGNAL CANCELLATION PUSH BUTTON	RED	To be pressed for canceling a signal which is already taken 'OFF' or to release a route after passage of a train.
11	SIGNAL LAMPFAILURE /POINT FAILURE ACKNOWLEDGEMENT	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp/point failure
12	EMERGENCY POINT OPERATION	BLACK WITH RED DOT	To be pressed to operate the point when concerned point zone track circuit failed.
13	BUTTON HELD ACKNOWLEDGEMENT PUSH BUTTON	WHITE WITH RED DOT	To be pressed for silencing button held buzzer in case of any push button remains pressed after the button is released.
14	UP BLOCK RELEASE	CHOCOLATE WITH	To be pressed for normalizing the Block

	PUSH BUTTON	WHITE DOT	instrument for section PVP-SNM.
15	DN BLOCK RELEASE PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block instrument for section VBL-SNM.
16	DN TRAIN RUN AWAY ACKN. (VBL side)	RED WITH WHITE DOT	To be pressed to silence
17	24 AXT RES PERMISSION BUTTON	YELLOW	To be pressed for granting permission to VBL resetting 24 AXT
18	RESET PERMISSION BUTTON TO VBL	YELLOW	To be pressed for granting permission to VBL.
19	PARMISSION ACK.BUTTON FROM VBL	GREEN	To be pressed when permission received from VBL.
20	DN LVV RESET PUSH BUTTON (VBL Side)	YELLOW	To be pressed for resetting DN LVCD between SNM-VBL.
21	UP TRAIN RUN AWAY ACK. (VBL Side)	RED WITH WHITE DOT	To be pressed when UP train passed on danger for suppressing buzzer.
22	UP IB RESET PUSH BUTTON	RED	To be pressed for resetting UP IB 13AXT portion.
23	PERMISSION ACK. BUTTON FROM VBL FOR 13 AXT/TRAR	GREEN	To be pressed for Acknowledgement if permission received from VBL for 13 AXT/TRAR.
24	UP IB RESET KEY (VBL Side)	---	This key is to be inserted and operated in the event of UP IB 13 AXT resetting.
25	CRANK HANDLE BUTTON FOR CH 1, CH2, CH3 & CH4	BLUE	Individual button for Crank handles transmit or release.
26	RESET BUTTON FOR 2AXT AXLE COUNTER	YELLOW	To be pressed for resetting 2AXT Axle counter.
27	SIDING POINT CONTROL 27	BLUE	To be pressed for Trans or release siding control No.27
28	DN IB RESET KEY (PVP Side)	---	This key is to be inserted and operated in the event of 14 AXT resetting.
29	DN TRAIN RUN AWAY ACK. (PVP Side)	RED WITH WHITE DOT	To be pressed to DN trains passing IB at danger.
30	UP LVV RESET KEY (PVP side)	---	This key is to be inserted and operated in the event of resetting of UP LVV PVP-SNM section.
31	UP TRAIN RUN AWAY ACK (PVP Side)	RED WITH WHITE DOT	To be pressed to suppress buzzer UP train passing danger.
32	DN IB RESET PUSH BUTTON	YELLOW	To be pressed for resetting of 14 AXT.
33	UP LVV RESET PUSH BUTTON	YELLOW	To be pressed for resetting of UP LVV PVP-SNM section.
34	PERMISSION ACK BUTTON FOR UP LVV	RED WITH WHITE DOT	To be pressed for acknowledgement of permission received from PVP for

	(From PVP)		resetting UP LVV.
35	PERMISSION ACK. BUTTON FOR TRAR/14AXT	GREEN	To be pressed to acknowledge permission received from resetting 14 AXAT/TRAR for PVP.
36	RESET BUTTON PERMISSION GRANTED TO PVP FOR TRAR/11 AXT	YELLOW	To be pressed for granting permission to PVP for resetting TRAR/11AXT.
37	DN LVV reset key (VBL end)	---	This key is to be inserted and operated in the event of DN LVV resetting for VBL-SNM section.

1.7 (A) Power supply for all the signaling installations and the auxiliary field units are fed from the following sources of power supply.

i] Normal supply from UP AT/ DN AT connected to OHE traction distribution.[230V 50HZ].

ii] Stand by supply – From AP Transco [Single-phase 230V-50 HZ].

Normal power supply [Single-phase 230V-50 HZ]. to the signaling and interlocking installation at the station is drawn from the traction power sources. Whenever traction power supply fails the SS/SM on duty shall operate the auto change over switch provided in the SM's office connecting the power supply from the healthy sources to the installation.

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

[i] A auto change over panel is provided in the SM's office viz., UP AT, DN AT and local which is kept in auto mode for the 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. Whenever auto mode fails SM has to change to manually for selection.

[ii] Normally the switch will be kept towards UP AT/DN AT position. Whenever power block is to be given on the line the on duty SS/SM on duty must ascertain that power is available on the other AT and change over the switch to the desired position.

NOTE: If power block is to be given on the UP line DN AT must be available and vice versa.

[iii] In case of failure of one of the AT supply without any power block the 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 down and when tripped it goes UP.]

In case of failure of both AT supplies without any power block the local supply shall be utilized by operating the change over switch. If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any means and a message shall be given to concerned SSE[Elect.] and SSE/PSI[OHE] for prompt rectification.

[iv] Whenever there is failure of power supply in one AT the SS/SM on duty shall take prompt action to inform to all concerned for rectification.

The on duty SS/SM himself during each shift shall check & test the availability of power supply on both ATs and make an entry in the station dairy duly initiating for rectification of failure if any.

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

i. Power supply to the signalling installation is fed through Integrated Power Supply System [IPS] installed in the S&T power supply room. The IPS is normally fed through UP AT/DN AT traction power selected SS/SM on duty. Standby power supply is through AP TRANSCO local supply. One change over switch is provided in the SM's room for selection of output of either traction power supply or local power supply. The available traction/local supply is fed to the IPS.

ii. Auto change over switch [which can be operated manually also keeping it in manual mode] which has been provided in SS/SM's room will automatically switch over to the other power supply mode in the absence of any power supply i.e. UP AD/DN AT/Local Power Supply.

iii. The IPS system is connected with battery as a backup power source for safe working during transition of power and in case no 230 AC supply is available due to any reason.

iv. In the event of failures all the sources of 230V 50HZ AC supply, the signalling system shall be fed by power generated by backup battery bank connected to IPS for a limited power of 8 to 10 hours. The health of the battery bank is monitored through one IPS Monitoring Panel provided in the SM's room which shall display the voltage of 110 V.DV battery bank provided as backup source of power supply. Depending up on the health of the battery bank and the system the following indications/alarm will appear on the remote monitoring panel. The indications/alarm, their implications and action to be taken by SS/SM on duty is tabulated below:

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

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

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

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

1.7.1 LED SIGNAL FAILURE INDICATION (RED SIGNAL LAMP MUTING BUTTON: RED WITH WHITE DOT)

Whenever LED signal becomes blank, a miniature flashing red light indication appears along with an audio buzzer indicates signal lamp failure. The SM on duty shall press the signal lamp/point failure Ack. Button, there by the buzzer stops but the red indication lamp becomes steady which continues till either LED signal is replaced /rectified or signal assumes other aspect.

1.8 POINT FAILURE INDICATION (RED)/POINT FAILURE BUZZER/POINTS FAILURE MUTING BUTTON (RED WITH WHITE DOT)

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

1.9 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.

2.0 <u>EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):</u>

The Electronic 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 concerned signal button. After this, first the emergency route release button (White with Red Dot) positioned on the top of the panel to be pressed after breaking seal and subsequently the concerned signal button is to be pressed.

A white light will be lit indicating that the timer is working. After a lapse of 120 seconds the white light along with the white strip of light will disappear suggesting that 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 release by rectifying the fault. It is to be ensured that after every emergency route release operation S&T staff shall seal the emergency route release button.

Each operation of emergency cancellation of route should be recorded in the emergency route release counter register by registering the next higher number. SM on duty shall ensure sealing of emergency route release button by S&T staff after completion of the work.

3.0 <u>EMERGENCY POINT OPERATION (BLACK WITH RED DOT):</u>

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to be pressed for

operating the point to 'NORMAL or REVERSE. Each emergency point operation should be recorded in the emergency point operation counter by registering the next higher number. All such operations and the new number should be recorded in the station diary counter register and in the train signal register. SM shall ensure sealing of Emergency point operation button by S&T staff after completion of such operation.

3.1 EMERGENCY CRANCK HANDLE:

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

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

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

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

3.2 EMERGENCY GATE RELEASE:

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

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

4.0 BUTTON HELD ACKNOWLEDGEMENT (WHITE WITH RED DOT)

All push buttons are self restoring type. A button held acknowledgement push button along with a white light is positioned at the top of the panel. When any point, route or signal button gets stuck up 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 indication of each point; route or signal will continue to glow until the pressed button is normalized. SM on duty shall try to find out the pressed button for normalization or otherwise inform the maintenance staff to rectify.

5.0 OVER LAP TIME RELEASE (WHITE LIGHT)

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

The locked indication starts flashing when the approaching train clears the rear end point zone track and occupies the berthing track. After a time lapse of 120 sec the white flashing light will disappear indicating concerned over lap is free.

6.0 <u>TRACK CIRCUIT:</u>

Line No.1 to 4 are track circuited.

In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in both the directions are also provided. For Calling-on signals (7 Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited. Indications for the above track circuits are available on Panel / VDU at SM's office. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel/VDU at SM's office. When a signal is cleared the route indication 'Yellow' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.

7.0 <u>AXLE COUNTER:</u>

(a) LAST VEHICLE CHECKING DEVICE:

Entire Block Section between SNM-PVP and SNM-VBL are provided with High Availability Digital Axle counters (HASSDAC) for last vehicle verification.

For section: SNM-PVP:-

A pair of HASSDAC is provided between **SNM-PVP** on DN line, one just beyond DN IBS Signal No.16 of SNM and another one on 2T1 track circuit of PVP and named as DDAXT.

For section SNM-VBL:-

A pair of digital axle counter is provided between SNM-VBL on UP line, one just beyond UP IBS signal No 15 of SNM and another one on 1T1 track circuit for VBL and named as UDAXT.

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

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

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office at the receiving station and after being assured by both the SM that the last vehicle has arrived complete at the receiving station by exchanging Private Number, then resetting to be complied with.

On duty SS/SM of SNM will have to inform to grant permission to PVP station of UP LVV and VBL for DN LVV resetting. On receiving permission from the adjacent stations SS/SM on duty SNM has to acknowledge permission Ack. Button for LVV. After acknowledgement of the permission SS/SM on duty of SNM has to turn the LV reset key and press LVV reset button for resetting of LVCD of the failed section.

After resetting the system the reset indication will appear on Panel/VDU. Piloting of first train is mandatory for completion of Axle counter reset. Number changed for resetting shall be recorded in TSR and in the register provided for this purpose.

NOTE:

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

(b) IB Axle Counter:

HASSDAC are provided in 1BH section between SNM-VBL and SNM-PVP. The occupation and clearance of the 1B Axle counter section are indicated on due Panel/VDU by RED & Green indications.

SNM-PVP:

A pair of HASSDAC is provided between SNM-SNM DN IB, one just beyond DN advance starter signal no.14 of SNM and another one beyond 400mtrs of DN IB signal no.16 of SNM and named as 14AXT.

SNM-VBL:

A pair of HASSDAC is provided between SNM-SNM UP IB, one just beyond UP advance starter signal no.13 of SNM and another are beyond 400mtrs of UP IB signals no.15 of SNM and named as 13AXT.

RESETTING OPERATION FOR IB AXLE COUNTER OF IB SECTIONS:

Whenever often arrival of due train, if due IB Axle counter 13AXT & 14AXT does not show clear indication and due section occupation continued to glow, SS/SM on duty shall initial resetting procedure for due IB Axle Counter monitoring due IB section, before initiating resetting procedure, SS/SM on duty shall ensure that the train which has left has been arrived completely at receiving station and IB section is clear of trains.

If the IB portion indication of that particular IB section is showing Red the following action are to be performed by SS/SM on duty at SNM station. Resetting of IB Axle counter shall be carried out at Dispatch end, but between that permission shall be obtained from the receiving station.

After getting permission from the receiving station “Permission received from ‘PVP’ or ‘VBL’ as the case may be indication will appear above the Axle button/icon.

On duty SS/SM at SNM needs to acknowledge the permission by pressing the button/Icon. For 14AXT or 13 AXT as the case may be.

After receiving permission for resetting of IB Axle counter, on duty SS/SM shall press the resetting button of concerned IB reset push button. After completing reset operation the “Prep Reset indication” will appear on the Panel/VDU. Piloting out is mandatory for completion of Axle counter reset operation. Number changed for resetting, shall be recorded in the TSR and in the register provided for this purpose.

(c) **GIRDER BRIDGE No.784 DETECTION AXLE COUNTER (2AXT):**

Analog Axle counter is provided in Girder bridge no. 784. The reception and clearance of the 2AXT axle counter section are indicated in the Panel/VDU by RED & GREEN indications. One detection point is provided on 2AT Track Circuit and another detection point on 4AT Track circuit.

After arrival of the train if 2AXT Axle Counter does not show clear indication and occupation condition to glow, SS/SM on duty SNM shall initiate resetting procedure.

A zone verification box for 2AXT is provided near the Bridge portion for physical verification. SS/SM shall depute a competent staff and the authorized staff has to press the Push button. Yellow indication will appear at 2AXT zone verified and SS/SM on duty shall press the Reset button for 2AXT axle counter.

After completion of reset operation the 2AXT portion will be cleared and clear indication will appear on Panel/VDU.

8.0 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 Station Master on duty is the only authorized person to operate the panel and the panel key must always remain in his custody vide SR 3.36.02 and 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 cancellation button without ASM's key also. However the provisions of SR 3.36.02 shall be followed while replacing signals also.

9.0 CRANK HANDLES:

When any point fails to operate normally by the route setting operation or through the concerned point button through panel, it is inevitable to operate the points with crank handle. Station Master on duty shall personally ensure clamping and padlocking all facing and trailing points enrooted. Crank handles are interlocked with signals and interlocking system. The CH push button (Blue) and group button (White with Black dot) is provided at the top of the panel board.

This button has two indications viz., WHITE and RED. The White indication suggests that the crank handle key is in its interlocked position of the panel. This is called "Crank Handle Key 'IN' indication.

The Red indication suggests that the crank handle key is locked and not free for extraction from RKT. This is called 'Crank handle key locked' indication.

For extracting CH key from RKT SM has to press relevant crank handle push button and group TRANS button simultaneously. The light white light besides the CH button starts flashing. After extraction of CH key from RKT at location box flashing white light disappears. On extraction of CH key from RKT, the points in that particular group cannot be operated from the panel. After completion of point operation, the CH key will be retransmitted to the station electrically by inserting the CH key in RKT in location box and turned. The white flashing indication appears on the Panel board. The flashing will be stopped and steady indication appears on pressing concerned CH button and group release button (White with Black dot).

Crank handle control for operation of points:

SL NO	CRANK HANDLE	CONTROL POINTS
1	CH-1	21 A/B
2	CH-2	22 A/B
3	CH-3	23 A/B, 26A/B
4	CH-4	24 A/B, 25A/B

9.1 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 and route button. As soon as the required points are set to the required position, the concerned signal for the route will clear and a Yellow strip of light will appear on the route confirming that the route is set and locked. The signal 'OFF' indication will appear on the panel.

9.2 TAKING OFF CALLING ON SIGNAL

Miniature color 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 and Miniature Yellow light when taken "OFF". A calling-on signal, will be taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line.

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit (1AT, 4AT, 2AT as the case may be) in rear of the Home signal. When a train occupies the track circuit a RED light strip will appear on the Panel/VDU. The particular route on which train is intended to be received shall be set by operating the point push button and group button individually or by signal and route buttons pressing or by crank handling in the event of failure of operation of points through panel/VDU. After the route is set, the Calling On signal button 'C-1(A-B)/ C-4(A-C) (Red with White dot) shall be pressed (as the case may be) simultaneously along with the concerned route button for 2 to 3 seconds and then released. After a lapse of 120 seconds, the Calling-on signal clears i.e. a Yellow light glows at the concerned Calling-on signal on the panel.

10. RELEASE/ CANCELLATION OF ROUTE.

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

NOTE:-

UP and DN calling on signals, UP and DN advanced starters are to be manually cancelled after the passage of the train to cancel the route.

11. REPLACEMENT OF SIGNALS TO ON:

Signals are replaced to 'ON' automatically by the operation of the first track in advance of 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 signal cancellation button (RED) is to be pressed simultaneously.

12. INTERLOCKING OF SIGNALS/POINTS

All running line points are fitted with point machines which have in built locking and are electrically detected by the relevant Home signals and starters.

12.1 UP & DN IB Home signals are interlocked with respective Double line SGE Block instrument in LINE CLEAR position.

12.2 Home signals are interlocked with respective Double line Block instruments. The Block instruments cannot be made to normal unless the respective Home is put back to 'ON' aspect and the respective block section monitored by axle counter is clear of trains.

12.3 Signals once taken OFF can be put back to ON in case of emergency by pressing the concerned signal button in conjunction with signal cancellation button even when the panel is locked up with Station Master's key.

13. PILOTING OF TRAINS IN TO THE STATION YARD

Whenever Home signal becomes defective, trains can be admitted by taking off calling-on signal. When both home and calling-on failed, then the trains will be piloted 'IN' in terms of SR 3.69.3(a) &(c).

The SM on duty shall nominate a clear line and shall set the nominated route correctly from the panel or shall advise the TPM on duty at station to set the nominate route with the help of crank

handle during failure of points. The TPM shall set the facing and trailing points clamp and padlock the same under the super vision of SM on duty at station in both the cases.

Then the SM on duty shall then hand over the written authority (T/369(3b) to the TPM for "piloting IN" the train. While going towards home signal, the TPM shall check that the points have been correctly set, clamped and padlocked. After the train has been brought to a dead stop at the foot of the home signal the TPM shall hand over the PILOT memo to the Loco Pilot board the engine and display proceed hand signal to pass the defective home signal.

NOTE:

1) The station master on duty shall personally supervise the correct setting, clamping and padlocking of both end points for admission of a train.
2) The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled
3) The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

13.1 PILOTING OF TRAINS OUT OF STATION YARD:

When starter signal has become defective, the SM on duty shall set the points correctly from the panel or advise the TPM to set the concerned points correctly for the outgoing train with the help of crank handle. The TPM on duty shall clamp and padlock both the facing and trailing end points under supervision of SM on duty in both the cases. He shall also advise the gateman to close the level crossing gate/gates on the route for dispatch of a train.

The SM on duty shall then authorize the TPM on duty to hand over the pilot memo T/369(3b) along with other authorities if any to the Loco Pilot of the train. Thereafter, he shall display proceed hand signal at the foot of the starter signal vide subsidiary rule 3.70.01. Incase advanced starter signal becomes defective BWM 3.33 will be followed.

NOTE:

(1)The station master on duty shall personally supervise the correct setting, clamping and padlocking of both end points for dispatching of a train.

(2) The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled.

(3) The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

14. **SHUNTING**: For back shunting SH-3 & SH- 6 are provided in the yard for shunting back to the station yard in desired direction. The particular route on which it is intended to do shunting is to be set by operating the desired points individually from the panel or by pressing the shunt signal button and required route button simultaneously for 2-3 seconds. When the route is set and locked correctly white strip of lights will appear on the route and concerned shunt signal shall display 'OFF' aspect.

15.0 VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAINS INTO THE YARD

In the station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be clear of any obstruction for the passage of any train or for any other movements.

The clearance of the route including overlap must be ensured by the Station Master on duty personally through Luminous indications of the track before any movement of trains are permitted on the concerned route subjected to the other conditions such as locking of points etc.

16.0 CRANK HANDLING EMERGENCY OPERATION OF POINTS

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'TRANS' push button and concerned Crank handle control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor trolley or light Diesel/electrical engine or tower wagon, indicating the occupancy of the track. It is necessary to satisfy SM on duty that the said vehicle has cleared point zone track circuits by observing the track indications on either side of the cross over.

17.0 EMERGENCY OPERATIONS

The following are the instructions for emergency operations.

17.1 CANCELLATION BUTTON AND COUNTERS

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

18.0 LOCKING OF RELAY ROOM:

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

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

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

19.1 Regular maintenance of S&T installations and adherence to the schedules of maintenance is also the mandatory schedules of testing of points, track circuits, point machines, level crossing gates, the associated interlocking apparatus i.e., cables and finally the interlocking functional tests is a must for the safe and satisfactory working of those installations at this Station.

19.2 The tests, checks and replacements etc. including overhauling shall confirm to the schedule of maintenance as indicated in the signal engineering manual as also in the current and extent instruction / circulars on the subject.

20.0 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF A SIGNAL AND INTERLOCKING INSTALLATIONS:

In case of failure of any interlocking gear at the station, the failure report should be communicated by the Station Master on duty through a memo to the Sectional Maintainer and the Signal Engineer of the Section and others as per G& SR 3.51.04 and 3.68.04 and document all such transactions.

20.1 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

Before declaring points as defective the setting of point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the buttons the Panel in term of SR 3.68.04(c).

20.2 RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

After receipt of this information, the sectional maintainer shall attend to the failure after giving a disconnection memo. After rectification of the fault the sectional maintainer shall give a reconnection memo detailing rectification. Thereafter the Station Master 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 gear in terms of SR 3.64.04 (c) and (d).

21.0 PROCEDURE FOR CARRYING OUT PLANNED MAINTANANCE WORK:

Whenever any normal maintenance or special works for heavy renewals etc., are involved, these works should be pre-planned by the signal & Telecommunication field staff and the Inspector of the section should give to the Station Master in writing “Advance Intimation” about this planned work in terms of GR 15.08.01.

22.0 EMERGENCIES:

Notwithstanding anything contained in the aforesaid Paras, when equipment is found to be defective and unsafe for passage of trains, the Signal and Telecom. Staff shall at once suspend the working of such equipment and the associated installation and issue a “Suspension Memo” explaining the seriousness of the defect or damage to the interlocking installation to the Station Master and obtain SM’s acknowledgement. After this, the usual practice of issuing disconnection memo and reconnection memo can follow and the Station Master must promptly act on such messages and take adequate precautions treating the S&T installations as defective and pass trains over the affected interlocking gears according to extant instructions as contain in GR & SR 3.77.

23.0 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF CRANK HANDLE.

23.1 When 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 to RKT.

23.2 The cases of failure of Motor Operated Points should be promptly reported to the Concerned Signal maintainer /Signal Inspector for immediate rectification.

23.3 Whenever an emergency Crank handle is required to be used by a Signal Official for maintenance of work attending to failure, the Signal Official will give a disconnection memo to the Station Master on duty and after making necessary entries in the emergency Crank Handle register, the Station Master on duty; will obtain acknowledgement of the Signal Official in the emergency Crank Handle Register and then handover to him the emergency Crank Handle for the Points concerned. All the concerned Points will be treated as defective till the Emergency Crank Handle is returned back to the Station Master on duty.

23.4 Before parting with the emergency crank handle either for attending failure or for Maintenance work by Signal Maintenance Officials, the Station Master on duty will ensure that the reception and departure Signals are put back to ON position. The Points for the affected lines shall be treated as Non-interlocked. The Station Master on duty is responsible for introduction of Non-interlocked working and the trains

Will be piloted IN and OUT duly clamping and Pad locking the Points, both in facing and trailing directions over which the train is to pass, as per GR 3.69 and 3.70 with relevant SR's. The Station Master on duty will be personally responsible for setting and locking of Points, for reception and dispatch of all trains.

23.5 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the Station Master on duty wherein the particulars of usage of the Emergency Crank Handle must be recorded.

24.0 SUSPENSION OF LAST STOP SIGNALS

24.1 When the Double line SGE Block Instrument is suspended with its handle in 'LINE CLEAR' position for whatever reason, the concerned UP & DN IB Home Signals controlled by the Block Instrument must be treated as suspended and trains shall be worked in accordance with the procedure prescribed in BWM 3.33.

24.2 The Station Master on duty shall not grant LINE CLEAR unless he has ensured that the lamps of fixed signals which apply to the trains are glowing. If the Signal Lights are not glowing the Station Master on duty shall before giving LINE CLEAR shall initiate action in accordance with the procedure prescribed in GR 3.68 to 3.71 and relevant SR's vide GR 3.49(4).

25.0 (A) <u>LAST VEHICLE VERIFICATION (LVV) BY BLOCK PROVING THROUGH AXLE COUNTER:</u>

(a) LAST VEHICLE CHECKING DEVICE:

Entire Block Section between SNM-PVP and SNM-VBL are provided with High Availability Digital Axle counters (HASSDAC) for last vehicle verification.

For section: SNM-PVP:-

A pair of HASSDAC is provided between **SNM-PVP** on DN line, one just beyond DN IBS Signal No.16 of SNM and another one on 2T1 track circuit of PVP and named as DDAXT.

For section SNM-VBL:-

A pair of digital axle counter is provided between SNM-VBL on UP line, one just beyond UP IBS signal No 15 of SNM and another one on 1T1 track circuit for VBL and named as UDAXT.

- Clearance of LV Axle counter section is proved in the respective Block control cct. (Circuit) as well as in block release circuit. In case of failure of LV Axle counter line clear cannot be granted through block instrument. Also in case of such failures on arrival of train block instrument cannot be normalized.
- Whenever after complete arrival of train, the LVCD axle counter continue to show Red on the panel Board, the on duty SS/SM at SNM station shall resort to the reset procedure of the axle counter.
- For this purpose SS/SM at SNM Station shall first verify the block section is clear of train if the failure has occurred after arrival of train, SS/SM shall obtain signature from the Guard of stopping train on the train intact register [vide GR & SR No.4.17, 4.17.01) or by exchanging alright signal with the Guard of through train, so that he can ensure that the train has arrived completely before resetting of LVCD axle counter. SS/SM of PVP for Up Block Section and VBL for DN block section.
- All reset keys shall be kept in the personal custody of SS/SM on duty.

Resetting Procedure for LVCD SNM-PVP and SNM-VBL section.

Before initiating reset procedure SS/SM of SNM shall inform PVP for granting reset permission for UP LVCD between SNM-PVP and VBL. For granting reset permission for DN LVCD between SNM-VBL.

On receipt of the reset permission from adjacent stations as the case may be, SS/SM on duty SNM shall press reset permission acknowledge button and reset by turning the reset key and by pressing UP or DN LVV reset push button.

(B) NORMALISATION OF THE BLOCK AXLE COUNTER AND BLOCK WORKING BY RESETTING FEATURE

25.1 Axle counters are provided on UP and DN lines between SNM-VBL and SNM-PVP Double line section for Block proving.

25.2 The occupation and clearance of the axle counter section are indicated on panel by 'Red' and 'Green' lights.

25.3 If any Block proving Axle counter section fails, the UP & DN IB Home signal at the rear station cannot be taken 'OFF' and Block instrument at advance station cannot be turned to "Line Closed" position after arrival of a train and in such case, resetting of last vehicle checking device is to be resorted to in either section.

25.4 Even after completion of reset operation, LVCD Axle counter will show clear only if next train is passed. The next train is to be piloted.

25.5 No train should be allowed on signal to leave a station in any particular direction unless:-
Track clear indication is available for the relevant axle counter track circuited portion and Last stop signal is not taken 'OFF'.

25.6 A resetting arrangement for the resumption of the track circuit by means of axle counter under failure condition at either end station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the at the receiving station and is certified in this respect by the SM at the receiving station through exchange of Private Number.

25.7 Reset arrangements are provided in the Reset Box in the SM's office for Sections SNM-VBL and SNM-PVP. The key for the Reset Box should normally be kept with SM. And for every such operation of the resetting the Axle Counter, the SM on duty shall record giving details of the date of use, train number, time, and number registered on the counter and reasons for resetting and initial each such entry.

26.0 RESETTING OF LVV DIGITAL AXLE COUNTER:

(i) Whenever after complete arrival of train, the LVV axle counter continue to show 'RED' on the Panel board/VDU, the on duty SS/SM at both ends of the section shall resort to reset the axle counter. For this purpose SS/SM at receiving end shall first verify that Block section is clear of trains. If the failure has occurred after arrival of train, SS/SM shall obtain signature from the guard of stopping train on the train intact register (vide GR & SR 4.17, 4.17.01) or by exchanging signal with the guard of through train, so that he can ensure that the train has arrived completely before resorting the LVV axle counter. SS/SM of receiving end shall inform the failure of axle counter to on duty SS/SM of dispatching end for UP/DN section.

(ii) SS/SM at receiving end then sends an operating person to verify that the last vehicle is clear of Block section. After verifying the clearance of last vehicle of concerned block section, the operating person exchanges private number and press the button in the LVV box.

(iii) On exchanging Private number the SS/SM at both ends will insert the reset key for corresponding section and shall press the nominated reset button. By this operation LVV Axle counter will reset and associated counter will change to next higher number at both ends.

(iv) SS/SM at both ends shall record the counter number so changer due to reset of axle counter in the reset register and also in the TSR mentioning the purpose of reset. After the reset operation is completed preparatory reset indication will appear on reset box at both ends which suggests that the reset operation is successfully completed and the first train has to be piloted out. On arrival of the piloted train the axle counter track circuit zone of the section shows clear and normal working shall be resumed. Even after arrival of piloted train, LVV axle counter zone does not show clear indication, S&T staff to be informed for getting rectified the failure of axle counter.

(v) It is mandatory that every reset operation of LVV axle counter first train after reset process shall have to be piloted out.

27.0 SIGNAL LIGHTS:

The station Master on duty at 00.00 Hrs (2nd Night shift) must also ensure from Panel board that all the signal lights are glowing properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the section controller on duty.

28. CORRECTING TIME IN STATION CLOCK:

The station Master shall set the time in his clock according to the time signal given by the section controller on duty at 16.00 Hrs every day according to GR and SR 4.01.01 and 4.01.02.

29.0 TELECOMMUNICATIONS:

Same as Para 5 in main body of this SWR.

VISUAL DISPLAY UNIT (VDU)

NOTE:

The standby system (VDU) is also provided with the Conventional panel for the operation of Signals, Points, L.C.Gates, Crank Handles, Siding Controls and Resetting of all type of Axle counters.

SYSTEM OVERVIEW:

In addition to the panel, an operator console (VDU) consists of a CPU with a high resolution colour monitor, keyboard and pointing device (mouse) are provided. Both the serial ports in the CPU are connected to the Westrace CPU board for exchange of control and indication messages. The Software is installed to display the Station Yard Mimic Panel diagram on the VDU and that it allows access to all functions through pop-up menus. When a particular function is selected, an appropriate Menu will appear on the screen by selecting a required operation clicking by the Left button of the pointing device (mouse) a function (Signal clear and cancellation, Route release, Point operation, Gate release etc.,) can be executed.

The Computer (VDU) or panel any one may be used for controlling and monitoring the station, however indications on the Station yard Mimic diagram of VDU and panel will be dynamically updated.

SELECTION OF CONTROL:

This VDU (Computer) is provided as a standby of conventional panel for the operation of signals, points, L.C.Gates, crank handles, siding controls from the Mimic panel diagram. A Mimic panel diagram will be displayed on the VDU, which is an exact replica of operation cum indication panel and suits the yard plan as per SI plan 23082 ALT-H.

One two-position switch (Red coloured) is provided on the conventional panel along with the SM's Key used for selection of Panel or VDU called PANEL/PC Change over switch.

SM of the station can select any of the controls, for the selection of one control to another there are certain procedures to be followed for the control transfer. The procedure to be followed as mentioned below.

CHANGE OVER FROM PANEL WORKING TO VDU.

a) Press request control in Panel/PC switch dialog box.
b) Then operating PC led starts flashing.
c) Turn the knob to PC control at Panel.
d) VDU will start working.

CHANGE OVER FROM VDU WORKING TO PANEL.

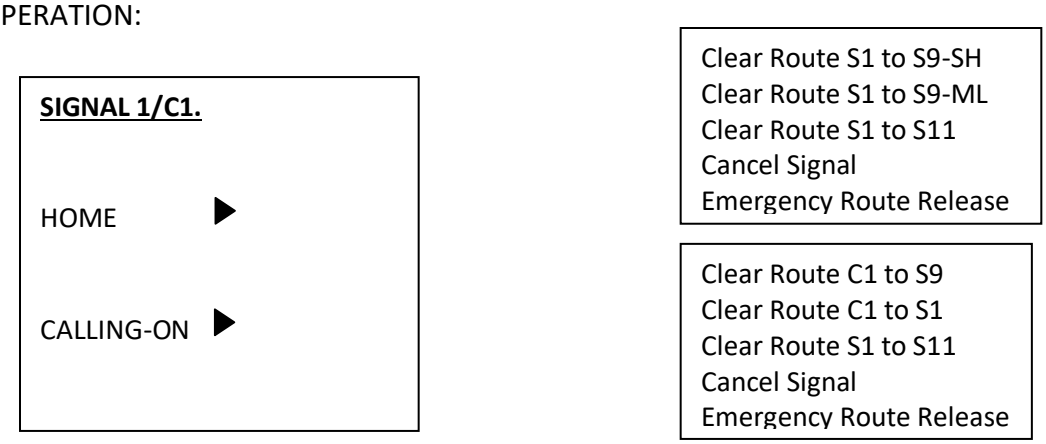
a) Turn the knob of Panel/PC control on panel.
b) Panel control on led will start flashing on VDU (Panel/PC switch).
c) Click on Panel control and select acknowledge request.
d) Panel will start working.

OPERATIONAL PROCEDURE:VDU INDICATIONS:

ELECTRONIC INTERLOCKING SYSTEM (EI) INDICATIONS:

In Panel/PC there are two system indication, Green indication mentioning the On-line system and the RED indication mentioning the Off-line system. In addition there are two indications mentioning status of communication and panel processor.

SIGNAL OPERATION:



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

SETTING A ROUTE:

To set a route of a signal, click on a possible route of the signal, after done so the route initiated Red indication will appear on the replacement track of the signal. And all the relevant points Normal/Reverse set indications will start flashing if it is not available in the required position. After setting of point in the route required condition (Flashing indication will be steady) a complete yellow route set indication will appear from the Replacement Track of the signal to the last track of overlap of the route also the points will be locked (A Point locked can be ensured from the Red Steady indication will appear near the point). Finally a Route locked Yellow Steady indication will appear on the just below the signal. The signal will be Taken-Off now. The yellow route set indication will turn to Red when the train occupies the track circuit.

CONDITIONS FOR SETTING A ROUTE:

The following condition to be ensured before setting the route by the SM.
All the Crank handles of the required route related points to be in Key in condition.
All the related siding control keys to be in Key in condition.

If any Level Crossing gates are falling under the route that should be locked (KEY IN) and signal slot lever of the gate to be in reverse position (Can be ensured from the Yellow steady indication just near the LC Gate control).

All the related siding points should be in normal position (can be ensured from Yellow steady indication at the siding point on the route).

CANCELLING A ROUTE/ EMERGENCY ROUTE RELEASE:

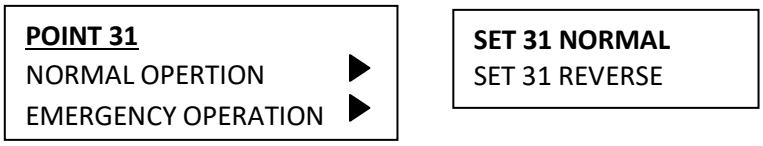
To Cancel a signal route when the route is set and the signal is taken-off, click on the signal cancellation menu (Main/Calling on) of the concerned signal, the signal will immediately go to ON aspect, after doing so click on the Route release menu the route locked indication will starts flashing for 120sec. After the completion of 120sec the locked route will be released and counter provided for the route release in the conventional panel will changeover to next higher digit which should be recorded by SM.

SHUNT SIGNAL OPERATION:

To setting and Cancelling the signal route for the shunt signal the same procedure shall be followed as explained in Signal Operation.

POINT OPERATION:

To Operate the Point the SM needs to track the mouse pointer to concerned point's normal/reverse indications on the VDU, after clicking by the left button on the mouse a popup menu will appear as below:



REVERSE TO NORMAL OPERATION:

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

NORMAL TO REVERSE OPERATION:

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

EMERGENCY NORMAL OPERATION:

When the Point zone track circuits/ Axle counters failed without any Point lock condition by any signal routes, a point can be operated by the Emergency Point operation.

Before doing the emergency operation A Emergency Point Operation Key to be KEY IN by clicking the KEY IN menu, after the completion of the Emergency point operation, the key to be KEY OUT by clicking KEY OUT menu.

Track the pointer to EMERGENCY NORMAL menu and again click 'YES' to the Do you want to perform this emergency point operation drop down menu. A Normal flashing indication will appear, the indication will be steady after the point is set to NORMAL.

After the Emergency point operation a specific counter provided in the Domino panel board will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SM.

EMERGENCY REVERSE OPERATION:

When the Point zone Track circuits/ Axle counters failed without any Point lock condition by any signal routes, a point can be operated by the Emergency Point operation.

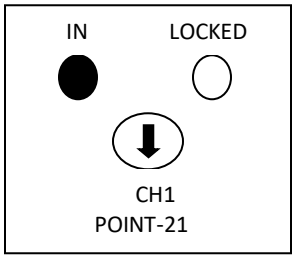
Before doing the emergency operation A Emergency Point Operation Key to be KEY IN by clicking the KEY IN menu, after the completion of the Emergency point operation the key to be KEY OUT by clicking KEY OUT menu.

Track the pointer to EMERGENCY REVERSE menu and again click 'YES' to the Do you want to perform this emergency point operation drop down menu. A Reverse flashing indication will appear, the indication will be steady after the point is set to reverse.

After the Emergency point operation a specific counter provided in the Domino panel board will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SM.

CRANK HANDLE & SIDING CONTROL OPERATION:

To Transmit or Release control of the Crank Handle, click on the crank handle/ Siding control button provided like the following button on the VDU.



CRANK HANDLE CH1
Transmit Control
Release Control

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

For Transmitting the Crank Handle KEY to the field personnel SM has to click transmit control menu. After transmission the KEY IN indication will starts flashing, now the KEY can be extracted from the RKT. After extracting the key from the RKT, the KEY IN indication will disappear.

When the Manual point operation is over, after putting the KEY in the RKT, A KEY IN flashing indication will appear on the VDU. Now the SM has to release the control for the Steady indication by clicking release control menu.

A Crank handle locked indication will appear when the particular point has locked by any of the possible signal routes.

EMERGENCY CRANK HANDLE EXTENTION:

LEVEL CROSSING GATE OPERATION:

To Transmit or Release control of the Level crossing gate, click on the Level crossing control button provided like the following button on the VDU. The appearing pop-up menu gives details of the possible commands on the Level crossing gate.

LEVEL CROSSING - 28
Normal ➡
Emergency

Transmit Control
Restore Control

For transmitting the LC Key to the Gate man, SM has to transmit the control by clicking, after transmission the CLOSED indication will starts flashing, now the KEY can be extracted from the RKT. When the gate has been closed, locked & slot lever is in reverse position, after putting the key in the RKT, a closed flashing indication will appear on the panel. Now the SM has to release the control for the Steady indication.

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

EMERGENCY GATE OPERATION:

If the LC Gate has locked by any of the signal route, for releasing the gate by the Emergency operation the SM has to cancel the signal by signal cancellation control of the relevant signal. Then he has to click the Emergency Gate Release Control in the Gate pop-up menu. This will take 120 sec of time to release the gate. After the time lapsed, the Key can be extracted from the RKT at Gate Lodge and concerned counter provided on the panel board will change to next higher digit number, which should be recorded in the register provided for this purpose.

APPENDIX 'C'

ANTI COLLISION DEVICE (RAKSHA KAVACH)

NIL

APPENDIX-'D'

The duties of safe working staff at Sitanagaram Station:

1. STATION MASTER (IN CHARGE):

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

2. STATION MASTER:

i) He is responsible for trains passing during his shift.
ii) He shall promptly bring to the notice of SM incharge all irregularities and accidents in course of his shift duties.
iii) During the absence of SM I/C, the duties of the Station Master will devolve on him.
iv) He shall follow SR 3.68.01(c) and (d) SR 14.07.l and OM Chapter-2.
v) His special attention is drawn to Chapter-2 of G&SR 1976 and GR 5.01 to 5.08 with relevant SRs.
vi) As an assistant to SM I/C, he shall carry out the instructions given from time to time.

3. TRAFFIC POINTS MAN :

i. He shall work under the orders SM on duty.
ii. He shall couple and uncouple vehicles under the supervision of SM.
iii. He shall watch and guard the packages and other Railway property lying in the Station premises.
iv. He shall report any irregularities coming to his notice.
v. He shall do loading and unloading of parcels, smalls and Guard's boxes. He shall do piloting IN and OUT.
vi. He shall deliver any official message to the proper person/office. He shall carry out any other duties entrusted to him by the SM on duty.
vii. He shall follow OM Chapter-2.

4. TRAFFIC GATE KEEPER:

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

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

APPENDIX 'E'

ESSENTIAL EQUIPMENT

Essential equipment's shall be maintained in good Working order.

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

APPENDIX 'F'

RULES OF WORKING OF DK STATION, HALTS, IBH, IBS AND OUTLYING SIDINGS.

The Block section between PVP- SNM has been split into TWO IB section each. The entry into each is governed by Intermediate Block stop signal as :

1 DN IB signal between SNM-PVP is provided at KM 393.670 controlled by switch No.16 of SNM (IB controlled by station in rear)

2 UP IB Signal between PVP-SNM is provided at KM 394.330 controlled by switch No.13 of PVP (IB controlled by station in rear).

[a] The Block section starts from UP IB signal No. 15 of SNM and ends with UP Home signal of VBL at respective receiving ends" may be substituted with the following.

The Block section between SNM-VBL has been split into TWO IB section each. The entry into each is governed by Intermediate Block stop signal as :

(i) UP IB signal between SNM-VBL is provided at KM 407.911 controlled by switch No.15 of SNM (IB controlled by station in rear).

(ii) DN IB Signal between VBL-SNM is provided at KM 408.156 controlled by switch No.26 of VBL (IB controlled by station in rear)".

[b] Block working for the section SNM-PVP/VBL is controlled by double line lock and block instrument (SGE type three position) provided at SNM & PVP/VBL stations. Down Advanced starter No. 14 of SNM is controlled by clearance position of train past the down IBS No. 16 by 400 meters beyond respectively vide GR 8.04 (a).

UP Advanced starter No. 13 of SNM is controlled by clearance position of train past the UP IBS No. 15 by 400 meters beyond respectively vide GR 8.04 (a).

[c] Trains between intermediate block signal to respective Home signal of Station in advance in both the sides are worked by means of SGE type lock block instrument vide 4.09, 5.07, 14.01 to 14.14 of the G & SR and chapter V of BWM.

[d] Last stop signal to the intermediate block stop signal in both the sides are controlled by Electronic Axle counter and are worked under absolute block system in terms of G & SR 14.01, 14.13. Indications on Panel provided at PVP/VBL and SNM station.

INDICATIONS PROVIDED ON VDU FOR I.B. SECTION.

The indications of signals, IB and Block sections in both UP and Down directions are shown in the following table:

SECTION SNM-PVP:

SN	Signal Aspect [S-14]	IB Section Indication [14 AXT]	IB Home Aspect [S-16]	Block Section Indication	Remarks.
1	Green	While Illuminated	-	-	Advance starter No: 14 is taken off to dispatch a train up to IB Home.
2	Red	Red	-	-	IB Section is occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of PVP.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

SECTION PVP-SNM

SN	Signal Aspect [S-11]	IB Section Indication [11 AXT]	IB Home Aspect [S-13]	Block Section Indication	Remarks.
1	Green.	While Illuminated.	-	-	Advance starter No: 11 is taken off to dispatch a train up to IB Home.
2	Red.	Red.	-	-	IB section occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of SNM.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

SECTION SNM-VBL:

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

SECTION VBL-SNM

SN	Signal Aspect [S-24]	IB Section Indication [24 AXT]	IB Home Aspect[S-26]	Block Section Indication	Remarks.
1	Green.	While Illuminated.	-	-	Advance starter No: 24 is taken off to dispatch a train up to IB Home.
2	Red.	Red.	-	-	IB section occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of SNM.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

i] Buzzer/Bell

One audio buzzer is provided in the SM room at SNM to detect Train Entering section for outgoing trains. After train passes the intermediate block stop signal, the buzzer/bell will start ringing at SNM station. On hearing the buzzer/bell the SS/SM must acknowledge the same by clicking on train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to of the station in advance who shall turn commutator of the Double Line Lock and Block Instrument from the Line Clear

position to 'Train On Line position' and acknowledge train entering section following the procedures laid down vide Block Working Manual.

[ii] Train Run-Away buzzer:

When a train passes IB signal at ON position SM/SNM of dispatching station receives the train run away buzzer and displays flashing indication on the VDU. The SM/SNM by acknowledging the train run away button, the buzzer stops and the indication remains steady and after train passes IB signal and beyond 400mts the indication also disappears.

[e] In the event of failure of I.B. track circuit [i.e. track clear indication not available] which shall not permit taking 'OFF' last stop signal, it should be ensured by SS/SM on duty at the dispatching station through exchange of private number with the Dy. SS/SM of the receiving station that the last train that passed the last stop signal of his station has fully arrived at receiving station, before allowing the next train to enter in to the section, such permission to the next train shall be granted and the section SNM-PVP/VBL shall be shall be treated as single section.

i) By issuing the pilot memo when normalization of the system is not possible. In such case, line clear has to be taken on lock and block instrument. Trains are to be dispatched from the station only after obtaining line clear till such time track circuits are last stop signal is restored to normal.

NORMALIZATION OF THE TRACK CIRCUIT AND OF BLOCK WORKING BY RESETTING FEATURE:

No train should be allowed to leave station in any particular direction unless I.B. track clear indication is available for the relevant track circuited portion of I.B. section and last stop signal cannot be taken off and provision stipulated in Para g.III to be followed.

A Resetting arrangement for the resumption of I.B. Axle counter under failure condition through co-operative features of both the SS/SM on duty at either end station of the Block section is provided, which should only be resorted to after the train that was lastly sent arrives fully at the receiving station and is certified in this respect by the SS/SM at the receiving station through exchange of private number.

For monitoring of I.B. section working & re-setting of I.B. Axle counters, Track Indications and Re-setting arrangements are provided with button icons on the Panel at DNV station and operating panels [re-setting panels] provided at VBL station. Counters are also provided for the purpose of recording the re-settings for the I.B. Axle Counters in case of failures in IB section. The Re-setting button and permission granting button on the Resetting Panel shall at VBL should normally be kept sealed by the S&T staff and SS/SM will inform the Maintainer for resealing the same whenever the seal has been broken.

The SS/SM on duty at DNV station shall maintain a separate register for use of resetting at IB Axle Counters wherein every operation of the resetting button shall be recorded giving details of date of use, train, number, time, number registered in the counter on PANEL and reasons for resetting and initial each such entry

The procedure for resetting of the I.B. Axle counters in terms of clause g. II above shall be as follows:

SECTION PVP-SNM ON UP LINE (11AXT):

	DISPATCHING STATION [PVP]		**RECEIVING STATION [SNM]**
1	SS/SM on duty shall call the attention of SS/ SM of SNM station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/SM on duty at SNM after verifying that the said dispatched train arrives fully, shall exchange private number with SS/SM on duty at PVP and gives permission to re-set by pressing the 'Permission Granting' button provided on the re-set panel.

2	On getting re-set permission on PANEL SS/SM on duty shall acknowledge by clicking on 'Permission received from SNM' acknowledgement button icon. For each such operation the reset counter provided in PANEL shall increase by one digit. SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.	2	SS/SM on duty at SNM shall continue to press the 'Permission Granting' button till the SM/PVP acknowledges.
3	SS/SM on duty then shall re-set the I.B. Axle counter by clicking on 'UP Re-set Key', which will reset the Axle Counter.	3	SS/SM SNM shall also press 'Re-set' button provided on re-set panel at SNM station simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on PANEL.	4	The SS/SM on duty at SNM shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/SM of PVP station giving reasons for the re-setting operation.

SECTION SNM-PVP ON UP INE (URAXT):

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

SECTION PVP-SNM ON DN LINE (DDAXT):

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

SECTION PVP-SNM ON UP LINE (14AXT):

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

	will reset the Axle Counter.		simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on PANEL.	4	The SS/SM on duty at PVP shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/SM of SNM station giving reasons for the re-setting operation.

SECTION SNM-VBL ON UP LINE (24AXT):

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

SECTION SNM-VBL ON DN LINE (DRAXT):

	RECEIVING STATION [SNM]		**DISPATCHING STATION [VBL]**
1	SS/SM on duty shall call the attention of SS/SM of VBL station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/SM on duty at VBL after verifying that the said dispatched train arrives fully, shall exchange private number with SS/SM on duty at SNM and gives permission to re-set by pressing the 'Permission Granting' button provided on the panel.

2	On getting re-set permission on VDU SS/SM on duty shall acknowledge by clicking on 'Permission received from VBL' acknowledgement button icon. For each such operation the reset counter provided in PANEL shall increase by one digit. SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.	2	SS/SM on duty at VBL shall continue to press the 'Permission Granting' button till the SM/SNM Acknowledges.
3	SS/SM on duty then shall re-set the I.B. Axle counter by clicking on 'UP LVV Re-set Key', which will reset the Axle Counter.	3	SS/SM VBL shall also press 'Re-set' button provided on re-set panel at VBL station simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on PANEL.	4	The SS/SM on duty at VBL shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/SM of SNM station giving reasons for the re-setting operation.

SECTION SNM-VBL ON UP LINE (13AXT):

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

4	On completion of re-setting process I.B. section clear indication will appear on PANEL.	4	The SS/SM on duty at VBL shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/SM of SNM station giving reasons for the re-setting operation.

SECTION SNM-VBL ON UP LINE (UDAXT):

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

h] DISPATCH OF TRAINS

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

i] From SNM towards PVP/VBL:

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

j] SNM TO IBS ON UP & DOWN LINES

The SS/SM on duty shall ensure that the portion of line between Advanced Starter and 400 Mtrs beyond IBS at their respective ends is clear of obstruction and indication to this effect is available in

the PANEL and shall also ensure any non-isolated shunting at their respective ends suspended and shunting authority issued if any is withdrawn and kept in his custody.

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

k] IBS SIGNAL TO THE STATION IN ADVANCE

The SS/SM on duty shall obtain line clear over lock & Block instruments from the station in advance to dispatch a train past the IBS signal at the respective ends and shall take off the IBS signal by means of taking of signal No.16/ 15 of SNM or signal no 14/13 as the case may be. After the train passes the intermediate Block Stop signal of SNM a buzzer will ring in the PANEL. On hearing the buzzer/bell the SS/SM must acknowledge the same by clicking train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the cabin master of the station in advance who in turn will turn commutator of the Double line Lock and Block Instrument from the line clear position to Train On Line position and acknowledge train entering section. After dispatch of a train from SNM into the Block section between SNM-PVP/VBL and intermediate Block Post in case when the intermediate stop signal is not taken 'off' but the buzzer has started ringing, this may be either due to the train passing intermediate Block stop signal at 'ON' position or due to failure of the track circuit in advance of that intermediate Block Signal, the SS/SM on duty at PVP/VBL in turn will inform SCR on duty about this.

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

l] (i) Dispatch of trains towards PVP/VBL in case of failure of the Down Advanced Starter signal at SNM Station due to failure of "Axle Counter" device or otherwise. If the failure of the Advanced starter of SNM due to the failure of axle counting device or the indication lamp (repeated by indication lamp) showing 'Red' light either due to power failure or due to any other causes, the re-setting "Push Button" provided with Veeder counter at the SS/SM's office for resorting the normal function of the signal, should be operated accordingly to the following instruction whenever the IB Home signal of SNM is found defective by the Station Master and the following procedure shall be adopted.

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

If it is not possible to restore normal working of the counter by use of the resetting button, the ESM-in-charge of the section shall be served with a written memo to attend the defective signal and rectify the same. The ESM-in-charge of the section on being served with a memo by the SS/SM, shall attend the failure and rectify the fault. The ESM after ensuring that all S&T gears relating to defective signal have been attended to and are in working order except the axle counter which needs re-setting shall establish communication with SS/SM concerned and ask him to reset the axle counter by

pressing the reset push button. Where after the SS/SM on duty, after ensuring that all the trains which had left his Block Station had arrived complete and intact at PVP (by exchanging of P.N with SM/ASM/SNM confirming this) shall press the resetting button provided in the PANEL at PVP/VBL station and resume the normal working.

M] DESPATCH OF TRAINS IN CASE OF FAILURE OF INTERMEDIATE BLOCK STOP SIGNAL

[a] When a Loco pilot finds an intermediate Block Stop signal at 'ON' Position he shall stop his train in rear of the signal and advise the guard of the fact by sounding long continuous whistle and shall then contact the Station Master of the Block Station in rear over the signal post telephone provided for the purpose vide SR.3.75.01[i].

[b] If the SS/SM of PVP/VBL station, on being contacted over Telephone by the Loco pilot, finds that the signal is defective, he shall, after obtaining "Line Clear" for the train from the station in advance, authorized the Loco pilot on the telephone to pass intermediate Block Signal at "ON" and enter the block section ahead. He shall give Loco pilot the Private Number and identification Number under which he has received "Line Clear" for the train from the station in advance

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

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

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

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

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

The station Master of the block station working the intermediate block stop signal on becoming

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

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

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

[N] **INDICATION CUM RESETTING PROVISION IN THE PANEL AT PVP/VBL**:

The PANEL Provided for following light indications

a) Two green indications for the track- circuited portion by Axle Counter, which remain normally lit to indicate that the track is clear. These lamps extinguish no sooner the train passes the last stop signal and their place two red indications are lit to indicate that the track is occupied.

b) Two red indications for the last stop signal replacement track circuit which remain lit so long this track- circuit is occupied or in under failure condition.

c) Two red indication ahead of the IBS Signal, which are lit if the train passes the side signal in "ON" Position. These indications continue to glow till such time the lock and block working is resumed through emergence re-setting feature.

d) Two red indications just ahead of IBS Signal for the IBS signals replacement track circuit. These indications normally remain dark and are lit either during occupation by a train or during failure of this track circuit.

e) Two red indications for the block section for receiving trains. These indications shall normally remain no indications and shall be lit only when the incoming train passes the IBS signal. It remains lit till such time train arrives fully and Block Instrument is normalized.

[O] RESETTING PROVISION IN THE VDU AT SNM STATION

For resetting of I.B. Axle counter please refer of Appendix 'B' of this SWR

[P] SPECIAL INSTRUCTION IN CASE OF A TRAIN PASSING IBH AT 'ON' POSITION

I] In case train run away indication appears the SS/SM/Cabin Master receiving Station shall not turn the block instrument handle to line clear position and SS/SM at sending station shall not take any action to dispatch the third train unless the second train which passed the IB signal in the 'ON' position has actually arrived and its complete arrival is verified by the receiving station.

II] Every case of a train passing IB signal at 'ON' position without strictly following the provision of GR 3.75 should be treated as a breach of block rule by the Loco pilot and action to be taken accordingly.

III] When train run away indication appears at the Dispatching Station/Cabin without any train in the section, the IBS system should be treated as failed and Signal Maintainer should be advised. All the subsequent trains shall be Piloted OUT after duly taking line clear treating entire section as one

Block section as per GR 3.75(4).

IV] Whenever a train after having obtained line clear passes IBS (when not taken off) in "ON" position the train run away indication appears at the Dispatching cabin and train entering section indication appears at the receiving station, under such circumstances no further train shall be allowed in the section till they said train arrives completely at the receiving station i.e., station in advance, and its complete arrival received at the receiving station i.e. station in rear supported by Private Number treating the entire block section as single section.

V] If any train passes IB Signal at 'ON' position when there is a train in the Section between IBS and the station ahead, the train run away indication will appear at both receiving and Dispatching station/cabin. Under such circumstances the SS/SM in the receiving station shall not turn the Block instrument to Line Clear position and SS/SM at sending station shall not take action to despatch the (3rd) train, unless the 2nd train which passes the IBS in the 'ON' position has actually arrived and its complete arrival is verified by the receiving station.

VI] Permission button to be pressed for the runaway train by break opening the seal only after verifying that the last vehicle of the runaway train has arrived in tact and ensured by exchange of private number with the SS/SM of the sending station. In case of failure of Axle Counter equipment at the sending station, permission button may also be pressed for normalizing the system only after verifying that there is no train in the section and after duly exchanging Private number with the SS/SM of the sending station.

VII] Whenever a train run away indication appears when there is a train in the section, no further train should be allowed in the section till resetting is done as per item No.30.3 above.

VIII] Before any re-setting operation is done, the Dispatching station should advise the receiving station giving details of the last train that has entered the section and should ensure by exchanging of private number that the last train has arrived complete at receiving station.

[Q] <u>RUNNING OF MOTOR TROLLYS ON IBS ZONE.</u>

While allowing motor trolleys/ 4 wheeler tower wagon/material trolley etc., entire section between SNM-PVP/VBL on which section motor trolleys / 4 wheeler tower wagon/material trolley in to be allowed shall be treated as one block section and accordingly an authority on form No. T369 (3b) shall be issued for passing IB signal at 'ON' position treating the IB working is suspended.

<u>Every Case of re-setting shall be entered in a register in the following proforma</u>

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

IX] If resetting is not possible under item as mentioned above, the system should be treated as failed and train will work treating the entire section up to the Block Station immediately ahead of the IBS Post as one block section as per GR 3.75(4).

X] Action to be taken when a train passes Intermediate Block Stop Signal at 'ON'

a) By SS/SM of Block Station in advance of the Intermediate Block Stop signal

I] Shall not turn the Block Instrument commutator to "Line Closed" Position Unless the complete arrival of the train which passed IBS at "ON" position is ensured, without any exception even for such a train which leaves the rear station after obtaining line clear and passes IBS at "ON" position, since there is a chance of leaving a vehicle or vehicles in the Axle Counter area where the function of Axle Counter also fail when IBS is passed at "ON" position.

II] In case the bottom needle of the SGE type block instrument is in its 'Line closed' position action should be taken to turn the block instrument commutator to 'TOL' Position vide BWM 5.16(2)(iv) and must not turn to "Line closed" and then to "Line clear" position unless the train which had passed the "Intermediate Block Stop Signal" in the 'ON' position arrives complete and its complete arrival is verified.

b] By the SS/SM of Block Station in rear of the intermediate Block Stop Signal must ensure that last stop signal controlling entry of trains into the section between the last stop signal and the intermediate Block Stop Signal is in its 'ON' position and shall under no circumstances take 'OFF' or attempt to take 'OFF' the said last Stop signal even if the Axle counter/Track circuit section from his block station up to and including the adequate distance beyond the Intermediate Block Stop signal shows 'clear' unless the train which had passed the intermediate Block Stop signal in the 'ON' position arrives complete the block station in advance and its complete arrival is verified, and intimate the SS/SM of the block station in advance the number, description and the departure time of the last train Dispatched from his block station under exchange of Private number.

c] By the SS/SM of both the block stations in rear and in advance of the intermediate Block Stop Signal.

I] After the complete arrival of the last train, according to the information received vide sub-para (b) above, the SS/SM of the block station in advance shall communicate the same to the SS/SM of the station in rear supported by a Private Number which shall be acknowledged by the later by issuing Private Number. Thereafter the SS/SM of the dispatching station and the SS/SM of the receiving station shall operate the 'Resetting ' and 'reset' panel respectively in conjunction. This simultaneous operation will cause the 'counter' to 'reset panel' at the departure end cabin of the dispatching station to illuminate then the Cabin Master shall operate the push button which in turn will record the next higher number in the counter at station.

II] The SS/SM of the Block Station in advance shall then take steps to normalize the block instrument.

It is to be noted that in terms of GR3.75 whenever intermediate block stop signal is at 'ON', Loco pilot must stop his train in rear of the signal and contact SS/SM of the block Station in rear

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

If the block instrument or any of the axle counters of IB section fails, the IB section shall be treated as defective and the section will be treated as one block section in terms of GR. 14.14. Jurisdiction of block section shall not be changed in case of failure of IB signal.

d] In the event of failure of IBS signal in the "OFF" position or cannot resume to "ON" position immediately after it has been passed by a train, the station master controlling the signal shall take steps to put back IBS signal to "ON" position and treat IBS signal failed and train shall be dispatched treating entire section as one Block section.

e] <u>RUNNING OF MOTOR TROLLYS ON IBS ZONE</u>:

i) While allowing motor trolly/4 wheeler tower wagon/material trolley etc., entire section between SNM-PVP/VBL shall be treated as one block section and shall be issued T-369 [3B] for passing IBS at "ON" position.

ii) After the complete arrival of the said Motor Trolly/4 wheeler tower wagon/material trolley etc., at the station ahead, Station Master at adjacent station shall exchange Private Number in token of complete arrival and then shall resume normal working by resetting the Axle Counter as stated in the SWR.

iii) Motor Trolleys shall not be allowed on following line clear.

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

<u>SIGNAL POST TELEPHONE</u>

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

<u>POWER SUPPLY AT IBS:</u>

UP AT, DN AT & local Power supply is available at IBS SNM-PVP/VBL. Auto changeover switch is available only for AT supply. One mini IPS is provided at IBS for power back-up up to 3 hours.