

EAST COAST RAILWAY
WALTAIR DIVISION

STATION WORKING RULES OF CHIPURUPALLI STATION

Date of Issue:-

Date of brought in force:

Ref: Rly. Bd. Lr. No: 2000/Safety/A&R/19/36, Dt: 27-10-2005.

NOTE: -

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

1. STATION WORKING RULE DIAGRAM:

- a) Station Working Rule Diagram: SI/23010, ALT-'C'.
b) CSTE/E.Co.Rly/DRG No : SI/23010.
c) Date up to which corrected :

2 DESCRIPTION OF STATION:

CHIPURUPALLI (Code: CPP) is a 'B' class station on the Howrah – Visakhapatnam Main line electrified (BG) section of East Coast Railway. It is situated at Km.787.700 from Howrah. The station is provided with standard III Interlocking and equipped with VDU(VISUAL DISPLAY UNIT) and Multiple Aspect Colour Light signals.

2.1 GENERAL LOCATION:

a.	Name of the Station:	:	CHIPURUPALLI
b.	Class	:	'B'-Class
c.	Name of the section	:	Howrah- CHENNAI
d.	Double/Single/Multiple Line	:	Double Line
e.	Electrified/Non-Electrified	:	Electrified
f.	Gauge BG/MG/NG	:	BG
g.	Railway	:	East Coast Railway
h.	Route	:	'B'-Route
i.	Situated at	:	787.700 From HOWRAH
j.	No. of Cabins	:	Nil

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

a)	Block Station	Distance	Direction
	PUNDI	13.2 Kms	HWH END
	KOTABOMMALI	13.7 Kms	VSKP END

- b) The section between Chipurupalli and Sigadam has been split into two section by providing IB signals on both Up and Dn direction at KM 778.458 & at KM 779.318 respectively.

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 terminates
CPP-GVI Up Direction	From UP Advanced starter signal No 13 of CPP	Up to BSLB board of GVI.
CPP-GVI Dn Direction	From Dn Advanced starter signal No 14 of GVI.	Up to facing point No 22A of CPP.
CPP-SGDM Up Direction	a) From UP Advanced starter signal of SGDM. b) From IB Home signal No15 of Sigadam.	a) To a point of 400 Mtrs beyond Up IB Home signal No15 of Sigadam. b)to BSLB of CPP.
CPP-SGDM Dn Direction	a)From DN Advanced starter signal No 14 of CPP. b)From IB Home signal No16 of Sigadam.	a) To a point of 400 Mtrs beyond Dn IB Home signal No16 of Sigadam. b)To the outermost facing point No 21 of Sigadam.

2.4 GRADIENTS

Section	Line	From	To	Inter Distance	Gradient
CPP-SGDM	Up & Dn	0.00 M	272.80 M	272.80 M	Level
	Up & Dn	272.80 M	863.58 M	590.78 M	1 in 421 Raising
	Up & Dn	863.58 M	Up to section		1 in 200 Raising
	Dn Line	86.584 M	780.980 M	72.604 M	1 in 126 Raising
	Dn Line	780.980 M	780.560 M	0.620 M	1 in 183 Raising
	Dn Line	780.560 M	779.930 M	0.530 M	1 in 150 Falling
	Dn Line	779.930 M	779.630 M	0.300 M	1 in 200 Falling
	Dn Line	779.630 M	779.470 M	0.160 M	1 in 500 Falling

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	Section	Line	From	To	Inter Distance	Gradient
	CPP-SGDM	Dn Line	779.470 M	779.120 M	0.350 M	Level
		Dn Line	779.120 M	778.970 M	0.150 M	1 in 1000 Raising
		Dn Line	778.970 M	778.550 M	0.720 M	Level
		Dn Line	778.550 M	778.450 M	0.100 M	1 in 300 Falling
		Dn Line	778.450 M	777.700 M	0.750 M	1 in 200 Falling
		Dn Line	777.700 M	776.300 M	1.400 M	1 in 150 Falling
		Dn Line	776.300 M	Into section		1 in 450 Falling
	CPP-GVI	Up & Dn	0.00 M	635.641 M	635.641 M	Level
			635.641 M	Up to Section		1 in 200 Falling

2.5 LAYOUT:

- a) The station is provided with five running lines with Line No.1 as Down loop, Line no. 2 and 3 are DN Main and UP Main respectively and Line no. 4 as Up loop and Line No 5 as Common loop. There is a Hot axle siding on Down Loop and an(Goods) Ore loading siding on common Goods loop. A shunting neck is provided at GVI end of the yard.

b) PLAT FORMS

i)	Line No. 1 (Dn Loop)	High Level Plat Form.
ii)	Line No. 2(DN Main)	Nil
iii)	Line No. 3 (Up Main)	High Level Plat Form
iv)	Line No. 4(Up Loop)	High Level Plat Form
v)	Line No .5(Common Loop)	Nil

c) DESCRIPTION OF SIDINGS

i) ORE LOADING SIDING :-

The Ore loading siding takes off from common loop line and is isolated by Derailing switches at both ends. The entrance point and the corresponding Derailing switches are operated by Arc levers provided at site, at either end of the siding. Hand plunger locks fitted at the entrance point of South end are unlocked by the Key 'R1' released from the RKT instrument provided in a location near siding through control 34 from VDU. Hand plunger locks fitted at the entrance point of North end are unlocked by the Key 'R2' released from the RKT instrument provided in a location near siding through control 34 from VDU. When the Keys released from control No 34 from VDU, the Up and Dn reception signals and Up and Dn starter signals for common loop will be held locked in their Normal position.

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ii) **HOT AXLE SIDING :-**

The hot axle siding takes OFF from Dn Loop at at HWH end of the yard and is isolated by a derailing switch and terminates in to a dead end towards station. The entrance point and the corresponding derailing switch are coupled and operated by Arc levers provided at site. Hand plunger lock fitted at the entrance point is unlocked by the Key 'S' released from the RKT instrument provided in a location near siding through control 35 from VDU. When the Key is released from control No 35 from VDU, the Dn reception signals and Dn starter signals for Dn loop will be held locked in their Normal position.

2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT & HOLDING CAPACITY IN CSL:
RUNNING LINES

The yard consists of five running lines viz. Up Main line, Down Main line, Dn loop line, Up loop and common loop lines(i.e Line Nos 3, 2, 1 , 4 and 5 respectively)

DIRECTION OF TRAFFIC:

The trains coming from SGDM end are Up trains and the trains coming from GVI end are Down trains.

HOLDING CAPACITIES IN CSL:

Line No.1	Dn Loop	840 M	(Electrified).	From SB to starter
Line No.2	Dn Main	854 M	(Electrified).	From starter to SB
Line No.3	Up Main	971 M	(Electrified).	From starter to SB
Line No.4	Up Loop	777 M	(Electrified).	From starter to SB
Line No.5	Common Loop	696 M	(Electrified).	From starter to Str

2.5.2 NON RUNNING LINES:

- | | | |
|------|--------------------|-------------------------|
| i) | Ore Loading siding | CSL-503 M (BJ to BJ) |
| ii) | Hot Axle siding | CSL- 44.07 M (BJ to DE) |
| iii) | Shunting neck | CSL- 433 M (SB to SH) |

2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT

Nil

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3.0 SYSTEM AND MEANS OF WORKING:

Trains are worked under Absolute Block System in accordance with GR Chapter VIII Rule No 8.01(1)(a)&(b), 8.01(2)(b), 8.03(1),Chapter-III Rule No 3.07(4)(5),3.08(4) Chapter-XIV and BWM Chapter V.

SGE type Double Line Lock and Block Instruments are provided for CPP-SGDM & CPP-GVI sections. The Block Instruments shall be operated by Station Master on duty and keys of the Block Instruments shall remain under personal custody of SM on duty. The authority for the Loco Pilot to proceed is taking ‘OFF’ of the last stop signal. The Block Instruments are of non co-operative. [Refer Chapter XIV of GR & SRs, Chapter –V of Block Working Manual and GR 14.08(a)]

4.0 SYSTEM OF SIGNALLING AND INTERLOCKING:

This Station is provided with Standard-III interlocking with Multiple Aspect Colour Light Signalling having maximum equipment of signals. The aspects and indications of the MACLS is governed by GR.3.08 (4)(b).

The Station is provided with central Electronic Interlocking (EI). All signals and points are electrically operated from the VDU provided at SM’s Office. A stand by VDU is also provided to switch over the system in case of failure of working VDU. 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). Central VDU is provided in the Station Master’s office to electrically control all signals, points, , Gate key, etc., The VDU is provided with SM’s key user name and password which shall always remain with the Station Master on duty in terms of SR 3.36.03(a).

NOTE: The details of operation from VDU is given under APPENDIX-‘B’.

a) **CRANK HANDLE**

When any point fails to operate normally by the Route Setting operation through 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-20.06.

<u>CRANK HANDLE</u>	-----	<u>CONTROL POINTS</u>
CH-1	-----	21 A/B
CH-2	-----	22 A/B
CH-3	-----	23A/B,24 A/B,
CH-4	-----	25 A/B, 26 A/B
CH-5	-----	27 A/B, 28 A/B, 30 A/B.

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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 SM by tracking the mouse pointer on to the concerned crank handle button icon. This will enable two options to be displayed on the menu i.e. Crank handle Transmit control and Crank Handle Release control. To release the crank handle key, SM should click the Crank handle 'TRANSMIT' control option. After transmission the KEY IN indication will start flashing, now the key can be extracted from the EKT. After extracting the key from the EKT, the KEY IN indication will disappear. When the keys are taken out no signal can be taken "OFF" over the particular route on the points nominated by that Crank Handle. This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points.

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 20.06(d) of the Operating Manual. Correct setting, clamping and padlocking of the points devolve on the SM on duty. (Details of use of Crank Handle as per Appendix- 'B').

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

b) **TAKING OFF CALLING-ON SIGNAL:**

Miniature colour light Calling-on signal is provided below the Home signals in terms of GR.3.13(6)(b). A Calling-on signal shows no light in the 'ON' position and White 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 in rear of the signal. When a train occupies the track circuit a RED light strip will appear on the VDU. The particular route on which train is intended to be received shall be set by tracking the pointer in VDU on to the signal below which the calling on signal is provided. Various options in terms of the total routes over which the signal will lead to will appear on the menu. Then the SM must drag the pointer and click over the particular Calling on route amongst the various options displayed in the menu by the left button of the mouse as a result of which the Calling-on signal will blink for 120 seconds. After a lapse of 120 seconds, the Calling-on signal clears i.e., a White light glows at the concerned calling-on signal on the VDU. Every such operation has to be recorded by the on duty SM along with the reasons to do so. The calling-on signal route can be released after complete arrival of the train or by emergency cancellation.

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NOTE:

SM on duty to ensure that no through signals are given while receiving a train on Calling-on.

c) **IBS SIGNALS :**

The details are in Appendix 'F' of this SWR.

d) **SHUNT SIGNALS**

Back shunt signals SH 3A/B/C/D/E at HWH end, SH 4A/B/C, SH 6A/B are provided at VSKP end of the yard for shunting purpose.

e) **EMERGENCY CROSS OVER**

Emergency cross over No 21 towards HWH end and No 22 towards VSKP end are provided at either end of the yard.

f) **L.C. GATE OPERATION**

Details described in Appendix-'A'.

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

Emergency point operation facility is provided to operate the point from the VDU in case of failure of point controlling track circuit/Axle Counter.

Before doing the emergency operation, the Emergency Point Operation Key is to be made "KEY IN" by clicking the KEY IN menu. The user name and password is to be logged in. The user name is ECOR and the password of this station is CPP. On clicking the concerned point icon, a pop-up menu is displayed carrying four options: 1) Normal 2) Reverse 3) Emergency Normal 4) Emergency Reverse. For emergency operation of concerned point, drag the pointer to either emergency normal or emergency reverse whichever is desired. A normal or reverse flashing indication will appear and the indication will be steady after the point is set to Normal or reverse, whichever is desired. After the completion of Emergency point operation, the key is to be KEY OUT by clicking KEY OUT menu. The user name and password is to be given for KEY OUT also. This action will be recorded in a counter. All such operations will be registered in the emergency point operation counter Register. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

h) **EMERGENCY ROUTE RELEASE COUNTER:**

This counter is provided to register the number of operations made for emergency

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cancellation of route. The Station Master must record the last number registered on the counter while taking over/handing over duty.

i) **EMERGENCY ROUTE RELEASE INDICATION :**

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), click on the concerned signal. After clicking by the left button on the mouse a pop-up menu will appear as shown above- Click on the 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 start flashing for 120 second. After completion of 120 seconds, the White light along with the White strip of light will disappear suggesting the route has been released. This action will be recorded in a counter. The counter will increment the number for each and every such action. 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 the route and 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. All such operations and the new number should be recorded in the station diary Veeder counter register and in the train signal register.

j) **TRACK CIRCUITS/AXLE COUNTERS:**

Both Up and Down main Lines, Up Loop, Dn Loop and Common Loop lines 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 (91M 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 (i.e. 13AT and 14AT in Up and Down directions respectively). Indications for the above track circuits/Axle Counters are available on VDU at SM's office. White indication on the VDU indicates track clear and Red light indicates track occupied condition.

k) **AXLE COUNTER:**

Entire Block Section between CPP-GVI and CPP-SGDM are provided with Digital axle counter.

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FOR SECTION CPP-GVI : A pair of Digital axle counter is provided between CPP-GVI (UP LVV CPP-GVI) on UP line, one just beyond UP advanced starter No.13 of CPP and another one on 1T2 track circuit beyond UP Home Signal No.1 of GVI station. Similarly a pair of Digital axle counter is provided between CPP-GVI (DN LVV CPP-GVI) on DN line, one beyond DN Advanced starter signal No.12 of GVI and another in 2T2 track circuit beyond DN Home signal of CPP.

FOR SECTION CPP-SGDM : A pair of Digital axle counter is provided between CPP-SGDM (DN IBS CPP-SGDM) on DN line one just beyond DN advanced starter no. 14 of CPP and another on 16T2 track circuit beyond the DN IB home signal No 16 of CPP. Similarly a pair of Digital axle counter is provided between CPP-SGDM(UP IBS SGDM-CPP) on UP line one just beyond UP Advanced starter No 13 of SGDM and another on 15T2 track circuit beyond Up IB Home signal No 15 of SGDM.

FOR SECTION CPP-SGDM : A pair of Digital axle counter is provided between CPP-SGDM (DN LVV CPP-SGDM) on DN line one just beyond DN IB home signal No 16 of CPP and another on 2T2 track circuit beyond the DN home signal No 2 of SGDM. Similarly a pair of Digital axle counter is provided between CPP-SGDM(UP LVV SGDM-CPP) on UP line one just beyond UP IB Home signal No 15 of SGDM and another on 1T2 track circuit beyond Up Home signal No 1 of CPP.

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

After complete arrival of the train the 'RED' indication will disappear and 'YELLOW' indication will appear. If after the complete arrival of the train the 'RED' indication does not change to 'YELLOW' 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 5.2 of this SWR).

In the event 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

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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.

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

Double Locking arrangement for Relay room is provided. Key of one lock remains with signal maintainer of the section and the key of the other lock remains with the SM on duty. The relay room cannot be opened unless both the keys are used. In the event of necessity such as for attending failure or regular maintenance on being requisitioned by S&T maintainer SM shall handover the key to the maintainer. On completion of the work the maintainer shall lock the relay room and return the key to SM. The transaction shall be recorded in relay room key register by SM on duty vide O.M. 1.14 and SR 3.51.05 and shall duly signed by SM/SS and maintainer respectively.

Whenever the key is taken by the maintainer for normal maintenance of work, the S&T staff shall give a remark in the register that, they will not interfere with the safe passage of train. The SM on duty shall ensure that this remark is given by the S&T staff, otherwise the installation shall be treated as non- interlocked and the action taken in terms of GR 3.69, 3.70 and SR's thereto.

4.3 POWER SUPPLY:

- i) A changeover switch is provided in the Station Master's Office with the three power supplies viz., Up AT, Down. AT and Local, for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the supply
- ii) Normally the switch will be kept towards Up AT or Dn AT position. Whenever power block is to be given on the line, the on duty SM must ascertain that power is available on the other AT.
Eg: If power block is to be given on the Up line, Down AT must be available and vice-versa.
- iii) In case of failure of one of the AT supply without any power block, the on duty SM. has to check 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, the Local supply shall be utilized by operating the switch.

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If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any other mean and a message shall be given to the AEE and CTFO/PSI for prompt rectification.

- iv) For IPS system that provides to EI auto-change over has been provided.

There is a remote monitoring SM box provided at the station to monitor the health of IPS.

REMOTE MONITORING SM BOX:

Remote monitoring SM Box gives alarm to the SM for the following fault conditions:-

- a) 50% depth of discharge (DOD) of battery. In this condition audio/visual alarm comes, which can be acknowledged with audio cut-off.
- b) 60% DOD, which warns for emergency. The alarm for this condition is same as for condition 1.
- c) 70% DOD, which signals system, shut-down. In this condition signal feed is cut-off and all DC-DC converters continue working. Audio alarm continues till power supply is restored.
- 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 ATs and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

5. TELECOMMUNICATIONS:

- a) The Station is connected to VSKP -PSA Main line Control Circuit.
- b) Telephone attached to SGE type Lock and Block Instruments for sections CPP-SGDM and CPP-GVI.
- c) Railway Auto telephone is provided at the station.
- d) Magneto telephone communication is provided between CPP-SGDM and CPP- GVI stations.
- e) Telephone communication is provided between Station Master and Up CH locations and to Dn CH Locations.

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- f) Telephone attached to L.C.Gate at Km., 781/25-27, 786/3-5 and 789/33-35.
- g) The station is connected to VSKP – PSA traction power control circuit.
- h) The station is connected to VSKP – PSA traction Loco control circuit.
- i) The station is provided with BSNL Telephone.
- j) VHF set is provided at the station.
- k) Telephone is provided at IBS KM 779.318 between CPP-SGDM

5.1 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF COMMUNICATION.

- i) When telephone communication attached to SGE type Lock and Block instrument fails, the line clear duties of the affected section shall be taken up by SM on duty at the station. Necessary entry shall be made in the train signal register. Line clear shall be obtained by using station to station Magneto telephone using ID number and Private number.
- ii) When Block telephone and station to station magneto telephone failed Line clear shall be obtained using section control phone using ID number and Private number.
- iii) When Block telephone ,station to station magneto telephone and control telephone failed Line clear shall be obtained on VHF set using ID number and Private number.
- iv) When telephone communication with L.C. Gates failed the same shall be intimated to the SM at the other end of the Block section concerned .All trains entering such Block section shall be issued with a caution order to the effect.

6.0 SYSTEM OF TRAIN WORKING:

Movement of trains is regulated by the Section Controller on duty whose orders must be carried out provided they do not contravene any G&SR, BWM, OM, SWR or any other safe working principles. In the event of suspension of control working, the SS/Dy.SS on duty shall work independently in consultation with the Station Master of the adjacent block station and shall be responsible for reception and dispatch of train. He shall ensure that preference is given to important trains and at the same time no undue detention occurs to other train vide OM 2.14 & 2.24(a).

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6.1 DUTIES OF TRAIN WORKING STAFF:

The duties of train working staff are mentioned in detail in Appendix – ‘D’

6.1.1 DUTIES OF TRAIN WORKING STAFF IN EACH SHIFT:

COMPLEMENT OF STAFF		STAFF IN EACH SHIFT
Station Superintendent	1	1 in Day Shift
Dy.Station Superintendent	2	1 in each night shift
Traffic Points Man	3	1 in each shift
Sr.SCLM	2	

NOTE: 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 and in Gate lodge for traffic gate man (details duties are given in APPENDIX-'D').

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

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

b) USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SS under lock key by maintaining register for this purpose.

6.1.3 ASSURANCE OF STAFF IN THE ASSURENCE 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 15 days 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 all the staff who 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:

The trains are worked under “ABSOLUTE BLOCK” System with double line working and MACL signaling vide GR 8.03.

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

Nil

6.2.1.1 SETTING OF POINTS AGAINST BLOCK 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, the points in rear shall be set against the blocked line except when shunting or any other movement is required to be done on that line. [Refer SR 3.51.06(a)].

If all the lines at a station happen to be blocked, when line clear has been granted to a train, the point should be set for the line occupied by a stabled load or a Goods train. [Refer GR 3.36.03(b)5.04.01 & SR. 3.51.06 (b)].

The above precautions shall be taken in addition to the observance of other precautions. [Refer SR 5.04.01 & SR 5.23.01].

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE

Whenever trains are to be admitted on an obstructed line it is necessary that the train are piloted IN on a written authority T/509 given by the SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train. [Refer GR 5.09 & SRs there to]. Calling on signal where provided may be taken OFF.

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE

Nil

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE.

Nil

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

Nil

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

SPECIAL RESTRICTIONS:

- i) No Dn train shall be dispatched from common loop when line clear for an up train has been given unless the said up train comes to a stop at the first stop signal or has been received at the station clearing the Fouling mark.

(OR)

If starter signal has been taken OFF for a Dn train from common loop, the line clear for an Up train shall not be given unless the said train with its last vehicle has cleared the cross over points between the Up and Dn lines.

- ii) In case of approaching Up trains, no signaling movement with point -21 reverse is permitted vide CRS No -253 dated 04-06-2012.

6.3 CONDITIONS FOR TAKING “OFF” APPROACH SIGNALS:-

The SM on duty shall nominate a clear line not only up to the starter but also for an adequate distance beyond it for reception of trains. [Refer GR 3.07(4)(5),3.08(4)(b) 3.36, 3.38, 3.40, 4.17 and SR 3.36. 01, 3.36.02, 3.36.04, 3.40.01, 3.40.02, 3.47.01, 4.17.02, and Block Working Manual

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6.3.1 RESPONSIBILITY OF SS/DY.SS FOR RESTORATION OF SIGNALS TO ‘ON’:

SS/DY.SS shall ensure that the signal is gone back to ‘ON’ after passage of a train as per GR 3.36(2)(b).

6.4 SIMULTANEOUS RECEPTION/DISPATCH, CROSSING AND PRECEDENCE OF TRAINS:

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

1.	While Receiving of an DN train on line No.1 set to over run line	Receiving of a up train on line No.3 or 4 and dispatch an Dn train from line no. 2.
2.	While receiving of a Dn train on line no. 1 set to main line	Receiving of a UP train on line no. 3 or 4.
2.	While Receiving of a DN train on line No.2 (DN Main)	Receiving of a UP train on line No.3 or 4.
3.	While Receiving of an UP train on line No.3 (UP Main)	Receiving of a DN train on line No.1 or 2
4.	While Receiving of an Dn train on line No.4 (Common Loop)	Nil
5.	While Receiving of a UP train on line No.4 set to sand hump (Common loop)	Receiving of an Dn train on line no. 1 or 2 OR dispatch a Dn train from line no.1 or 2.or Dispatching of an Up train from Line No 3.
6.	While receiving of a Up train on line no. 4 set to main line (Common loop)	Receiving of an Dn train on line no. 1 or 2. OR dispatch a Dn train from line no.1 or 2.

6.5 COMPLETE ARRIVAL OF TRAINS:

The entire block section between CPP-SGDM and CPP-GVI on both Up and Down Lines are monitored by axle counter system and the position of the block section whether ‘Occupied’ or ‘Clear’ is indicated on VDU at SM’s office. As soon as train enters in to that block section the RED indication appears on VDU. After whole train clears the block section YELLOW indication appears on the 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 YELLOW on the VDU.

In case of failure of Axle counter 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

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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, "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. Train passing on adjacent line shall be stopped and Guard and Loco Pilot shall be issued with caution Order to proceed cautiously and stop short of any obstruction as per SR. 4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the SM on duty shall take action in terms of SR.15.25.03(b)(vi).

6.6 DESPATCH OF TRAINS:

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 VDU. He shall suspend all non-isolated shunting and the Station Master will ensure that the Level crossing Gate is closed against road traffic and then shall take "OFF" the concerned route starter and advanced starter signal. The 'OFF' aspect of the route starter and advanced starter is the authority to proceed into the block section. [Refer GR 3.38, 3.42, SR 3.36.04(b), 3.42.01(a) ,3.42.04 and BWM 2.07.5(a)]

The Station Master on duty shall watch the safe passage of the train with its last vehicle indicator. After the train passes the advanced starter complete, he shall send the train entering block section signal to the station in advance. If a train worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed. The interlocked level crossing gate shall remain closed against road traffic for dispatch of trains. [ReferSR.4.23.02 & 4.25.02].

6.7 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 any thing 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

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substitute, action shall be taken as per General and Subsidiary Rule. [Ref GR 3.40, 3.42, 4.17, 4.42,& SR 4.42.02 (b) (i) ,(ii), (iii),c & (d)]

6.8 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) **AXLE COUNTER:**

In case of failure of axle counter in the station yard, the clearance of the concerned line should be ensured physically before a train is piloted.

If the axle counter fails between the block sections, resetting procedure will be adopted as per Para 5.0 of SWR (APP-B). if the axle counter indication does not appear 'Yellow & 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.

c) **BLOCK INSTRUMENTS**

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

During this period of time the authority will be T/369(3b) with identification number and Private Number issued from the station in advance written both in figure and words.

d) **RECEPTION OF TRAIN ON OBSTRUCTED LINE:**

Whenever trains are to be admitted on an obstructed line it is necessary that the trains are piloted IN on a written authority given by the SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train. [Refer GR 5.09 & SRs there to].

e) **RECEPTION OF A TRAIN ON NON-SIGNALLED LINE**

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f) **DEFECTIVE SIGNALS:**

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for which it applies and if it is found impossible to take OFF a signal, the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.71, 3.80, 3.81 and SR 3.68.01 (c)].

In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, Station Master on duty shall before giving line clear initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]

g) **DEFECTIVE/DAMAGED POINTS**

When any point fails to operate normally by the route setting operation through 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. As per 4.1 (a) of the SWR shall be followed.

6.9 PROVISIONS FOR WORKING OF TROLRIES/ MOTOR TROLRIES/MATERIAL LORRIES ETC"

Motor trolleys shall be worked as per GR 15.25 and SRs there to and BWM 5.11(2), 5.12, 5.13 and 5.14(2)(b).Material Lorries shall be worked in accordance with GR.15.27 and SRs there to and BWM 5.11(2),5.13 and 5.13(2)(b) .Trolleys, Motor Trolleys, Lorries which are not insulated shall not be allowed to run except on Line clear.

- i) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly.
- ii) In all other respects the Working of a light motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley.

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7.0 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 Dy. SS/SM on duty following procedures as laid down in para no. 6.2.2. 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 ,SR5.04.01(a) and SR 5.23.01(a)]

8.0 SHUNTING

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13 to 5.23, 8.05(2) (3), 8.06 and 8.14, 8.15 (c) with relevant SRs and OM 7.01, 7.07 and 7.08 shall be observed. All shunt moment shall be supervised by Guard/SS/Dy.SS, point man on duty vide SR 5.13.03 as the case may be.

In the event of any non-signaled movement has taken place, the Dy.S.S/SS. on duty shall ensure physical verification of the clearance of the crossover points.

8.1 GENERAL PRECAUTIONS:

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17 to 5.21, 8.05, 8.06, 8.145 and 8.15(c) with relevant SRs shall be observed, all shunting movements shall be supervised by the Guard of the train. When there is no Guard the shunting shall be supervised by SM/YM/STJM/Points Man as per SR 5.13.03.

For any non signal movements the SS / SM on duty shall ensure clearance of cross over through the indication on the indication panel and the person who supervises such shunting shall also confirm it to SM on duty over Goomty Phone supported by private number.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approaching train is governed by SR 8.09 & SRs there to

8.3 PROHIBITION OF SHUNTING ANY SPECIAL FEATURES:

- a) Hand shunting/Fly shunting is prohibited at both ends of the yard.

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8.4 SHUNTING ON SINGLE LINE:

Not applicable to this station.

8.5 SHUNTING ON DOUBLE LINE:

- i) When the line clear has been given no shunting shall be permitted in the block section in rear Vide GR 8.06 (1).
- ii) Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and is blocked back Vide GR 8.06(2) and BWM 5.15(1)(b).
- iii) Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and is blocked forward Vide GR 8.06 (3) and BWM 5.15(2)(b).

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

While performing shunting in the sidings it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted. The relevant provisions of GR 5.14 and SR thereto shall be meticulously followed.

9.0 ABNORMAL CONDITION: -**i) PARTIAL FAILURE: -**

In the event of suspension of Lock and Block Instrument and during partial failure of other available means of communication, the procedures detailed below shall be followed for working of trains in different situations.(Refer BWM 5.16,5.23 and SR 6.02.06)

- a) Failure/Suspension of Block Instrument or Track Circuit or Axle counters-Line Clear shall be obtained on the Telephone attached to the Block Instrument or station telephone by exchanging ID number and supported by Private Number.
- b) Failure/Suspension of Block Instrument or Track Circuit or Axle Counters or telephone attached to the Block Instruments or station fixed telephones- 'Line clear' shall be obtained on Railway auto phone or BSNL phone by exchanging Identification Number supported by a Private Number.
- c) Failure/Suspension of Block Instrument or Track Circuit or Axle counters or telephone attached to the Block Instruments or station to station fixed

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telephone or Railway auto phone or BSNL phone. 'Line Clear' shall be obtained on control phone by exchanging Identification Number supported by a Private Number.

- d) Failure/Suspension of Block Instrument or Track Circuit or Axle counters or Telephone attached to the Block Instruments or Station to station fixed telephone or Railway auto phone or BSNL phone or control phone . 'Line Clear' shall be obtained on the VHF sets by exchanging identification Number supported by a Private Number.

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

ii) **THE AUTHORITY TO PROCEED IN OCCUPIED BLOCK SECTION IN CASE OF OBSTRUCTION OF LINE OR ACCIDENT.**

Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provision of SR 6.02.05.

iii) **TRAINS DELAYED IN BLOCK SECTIONS**

GR 6.04 & SRs there to shall be followed.

- iv) Failure of Axle Counter Block/BPAC – Procedure to be followed as per 5.0 of Appendix 'B'
- v) Procedure for emergency operation of points by Crank Handle.-
- a) The detailed Procedure for emergency operation of points by Crank Handle of motor operated points are given in Para No.3.5 of Appendix B of this SWR .
- b) Procedure for emergency operation of points with point zone axle counter/Track circuits failure and emergency route release.[GR 3.39 and GR 3.77]
- c) 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/ASM.

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- 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 Signalling Maintainer for rectification of the fault ,SM should restore the normal working.

The entries in failure registers to be done with message to the section controller.

9.1 TOTAL FAILURE OF COMMUNICATION: -

In the event of total failure of communications between SGDM-CPP or CPP-GVI train will be work in accordance with SR 6.02.03.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION

During temporary single line working on one clear line when one line is obstructed either between CPP-GVI and CPP-SGDM, trains shall be worked as per the procedure SR 6.02.01.

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

Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provisions of GR 6.09 and SRs thereto.

10.0 VISIBILITY TEST OBJECT:

The signal lights of common loop starter signal No.8 & 11 during day and night are the visibility test object vide GR 3.61.2(b)(iii)

11.0 ESSENTIAL EQUIPMENT AT THE STATION:

Details are given in Appendix 'E'.

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12.0 FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG.
FOG SIGNALLING:-

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 signal men 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:

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

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13.0**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 EQUIPMENTS PROVIDED AT THE STATION
- APPENDIX-F : RULES OF WORKING OF DK STATION, HALTS, IBH, IBS AND OUTLYING SIDINGS
- APPENDIX-G : RULES FOR WOKING OF TRAINS IN ELECTRIFIED SECTIONS

14.0 CERTIFICATE :

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

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APPENDIX-'A'**APPENDIX 'A' TO STATION WORKING RULES OF CHIPURUPALLI
STATION LEVEL CROSSING GATES****1. GENERAL:****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

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

1	No. of Level Crossing Gate	:	445
2	Engineering or Traffic gate	:	ENGINEERING ('Spl' Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/ CPP
4	Location at Km.	:	KM. 781/25-27
5	At station	:	At Mid Section
6	In between station	:	CPP-SGDM
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Closed to Road Traffic
10	Interlocked/ Non-Interlocked	:	Non-Interlocked
11	Means of Interlocking	:	Non-Interlocked
12	Provision of gate single at Km.	:	(i) Up Line : Nil (ii) DN Line : Nil
13	Signaling arrangement	:	----
14	Means of communication Telephone.	:	Telephone Connected with CPP Station
15	Width of the level crossing gate	:	7.5 M
16	Type of road	:	Other
17	Name of road	:	Panchayat
18	Metalled /Non-Metalled	:	C.C.Block
19	Approach road	:	Metalled
20	Width of the road	:	5.5 M
21	Angle of road crossing (in case of the SKEW gates)	:	90 ⁰
22	Road gradients (if any)	:	[a]North/East Side: 1 in 30 [b]South/West Side: 1 in 30
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Straight

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24	Provision of height gauges	: Provided
25	Type of barriers	: Coupled Lifting Barriers
26	Length of check rails	: 9.5 M
27	Road surface in between level crossing gates.	: Level
28	Length of rumble strip/ speed breakers.	: 5.5 M
29	Road signs	: Provided
30	Speed breakers indication board	: Provided
31	TVU:	: 27246 July 2011
32	Census next due on	: 2014
33	Demarcation for placement of detonators.	: Provided
34	No. of gateman working	: Two
35	Nearest Railway Medical Assistance	: Rly Health Unit VZM
36	Nearest Private Medical Assistance available (if any)	: CPP
37	List of equipment available (Yes/No)	: Yes

1.2 EQUIPMENT:

Items	<u>Quantity / Numbers</u>
1. Hand Signal Lamp Tri Colour	3 Nos.
2. Hand Signal Flag Green	1 No with mounted stick
3. Hand Signal Flag Red	3 Nos.
4. Banner Flag Red	3 Nos.
5. Posts for exhibiting red banner flag	2 Nos.
6. Spare chains with padlocks	2 with stop 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.

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Items	Quantity / Numbers
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 chin for use in case of failure of gate boom/Leaf Lock	1 No.

1.3 RECORDS TO BE KEPT AT GATE LODGE:

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

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

1.4 MODE OF OPERATION:

Detailed mode of operation for opening and closing the level crossing gate shall be provide in the respective station Working Rules and Gate Working Instructions incorporating local operational requirements.

1.5 DUTIES OF GATEMAN:**1. ALERTNESS:**

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

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APPENDIX-‘A’**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. ROUTING 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 sunrise.
- ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- 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, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- v) Gateman shall also 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 damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- vii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

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- viii) 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.
- ix) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- x) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiv) Gateman shall see that the channel for the flange of the wheel is kept clean.
- xv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvi) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xviii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:

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

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- i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot / guard fails to take notice, gateman shall immediately inform the Station Master, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

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

The gateman shall protect the line as under:-

a) On double line section:

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

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- ii) Then he will similarly plant the other red banner flag by day and a red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

b) **Other action to be taken by Gateman:**

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (A) and (B) above.
- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.

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

1.6 ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

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.ANNEXURE – V**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATES,
NON-INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL
POSITION “CLOSED TO ROAD TRAFFIC”**

(General Instructions are common for all types of Manned Level Crossing Gates)

1. Mode of Operation:

When level crossing gate is required to be open for passage of road traffic, the gate man must operate the winch often following the instructions given in para -2 item (i) to (iv).

2. Exchange of Private Number:

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

At LC gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gateman shall exchange PN with the SM, and confirm that the train has pass completely from his gate, there often the SM may all the Gateman to open the gate. In such a situation the SM, before dispatching or giving line clear for any other train in the block section shall ensure that the level crossing gate is closed for road traffic and assurance of the gateman is taken through exchange of PN.

- (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.

3. Failure of Telephonic Communication:

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

- (i) Station Master at the dispatching end shall issue a caution order to the driver of the departing train.
- (ii) The caution order shall advise the driver to whistle continuously and approach the gate cautiously.

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- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled 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 Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station Master shall also advise the gateman through gangman / 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.

4. Failure of Lifting Barriers:

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

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

5. Obstruction at the Gate:

- (i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately 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 defects / obstruction 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, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilot 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.

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

6. Obstruction on the Track near Level Crossing:

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.

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APPENDIX-'A'**APPENDIX 'A' TO STATION WORKING RULES OF CHIPURUPALLI
STATION LEVEL CROSSING GATES****1. GENERAL:****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

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

1	No. of Level Crossing Gate	:	447
2	Engineering or Traffic gate	:	ENGINEERING GATE ('C Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/ CPP
4	Location at Km.	:	KM. 786/3-5
5	At station	:	At Mid Section
6	In between station	:	CPP-SGDM
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Closed to Road Traffic
10	Interlocked/ Non-Interlocked	:	Non-Interlocked
11	Means of Interlocking	:	Non-Interlocked
12	Provision of gate single at Km.	:	i) Up Line : Nil ii) DN Line : Nil
13	Signaling arrangement	:	----
14	Means of communication Telephone.	:	Telephone Connected with CPP Station
15	Width of the level crossing gate	:	7.5 M
16	Type of road	:	Other
17	Name of road	:	Panchayat
18	Metalled /Non-Metalled	:	CC Block
19	Approach road	:	Metalled
20	Width of the road	:	5.5 M
21	Angle of road crossing (in case of the SKEW gates)	:	90 ⁰
22	Road gradients (if any)	:	[a]North/East Side: 1 in 30 [b]South/West Side: 1 in 30
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Straight

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24	Provision of height gauges	: Provided
25	Type of barriers	: Coupled Lifting Barriers
26	Length of check rails	: 9.5 M
27	Road surface in between level crossing gates.	: Level CC Blocks
28	Length of rumble strip/ speed breakers.	: 5.5 M
29	Road signs	: Provided
30	Speed breakers indication board	: Provided
31	TVU:	: 1049 July 2011
32	Census next due on	: July 2014
33	Demarcation for placement of detonators.	: Provided
34	No. of gateman working	: Two
35	Nearest Railway Medical Assistance	: Rly Health Unit VZM
36	Nearest Private Medical Assistance available (if any)	: CPP
37	List of equipment available (Yes/No)	: Yes

1.2 EQUIPMENT:

Items	<u>Quantity / Numbers</u>
1. Hand Signal Lamp Tri Colour	3 Nos.
2. Hand Signal Flag Green	1 No with mounted stick
3. Hand Signal Flag Red	3 Nos.
4. Banner Flag Red	3 Nos.
5. Posts for exhibiting red banner flag	2 Nos.
6. Spare chains with padlocks	2 with stop 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.

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Items	Quantity / Numbers
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 chin for use in case of failure of gate boom/Leaf Lock	1 No.

1.3 RECORDS TO BE KEPT AT GATE LODGE:

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

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

1.4 MODE OF OPERATION:

Detailed mode of operation for opening and closing the level crossing gate shall be provide in the respective station Working Rules and Gate Working Instructions incorporating local operational requirements.

1.5 DUTIES OF GATEMAN:**1. ALERTNESS:**

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

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APPENDIX-‘A’**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. ROUTING 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 sunrise.
- ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- 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, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- v) Gateman shall also 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 damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- vii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

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- viii) 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.
- ix) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- x) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiv) Gateman shall see that the channel for the flange of the wheel is kept clean.
- xv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvi) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xviii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:

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

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- i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot / guard fails to take notice, gateman shall immediately inform the Station Master, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

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

The gateman shall protect the line as under:-

a) **On double line section:**

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

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- ii) Then he will similarly plant the other red banner flag by day and a red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

b) **Other action to be taken by Gateman:**

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (A) and (B) above.
- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.

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

1.6 ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

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.ANNEXURE – V**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATES,
NON-INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL
POSITION “CLOSED TO ROAD TRAFFIC”**

(General Instructions are common for all types of Manned Level Crossing Gates)

1. Mode of Operation:

When level crossing gate is required to be open for passage of road traffic, the gate man must operate the winch often following the instructions given in para -2 item (i) to (iv).

2. Exchange of Private Number:

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

At LC gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gateman shall exchange PN with the SM, and confirm that the train has pass completely from his gate, there often the SM may all the Gateman to open the gate. In such a situation the SM, before dispatching or giving line clear for any other train in the block section shall ensure that the level crossing gate is closed for road traffic and assurance of the gateman is taken through exchange of PN

- (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.

3. Failure of Telephonic Communication:

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

- (i) Station Master at the dispatching end shall issue a caution order to the driver of the departing train.
- (ii) The caution order shall advise the driver to whistle continuously and approach the gate cautiously.

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- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled 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 Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station Master shall also advise the gateman through gangman / 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.

4. Failure of Lifting Barriers:

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

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- (vii) Station Master shall 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 repair the lifting barriers / leaf gates and issue reconnection / fit memo for the same.

5. Obstruction at the Gate:

- (i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately 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 defects / obstruction 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, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilot 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 thereafter exhibit green hand signal if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

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

6. Obstruction on the Track near Level Crossing:

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.

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APPENDIX-'A'**APPENDIX 'A' TO STATION WORKING RULES OF CHIPURUPALLI
STATION LEVEL CROSSING GATES****1. GENERAL:****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

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

1	No. of Level Crossing Gate	:	448
2	Engineering or Traffic gate	:	ENGINEERING GATE('C' Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/ CPP
4	Location at Km.	:	KM. 789./33-35
5	At station	:	At Mid Section
6	In between station	:	CPP-SGDM
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Closed to Road Traffic
10	Interlocked/ Non-Interlocked	:	Non-Interlocked
11	Means of Interlocking	:	Non-Interlocked
12	Provision of gate single at Km.	:	i) Up Line :Nil ii) DN Line : Nil
13	Signaling arrangement	:	----
14	Means of communication Telephone.	:	Telephone Connected with CPP Station
15	Width of the level crossing gate	:	7.5 M
16	Type of road	:	Other
17	Name of road	:	Panchayat
18	Metalled /Non-Metalled	:	CC Block
19	Approach road	:	Metalled
20	Width of the road	:	5.50 M
21	Angle of road crossing (in case of the SKEW gates)	:	90 ⁰
22	Road gradients (if any)	:	[a]North/East Side: 1 in 30 [b]South/West Side: 1 in 30
23	Road alignment (straight/Curve)	:	[a] North/East Side : Straight [b] South/East Side : Straight

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24	Provision of height gauges	: Provided
25	Type of barriers	: Coupled Lifting Barriers
26	Length of check rails	: 9.5 M
27	Road surface in between level crossing gates.	: Level CC Blocks
28	Length of rumble strip/ speed breakers.	: 5.5 M
29	Road signs	: Provided
30	Speed breakers indication board	: Provided
31	TVU:	: 55295 July 2011
32	Census next due on	: July-2014
33	Demarcation for placement of detonators.	: Provided
34	No. of gateman working	: Two
35	Nearest Railway Medical Assistance	: Rly Health Unit VZM
36	Nearest Private Medical Assistance available (if any)	: CPP
37	List of equipment available (Yes/No)	: Yes

1.2 EQUIPMENT:

Items	<u>Quantity / Numbers</u>
1. Hand Signal Lamp Tri Colour	3 Nos.
2. Hand Signal Flag Green	1 No with mounted stick
3. Hand Signal Flag Red	3 Nos.
4. Banner Flag Red	3 Nos.
5. Posts for exhibiting red banner flag	2 Nos.
6. Spare chains with padlocks	2 with stop 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.

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Items	Quantity / Numbers
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 chin for use in case of failure of gate boom/Leaf Lock	1 No.

1.3 RECORDS TO BE KEPT AT GATE LODGE:

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

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

1.4 MODE OF OPERATION:

Detailed mode of operation for opening and closing the level crossing gate shall be provide in the respective station Working Rules and Gate Working Instructions incorporating local operational requirements.

1.5 DUTIES OF GATEMAN:**1. ALERTNESS:**

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

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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. ROUTING 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 sunrise.
- ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- 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, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- v) Gateman shall also 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 damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- vii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

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- viii) 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.
- ix) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- x) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiv) Gateman shall see that the channel for the flange of the wheel is kept clean.
- xv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvi) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xviii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:

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

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- i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot / guard fails to take notice, gateman shall immediately inform the Station Master, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

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

The gateman shall protect the line as under:-

a) **On double line section:**

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

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- ii) Then he will similarly plant the other red banner flag by day and a red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

b) Other action to be taken by Gateman:

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (A) and (B) above.
- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.

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

1.6 ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

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.ANNEXURE – V**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATES,
NON-INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL
POSITION “CLOSED TO ROAD TRAFFIC”**

(General Instructions are common for all types of Manned Level Crossing Gates)

1. Mode of Operation:

When level crossing gate is required to be open for passage of road traffic, the gate man must operate the winch often following the instructions given in para -2 item (i) to (iv).

2. Exchange of Private Number:

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

At LC gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gateman shall exchange PN with the SM, and confirm that the train has pass completely from his gate, there often the SM may all the Gateman to open the gate. In such a situation the SM, before dispatching or giving line clear for any other train in the block section shall ensure that the level crossing gate is closed for road traffic and assurance of the gateman is taken through exchange of PN

- (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.

3. Failure of Telephonic Communication:

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

- (i) Station Master at the dispatching end shall issue a caution order to the driver of the departing train.
- (ii) The caution order shall advise the driver to whistle continuously and approach the gate cautiously.

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- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled 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 Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station Master shall also advise the gateman through gangman / 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.

4. Failure of Lifting Barriers:

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

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- (vii) Station Master shall 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 repair the lifting barriers / leaf gates and issue reconnection / fit memo for the same.

5. Obstruction at the Gate:

- (i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately 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 defects / obstruction 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, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilot 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 thereafter exhibit green hand signal if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

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

6. Obstruction on the Track near Level Crossing:

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.

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APPENDIX 'B' TO STATION WORKING RULES OF CHIPURUPALLI STATION

DETAIL DESCRIPTION OF SIGNALLING AND INTERLOCKING INSTALLATIONS, INSTRUCTIONS FOR WORKING THEM NORMALLY AND IN EMERGENCIES ETC. INCLUDING POWER SUPPLY ARRANGEMENTS.

1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALLATIONS:

This is a 'B' class station provided with Standard –III interlocking. The station is provided with Route setting type Electronic Interlocking between points, signals, track circuits and other signalling gears. The Station is equipped with Multiple Aspect Colour Light Signaling. All points and Signals etc. are power operated through a central **Visual Display Unit (VDU)** with a standby installed in the SS/DY. SS's Office.

2.0 DESCRIPTION OF OPERATOR CONSOLE CUM VISUAL DISPLAY UNIT (VDU):

The Operator Console cum Visual Display Unit (VDU) is provided for operation of Signals, Points, L.C Gates, Crank Handles, Siding & other controls etc. A Mimic yard diagram based on SI plan no. SI/23010 Alt 'C' will be displayed on the VDU. The VDU is used for controlling and monitoring the station. Indications on the Station yard mimic diagram of VDU will be dynamically updated.

2.1 SYSTEM OVERVIEW:

An Operator Console consisting of a VDU (a high-resolution 21" colour monitor), with keyboard and pointing device (mouse) connected with a computer (CPU) is provided. The CPU is connected to the Electronic Interlocking (E.I) equipment to exchange control and indication messages. The system is programmed to display the Station Yard Mimic VDU 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. A function (clearance of Signal or cancellation, Route release, Point operation, Gate release etc.) can be executed through selecting the required operation by clicking the Left button of the pointing device (mouse) on the desired function.

2.2 An additional VDU connected with a computer is provided as stand by arrangement in case of failure of the working operator console. In case of failure of the working operator console the system shall switch over to the stand by VDU automatically.

2.3 ICONS AND INDICATIONS PROVIDED ON THE VDU

In addition to mimic yard diagram including signal, points, track circuit, Axle counters, L.C.gates, sidings as indicated in the WRD, various other ICONS and indications have been provided on the VDU. A brief description of the same are described below.

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SL. NO.	ICONS	INDICATIONS	FUNCTIONS	REMARKS
1	SS/DY. SS's Key	Yellow light when key is 'IN'	Ensures operation of VDU by authorized person	Protected by pass word
2.	---	Emergency Route release - UP & DN	Flashing indication appears when Emergency route release operation is initiated.	
3.	---	Emergency Gate release	Flashing indication appears when Emergency gate release operation is initiated.	
4.	Emergency Point operation key	Yellow light when key is 'IN'	Ensures emergency point operation by authorized person	For each operation concerned counter shall register one count higher.
5.	---	System indication Central – On/Off	Indicates System 'A' or 'B' is in working mode	
6.	---	System indication End – On/Off	Indicates End system is in working mode or not	
7.	Point failure Ack. button	Yellow	Flashing indication appears when any point fails. SS/DY. SS has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement buzzer stops. After verification at site inform S&T staff Immediately.
8.	Signal failure Ack. button	Yellow	Flashing indication appears when any signal fails. SS/DY. SS has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement buzzer stops. Inform S&T staff Immediately.
9.	---	Main Filament Failure Indication	Flashing indication appears when Main filament of any signal fails.	
10.	CH-1, CH-2, CH-3, CH-4 and CH-5 buttons	Yellow lamp indicates 'KEY IN'. Red lamp indicates 'CH LOCKED'	In normal condition yellow lamp will be lit. Whenever the crank handle is locked in route or otherwise red indication will glow.	

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Srl.	ICONS	INDICATIONS	FUNCTIONS	REMARKS
11.	DN Reset key and button (SGDM end)	Yellow-Power on Green-prep reset	SS/DY. SS has to follow 'Key In' procedure followed by left click on the button icon to reset LVCD Axle counter.	This operation is required for Resetting of LVCD Axle Counter of Concerned Section. For each operation concerned counter shall register one count higher.
12.	UP Reset key and button (SGDM end)	Yellow-Power on Green-prep reset		
13.	DN Reset key and button (CPP end)	Yellow-Power on Green-prep reset		
14.	UP Reset key and button (CPP end)	Yellow-Power on Green-prep reset		
15.	'DN Train Entering Section' muting button	Yellow - acknowledged	On getting alarm/buzzer SS/DY. SS shall left click on the button icon to acknowledge it.	
16.	'UP Train Entering Section' muting button	Yellow - acknowledged	On getting alarm/buzzer SS/DY. SS shall left click on the button icon to acknowledge it.	
17.	UP Block release button	Yellow –Prepared for Block release.	On getting indication SS/DY. SS shall left click on the button icon which shall release Block Handle.	After complete arrival of train this will be activated
18.	DN Block release button	Yellow –Prepared for Block release.		
19.	Ore Loading siding control-34	Yellow lamp indicates 'KEY IN'. Red lamp indicates 'SDG. LOCKED'	SS/DY. SS shall right click on the button icon to select menu to Transmit / Receive of gate control as required.	
20.	H.A. Siding Control - 35	Yellow lamp indicates 'KEY IN'. Red lamp indicates 'SDG. LOCKED'	SS/DY. SS shall right click on the button icon to select menu to Transmit / Receive of gate control as required.	

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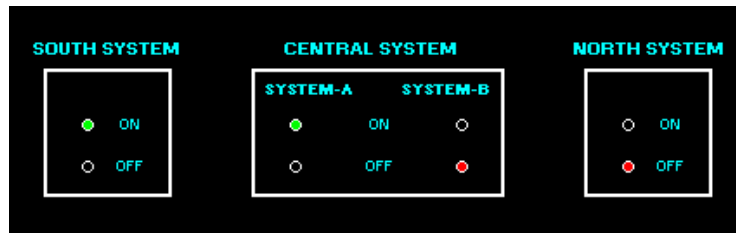
SL. NO.	ICONS	INDICATIONS	FUNCTIONS	REMARKS
21	Counter	-	As and when required SS/Dy. SS shall point the cursor on the counter icon and right click on it. A drop down menu will appear indicating all the counters available in the system. SS/Dy. SS shall select the required counter on the menu and can read the latest counter reading.	
22	Line Block button	Red when blocked	SS/Dy. SS shall point the cursor on the icons provided on the berthing track and right click . One drop menu will appear indicating line blocked and un-blocked, SS/Dy. SS has to select the required menu.	When line block is selected the concerned berthing portion of track will appear as thick Red line.

3.0 OPERATIONAL PROCEDURE THROUGH VDU AND INDICATIONS:

In addition to the mimic yard diagram various other indications will be available on the VDU. The implications of different indications provided and the operational procedure for different functions shall be strictly followed as per the following description.

3.1 ELECTRONIC INTERLOCKING (E.I) SYSTEM INDICATIONS:

Electronic Interlocking Equipment (E.I) at the center can work in either of the two modes i.e, System-'A' or System-'B'. On the VDU (Computer), there are two system indications in which Green indication mentioning the On-line system and the Red indication mentioning that the system is in power off condition. Similarly 'ON' and 'OFF' indications have been provided for the end E.I equipments.

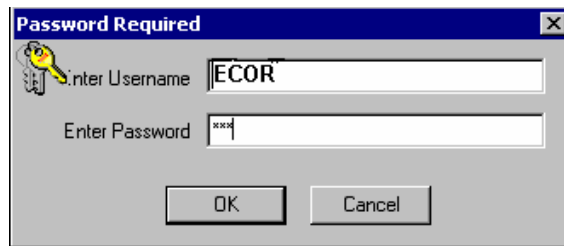


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3.2 OPERATION PROCEDURE OF SS/DY. SS's KEY :

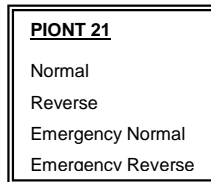
To prevent the unauthorized operation by any person other than SS/DY. SS on duty this facility is provided on VDU. On duty SS/DY. SS needs to track the pointer to the "SS/DY. SS KEY" icon and click the 'KEY IN' menu by the clicking left button of the mouse, by this a Password window will appear. SS/DY. SS on duty needs to enter the user name and the password and press the 'OK' Button provided on the Password window. This will allow operating all the controls e.g., Signals, Points, and Crank handles Etc. through VDU. In case incorrect password or user name is entered, no operation can be made. In such cases the same procedure is to be repeated till correct password username is entered.



Enter the USER NAME and PASSWORD and click the OK button. Now the OP VDU is ready for use & the entire yard can be controlled from the VDU. Similarly select the KEY OUT when the Station Master to Prevent the Unauthorized Operation with User name and password.

3.3 OPERATION AND INDICATION OF POINT:

To Operate the Point the SS/DY. SS 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 pop-up menu will appear as below:



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3.3.1 REVERSE TO NORMAL OPERATION:

Track the pointer to NORMAL menu and click. A Normal flashing indication will appear and the indication will be steady after the point is set to Normal.

3.3.2 NORMAL TO REVERSE OPERATION:

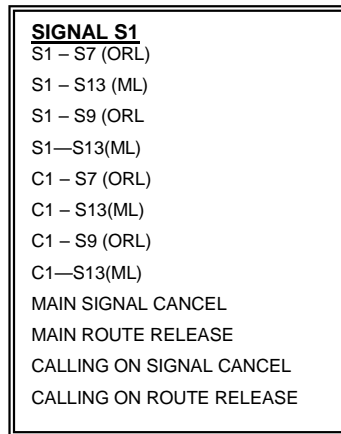
Track the pointer to REVERSE menu and click. A Reverse flashing indication will appear and the indication will be steady after the point is set to Reverse.

3.3.3 POINT INDICATIONS

When the point is free all steady strip of light will appear in the point zone (In case of cross-over at both ends) indicating the point is in normal/reverse condition. When the point is operated the same strip of light starts flashing till the point is set and becomes steady when the point is set and detected. When the point is engaged in a route /overlap/isolation steady yellow light will appear near the point indicating that the point is locked and cannot be operated now.

3.4 PROCEDURE FOR SETTING OF ROUTES AND TAKING OFF SIGNALS:

To Take-Off a Signal on the desired route the SS/DY. SS on duty needs to track the mouse pointer over the concerned Signal on the VDU, after clicking by the left button of the mouse a pop-up menu will appear as below:



SS/DY. SS on duty will select the route as per the requirement by moving the mouse pointer on the appropriate menu & left clicking on the menu. It will set the route and clear the signal provided all the conditions required to clear the signal are satisfied. Similarly by following the similar procedure operation of other signals can be done.

3.4.1 SETTING A ROUTE AND ITS INDICATIONS:

To set a route of a signal, click on a possible route of the signal, after doing so the route gets initiated & Red-flashing indication will appear on the replacement track of the signal. Point operation is initiated as per the requirement of the desired route and Normal/ Reverse set indications will starts flashing if favorable point detection is not available. After setting of points in the route, overlap & isolation Flashing indication will be disappeared and a complete yellow 'Route set' indication will appear from the replacement track of the signal

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to the last track of overlap section of the route. Also the points lock indication will appear. 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 immediate rear of the signal. Now the signal will be Taken-off. The yellow route set indication will turn to red when different track circuit portion within the route is occupied during passage of a train.

3.4.2 SHUNT SIGNAL OPERATION:

The same procedure as main signal has to be followed as explained above. To set the signal route for shunt signals SS/DY. SS on duty shall put the mouse pointer on the Shunt signal icon and left click on the same. A drop down menu will appear indicating different actions that can be selected. After selecting the desired route SS/DY. SS on duty shall left click on it. Desired shunt route will be initiated and the Shunt signal will be taken off.

3.4.3 CALLING ON SIGNAL OPERATION:

The same procedure as main signal has to be followed as explained above. To set the signal route for CALLING ON signals SS/DY. SS on duty shall select the desired route and left click on the same after a train occupies the approach track circuit in immediate rear of the stop signal. The signal is cleared after a lapse of 120 seconds provided other conditions are fulfilled.

3.5 CRANK HANDLE CONTROL OPERATION:

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicating that the crank handle is free. To Transmit or Receive control of the Crank Handle, click on the crank handle control button icon provided like the following on VDU.



The appearing pop-up menu gives details of the possible commands on the Crank Handle



To Transmit the Crank Handle KEY to the field personnel SS/DY. SS on duty has to click transmit control option menu. After transmission the 'KEY IN' indication will start flashing, now the KEY can be extracted from the RKT at site. After extracting the key from the RKT, the 'KEY IN' indication will disappear. When the Manual point operation is

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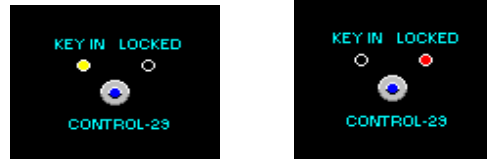
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over, after putting the crank handle Siding control key in the RKT, 'KEY IN' flashing indication will appear on the VDU, Now the SS/DY. SS on duty has to Release the control for the Steady indication by clicking release control option in the menu.

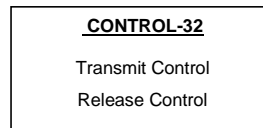
A Crank handle locked indication (Red) will appear when the particular point is on the signal route set over it or engaged in route setting in any other way.

3.6 SIDING CONTROL OPERATION:

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicating that the siding key is in condition. To Transmit or Receive of the Siding Control, click on the Siding control button icon provided like the following button on the VDU.



The appearing pop-up menu gives details of the possible commands on the Siding Control



For Transmitting the Siding Control KEY to the field personnel SS/DY. SS on duty 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 Siding point operation is over, after putting the KEY in the RKT, A KEY IN flashing indication will appear on the VDU, Now the SS/DY. SS has to Release the control for the Steady indication by clicking release control menu

A Siding Control locked indication (Red) will appear when a route is set over the particular Siding point or in some manner it is involved in route setting procedure.

3.7 OVERLAP 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 overlap. This indication light will glow when overlap is locked by any Home Signal route and there will be no light when 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 release of 120 seconds the white flashing light will disappear indicating concerned overlap is free.

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4.0 EMERGENCY OPERATIONS:

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

4.1 CANCELING 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. After clicking by the left button on the mouse a pop-up menu will appear as shown in Para 3.4 above. Click on the cancellation option in menu (Main/ Calling on) of the concerned signal, the signal will immediately go to 'ON' aspect, after doing so, click on the Route release option in menu the route locked indication will start flashing for 120 sec & the Emergency Route Release Indication (UP / DN as the case may be) will flash for the entire time interval. After the completion of 120 sec, the locked route will be released. This action will be recorded in a counter automatically. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/DY. SS on duty who shall record the details of the Route cancellation along with the latest counter no. in a register.

4.2 EMERGENCY NORMAL OPERATION OF POINTS:

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.

Note: Before resorting to this operation SS/DY. SS on duty shall verify that the point zone is clear of any vehicle occupying the track section and the same is clear of any obstruction.

4.2.1 NORMAL OPERATION

Before doing the emergency operation option in the "Emergency Point Operation Key" is to be made "KEY IN" by clicking the 'KEY IN' menu. The user name and password are to be logged in. The user name of this station is 'ECOR' and password of this station is CPP. Track the pointer to 'EMERGENCY NORMAL' menu and click. A Normal flashing indication will appear and the indication will be steady after the point is set to Normal. This action will be recorded in a counter automatically. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/DY. SS on duty who shall record the details of the Emergency Point Operation along with the latest counter no. in a register.

After the completion of the Emergency point operation, the Key to be 'KEY OUT' by clicking 'KEY OUT' option in the menu. The user name and password are to be given for "KEY OUT" also.

4.2.2 EMERGENCY REVERSE OPERATION OF POINTS:

Before doing the emergency operation an Emergency Point Operation Key is to be made 'KEY IN' by clicking the 'KEY IN' menu. The user name and password are to be logged in. The user name of this station is 'ECOR' and password of this station is CPP. Emergency reverse menu to be clicked. Track the pointer to 'EMERGENCY REVERSE' menu and click. A Reverse flashing indication will appear and the indication will be steady after the point is set to Reverse. The counter will increment the number for each and every

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such action and also, this number should be recorded by the SS/DY. SS on duty who shall record the details of the Emergency Point Operation along with the latest counter no. in a register.

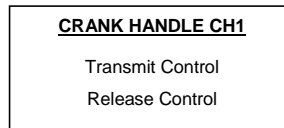
After the completion of the Emergency point operation, the Key to be 'KEY OUT' by clicking 'KEY OUT' menu. The user name and password are to be given for 'KEY OUT' also.

4.2.3 **EMERGENCY CRANK HANDLE RELEASE OPERATION :**

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/DY. SS 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/DY. SS 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/DY. SS 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/DY. SS on duty who shall record the details of the Emergency Crank Handle Operation along with the latest counter no. in a register.

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4.3 EMERGENCY GATE OPERATION:

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 SS/DY. SS on duty 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. Now the 'LOCKED' (Red) indication will flash for 120 seconds & after the time has elapsed the 'LOCKED' (Red) indication will vanish. Now the SS/DY. SS 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 SS/DY. SS/ 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 SS/DY. SS on duty who shall record the details of the Emergency Gate Operation along with the latest counter no. in a register.

4.4 LINE BLOCK AND UNBLOCK (REMINDER COLLAR):

When SS/DY. SS on duty requires demarcating a berthing/stabling line as BLOCKED / FREE line he shall adopt the following procedure:

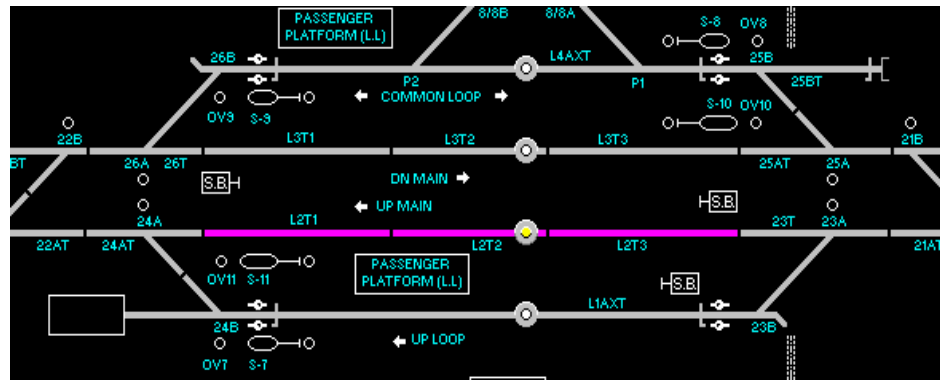
4.4.1 LINE BLOCK:

To set the 'LINE BLOCKED', the SS/DY. SS on duty shall select "L. No. ___ BLOCK" command using the left mouse button, after selecting the Line Block that particular line will be blocked for all the possible Track circuit section on that particular line. The 'TRACK BLOCK' yellow colour indication will be displayed after the successful application of such a blocking process on the VDU.



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4.4.2 LINE UNBLOCK:

To release the set block of any particular line, the SS/DY. SS/ASS/DY. SS should select “L. No. ___ UNBLOCK” command using the left mouse button. After selecting the “L. No. ___ UNBLOCK” that particular line will be available for the train movement leading to all the possible L1 Track circuit section.

5.0 PROCEDURE FOR RESETTING OPERATION OF LVCD (DIGITAL) AXLE COUNTER IN SECTION CPP-SGDM AND CPP-CPP.

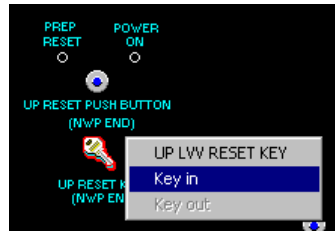
5.1 Digital Axle Counters are provided on both Up & Down Block sections between CPP-SGDM and CPP-GVI. The occupation and clearance of the axle counter section are indicated on VDU by RED & YELLOW light respectively. When after arrival of a train the LVCD Axle counter does not show clear indication and the ‘Section Occupied’ indication continues to glow SS/DY. SS on duty shall initiate resetting procedure for the LVCD Axle Counter, monitoring the Block section. Before initiating Resetting procedure SS/DY. SS on duty shall ensure that the train which has left arrived completely at receiving station and block section is clear [free] of trains. If the track indication of that particular block section is showing ‘Red’ then the following actions are to be performed by the SS/DY. SS on duty.

The SS/DY. SS on duty at CHIPURUPALLI Station shall verify with on duty SS/DY. SS at receiving station over phone, to ensure the complete arrival of the train in his station.

Resetting of Digital Axle Counter Cooperation is necessary from adjacent station.

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On duty SS/DY. SS shall track the pointer to the “ **Axle Counter Reset key** ” icon and click left button of the mouse and select “**KEY IN**” option.



Move the Cursor pointer near to the Axle Counter Reset push button icon, and click left button of the mouse and select “**Reset**”. In VDU ‘**Power on**’ indication will appear above the reset push button and it will remain for 10 sec. 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 SS/DY. SS manually in a register.



The on duty SS/DY. SS shall inform the SS/DY. SS on duty at adjacent to carryout aforesaid resetting procedure. After completing reset operation in both side “**PREP RESET**” indication will appear above the reset push button icon.



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The Piloting In or 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.

5.1 RESETTING OPERATION FOR ANALOG AXLE COUNTER IN I.B. SECTION:

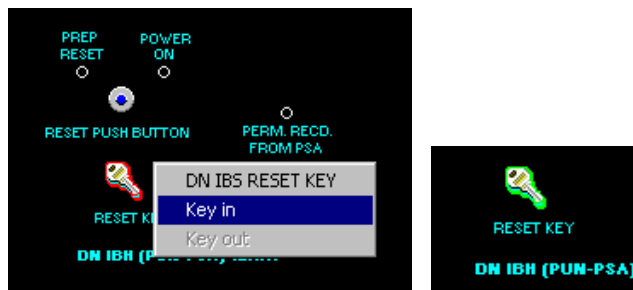
Analog Axle counters are provided in IBH section between (CPP-SGDM). The occupation and clearance of the I.B. Axle counter section are indicated on the VDU by RED & GREEN Indications. When after arrival of the train the axle counter does not show clear indication and the section occupation continued to glow, Dy. SS/SM on duty shall initiate re-setting procedure for the I.B. Axle counter monitoring the I.B. Section before initiating resetting procedure, Dy. SS/SM on duty shall ensure that the train which has left arrived completely at receiving station and I.B. section is clear [free] trains . If the track indication of that particular I.B. section is showing 'Red" then the following actions are to be performed by the DY. SS/SM on duty at CPP.

Resetting of Analog Axle Counter shall be carried out at Dispatch end, but before that permission shall be obtained from the receiving station.

After getting the permission from receiving station "Perm. Recd from SGDM" indication will appear above the Ack button icon



- On duty DY. SS/SM at Chipurupalli need to track the pointer to the " Axle Counter Reset key " icon and click left button of the mouse and select "KEY IN" option.



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After performing 'Key in operation' Dy. SS/SM on duty move the Curser pointer near to the Axle Counter Reset push button icon, and click left button of the mouse and select "Reset". In VDU Panel. Concerned VDU counter will change to the next higher number. After completion of reset operation first train shall be piloted out. On clearing of the piloted train over I.B.S. Axle counter zone, axle counter will get reset and Axle counter zone clear indication will appear on VDU



The Piloting out is mandatory for completion of I.B. Axle counter reset operation.

Number changed for resetting shall be recorded in the TSR and in the register provided for this purpose.

6.0 MAIN SIGNAL LAMP FAILURE INDICATION AND BUZZER ACKNOWLEDGMENT:

Double filament signal lamps have been used for main signals at this station. In case main filament fuses auxiliary filament will automatically lit up with same intensity. However failure of main filament will be indicated by the appearance of 'RED' light on VDU along with audible buzzer, which can be acknowledged and muted by pressing the 'SIGNAL FAILURE ACKNOWLEDGEMENT' button icon. However the RED light will continue to glow until the lamp is replaced by a new lamp. For rectification of failure SS/DY. SS on duty should inform the concerned S&T staff about the group which has failed. For the purpose of giving main filament failure indication the following groups are formed on either side.

- Down Advanced starter , Down Home
- Down starters.
- Up Starters.
- Up Advanced starter, Up Home
- Down Distant
- Up Distant

6.1 POINT FAILURE INDICATION (RED), POINT FAILURE BUZZER AND POINT FAILURE ACKNOWLEDGEMENT:

Whenever there is failure of point due to non-setting, point failure indication flashing light appears near the point button icon along with point failure Buzzer. The buzzer stops when the point failure acknowledgement button icon 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 'POINT FAILURE ACK' button will disappear.

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6.2 SHOWING OF COUNTERS:

One counter icon has been provided on the VDU. When selected a drop down menu will appear indicating the following counters.

1. Emergency Route Release.
2. Emergency Point Operation.
3. Emergency Crank handle release.
4. Emergency Gate release.
5. I.B. Axle counter resetting for section CPP-SGDM Dn line.
6. LVCD axle counter resetting for section CPP-GVI.
7. LVCD axle counter resetting for section CPP-SGDM.
8. Calling on Counter.

When the pointing device is placed any one of the menu the latest counter number will pop-up on VDU.

7.0 TRACK CIRCUITS:

Both Up and Down All Lines are track circuited from Home signal to Advance starter signals at either direction of the yard. Approach Track Circuit (7 Rail lengths) for Calling-on signal are also provided in rear of the Home signals in both directions. In addition there are (5 Rail length) track circuits beyond Advanced starter Signals in both the directions for replacement of Last Stop Signal. Indications for the above track circuits are available on VDU at SS/DY. SS's office. Yellow strip on VDU indicates 'ROUTE IS SET AND TRACK CLEAR' and Red strip indicates 'TRACK OCCUPIED CONDITION'.

- 7.1** On account of the doubtful operation of any track circuit by a light vehicle including self-propelled vehicle such as motor trolley or light engine or tower wagon etc., indicating the occupancy/clearance of track, it is necessary that the Station Master on duty satisfies himself that the said vehicle has cleared the point zone track circuits by observing the track indications of the track on either side of the crossovers by positively checking the 'entrance' and 'exit' track circuits are showing occupancy and clearance in accordance with the train movement.

8.0 AXLE COUNTER:

Entire Block Section between CPP-GVI and CPP-SGDM are provided with Digital Axle Counters. The details are described in para no 4.1(k) of the general portion of the SWR.

9.0 TAKING OFF CALLING-ON SIGNAL:

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

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- 9.1** To take off Calling-on signal the train must come to stop at the foot of the home signal, occupying the track circuit (1AT, 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 VDU. The particular route on which the train is intended to be received shall be set by selecting and setting desired route through VDU by SS/DY. SS on duty. After a lapse of 120 seconds, the Calling-on signal clears i.e. white light glows at the concerned Calling-on signal on the VDU.

NOTE:

SS/DY. SS on duty to ensure that no through signals are given while receiving a train on Calling-on.

- 9.2** **RELEASE/CANCELLATION OF ROUTE:**

Normally when a train is received on any route or dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released. When the route is not released automatically after passage of train over it or when SM on duty intends to cancel the route set by him shall follow procedure for cancellation of route described under Para 4.1 of APPENDIX-B above.

NOTE:

UP and DN Calling-on signals and UP and DN Advanced starters are to be manually cancelled after the passage of the train to release the route.

- 9.3** **REPLACEMENT OF SIGNALS TO 'ON':**

Signals are replaced to 'ON' automatically by the passage of a train beyond 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 SS/DY. SS shall follow para no. 3.4 of APPENDIX-B.

- 9.4** **INTERLOCKING OF SIGNALS:**

UP Advanced starter is interlocked with DLBI of section CPP – GVI and DN IB Home is interlocked with DLBI of section CPP –SGDM in Line Clear position.

The Block Instrument cannot be made normal unless the respective Home signal is put back to 'ON' and the respective Block Section monitored by Axle Counter is clear of trains. Signals once taken 'OFF' can be put back to danger in case of emergency by following para no. 3.4 of APPENDIX-B even when the SM's Key is withdrawn from VDU.

DN Advance Starter signal is interlocked with the clearance of IB section i.e., clearance of section up to 400 Mtrs. beyond DN IB Home which is controlled by IB zone Axle Counter.

The Block Instruments cannot be made normal unless the respective Home signal is put back to 'ON'. and the respective Block Section monitored by Axle Counter is clear of trains(LVCD). Signals once taken 'OFF' can be put back to danger in case of emergency by following Para no. 3.4 of APPENDIX-B even when the SM's Key is withdrawn from VDU.

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9.5 PILOTING OF TRAINS IN TO STATION YARD.

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. Whenever both Home signal and Calling-on signal failed, all trains will be piloted in vide SR. [Refer SR 3.69.03(a) & (c)].

The SS/DY. SS on duty shall nominate a clear line and shall advise the TPM on duty at station to set the nominated route with the help of crank handle if the points cannot be set from the VDU. Then the TPM shall set the facing and trailing points in nominated route and clamp and padlock the same under the supervision of SS/DY. SS on duty.

The SS/DY. SS on duty shall then hand over the written authority (T/369(3b) to the TPM for piloting the train. While going towards Home signal the TPM shall check the points and satisfy him self that the route is correctly set.

After the train has brought to a dead stop at 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 Home signal.

NOTE:

- (i) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of the facing points, if any and ensure clearance on the nominated route vide SR [Ref. SR 3.69.03(c)]
- (ii) The keys of padlock of the clamps put ON to the points on the route for piloting In or piloting OUT shall be in the personally custody of the SS/DY. SS on duty or any other authorized operating officials till such time the train / engine / vehicle has utilized the route or alternatively such movement is cancelled.

9.6 PILOTING OF TRAINS - OUT OF STATION YARD:

When the starter signal has become defective, the Station Master on duty shall advise the on duty TPM to set all points correctly for the outgoing trains. Then he shall clamp and padlock the same under the supervision of SS/DY. SS on duty. Then the SS/DY. SS on duty shall hand over the pilot memo T/369(3b) (along with the other authority if necessary) to the on duty TPM. The TPM on duty shall hand over the authority to the Driver of the train and display proceed hand signal at the foot of the starter vide SR. [Refer SR 3.70.01]. In case the advanced starter signal has become defective, such signal shall be passed on the written authority on the form T/369(3b). The TPM shall hand over the pilot memo in form T/369(3b) to the Driver after the train stopped. [Refer SR 3.70.02]

9.7 SHUNTING:

Caution aspect of starter signals for shunting up to Advance Starter at North and South Sides. For back shunting individual shunt signal No.3 , 4 and 6 are provided at North and South side except S7, S9 as dependent shunt signals SH-7, SH9 are provided below the said starters of the yard respectively for shunting back to the station yard in desired direction. For taking OFF Shunt signals please refer Para No. 3.4.2 of of APPENDIX-B.

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

In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard shall be kept clear of any obstruction for the passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the DY.SS/SM on duty personally through VDU indications and/or physical verification of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the point's etc.

11. **CRANK HANDLING/EMERGENCY OPERATION OF POINTS:**

Crank handle operation is interlocked with the Signalling and interlocking system at this station. Key for Crank handles are normally locked inside the RKT instrument inside Location boxes in the yard and can be taken out only when all the signals leading are in the 'normal' position and the route is not locked for whatever reasons. Crank handle can be transmitted or released by following procedure as laid down in Para no.3.5 of Appendix-'B'. 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.

12. **OBSERVATION OF TRACK CIRCUIT AFTER STABLING OF TRAINS ON RUNNING LINES:**

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

13. **LOCKING OF RELAY ROOM:**

THE Relay Room at the station is provided with double locks (two independent locks) as necessary vide Optg. Manual - 1.14. One key shall be kept with the signal maintainer of the station and the other key shall be with SS/Dy.SS on duty. The Relay room cannot be opened unless both keys are used.

SS/DY.SS 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 failures 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 1.14.

14. **MAINTENANCE OF S & T INSTALLATION AND ADHERENCE TO MAINTENANCE SCPPDULES:**

Regular maintenance of the S&T installations, adherence to schedules of maintenance testing of points, track circuits, level crossing gates, associated interlocking apparatus

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cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.

The tests, checks and replacements etc., shall confirm to the schedules of maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject.

15. PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF AN INTERLOCKING GEAR:

In case of failure of any interlocking gear at the station, the failure report should be communicated by the Station Master to the sectional Maintainer, the signal inspector of the section and others through a memo as per GR and SR 3.51.04 and 3.68.04 and document all such transactions.

16. INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

Before declaring a point as defective, the setting of the point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the buttons.

17. RECTIFICATION AND CPPCK BEFORE RESUMING NORMAL WORKING:

After receipt of the failure information, the sectional Maintainer shall attend to the failure after giving a 'Disconnection Memo'. After rectification of the fault, the Sectional Maintainer shall give 'Reconnection Memo' detailing the rectification. Thereafter the Station Master on duty shall personally check this defective apparatus. After satisfying him self that the gear is in good and proper working order, he shall resume the normal working of the said defective apparatus in terms of SR.3.68.04 (C) and (D).

18. PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:

Whenever any normal maintenance or special works for major renewals etc., are involved, the Signal and Telecom department should preplan these works. Field staff and the Inspector of the section should give to the Station master in writing 'Advance Intimation' about this work in terms of G and SR.15.08.01.

19. EMERGENCIES:

Notwithstanding, anything contained in the aforesaid para as when equipment is found defective and unsafe for passage of trains, the Signal and Telecom staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of the defect or damage to the interlocking installation to the Station master and take the Station Master's acknowledgement. After this, the usual practice of exchange of disconnection memo and reconnection memo can follow. The Station Master must act promptly on such messages and take adequate precaution treating the S&T installation as defective and pass trains over the affected interlocking equipment's according to extant instructions as contained in GR and SR.3.77.

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**20. PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNALS
POINTS AND USE OF EMERGENCY CRANK HANDLE:**

- 20.1** Whenever a Signal or a Point become defective any movements over the Points on the running lines should be made after clamping and padlocking both the facing and trailing Points by Station Master on duty personally for all trains at the Station.
- 20.2** In case of failure of Signal or a Point and in case the Point can not be operated from the Panel, the emergency Crank Handle which is Interlocked with the system has to be extracted and the following procedure has to be observed.
- 20.3** One common emergency Crank Handle is provided for all the Motor operated Points. This is mechanically riveted to the Key of RKT. This Key along with Crank Handle can be released from the RKT by pressing the Common RKT Push Button after cutting the seal between RKT and the Crank Handle. The Station Master on duty in case of Point Motor failure will take out the Crank Handle set the Point manually by inserting Crank Handle on the Motor.
- 20.4** When the Crank Handle is removed from RKT for operation of the defective Motor Operated Points, the responsibility for its safe custody re-sets with the SS/DY.SS on duty till it is replaced back in RKT and sealed by Signal Maintainer.
- 20.5** The case of failure of Motor Operated Points should be promptly reported to the concerned Signal Inspector/ESM for immediate rectification.
- 20.6** 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 than handover to him the emergency Crank Handle for the Points concerned. All the Points will be treated as defective till the Emergency Crank Handle is returned back to Station Master on duty.
- 20.7** 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 of all the lines should be treated as Non-interlocked and the Station Master on duty is responsible for introduction of Non-interlocked working and the trains will piloted IN and OUT duly clamping and Padlocking 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.

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20.7.1 The Emergency Crank Handle Register is to be maintained in the following proforma by the Station Master on duty wherein the particulars of usage of the Emergency Crank Handle must be recorded:

1. Date:
2. Point Number which failed or required to be tested:
3. Time failure:
4. Disconnection memo number received from S&T Staff:
5. Signature of SM/Signal Official to whom the Emergency Crank Handle is handed over:
6. Time Emergency Crank Handle is sent out:
7. Individual Point numbers, and Line number nominated for admission of dispatch for which Points are set, Clamped and Padlocked:
8. Train number to be admitted or dispatched:
9. Signature of the Station Master on duty to ensure correct setting, Clamping and Padlocking of the Points:
10. Date and Time fault rectified.
11. Time of Emergency Crank Handle received back by SM on duty:
12. Signature and Designation of the Signal Official who rectified the fault:

IMPORTANT NOTE:

When performing shunting operations in the sidings it must be clearly noted that the siding Points are interlocked with the system in the NORMAL position of the Points and in REVERSED position they are not interlocked. The Official responsible for shunting operation must clamp the Points at the both ends before permitting any movement.

21.0 INTERLOCKING OF SIGNALS WITH BLOCK INSTRUMENTS:

21.1 INTERLOCKING WITH HOME SIGNALS:

All the UP and DOWN HOME Signals are Electrically interlocked with the respective DLBI so that before the handle of the DLBI Instrument can be turned from TRAIN COMING FROM position to LINE CLOSED position of UP or DOWN direction as the case may be must be in their NORMAL position.

21.2 The DN IB Home Signal is Electrically interlocked with DLBI of section CPP-SGDM so that this Signal can not be taken OFF until the Handle of the concerned Block Instrument is in 'LINE CLEAR' position.

The UP advanced starter signal is controlled and interlocked with DLBI of section between CPP-GVI & Down Advanced starter signal is interlocked with the clearance of IB section i.e., clearance of section up to 400 Mtrs. beyond DN IB Home which is controlled by IB zone Axle Counter.

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21.3 SUSPENSION OF LAST STOP SIGNALS :-

When the Double line block instrument for section CHIPURUPALLI-SIGADAM is suspended with its handle in any position for whatever reason the concerned IB working between CPP-SGDM treated as suspended and trains shall be Piloted Out .

When the Double line block instrument for section CPP-GVI is suspended with its handle in any position for whatever reason the concerned Last stop Signal controlled by the DLBI must be treated as suspended and trains shall be Piloted Out.

22.0 NORMALISATION OF THE BLOCK AXLE COUNTER AND OF BLOCK WORKING BY RESETTING FEATURE:

22.1 Digital Axle Counters are provided on both Up and Down line Block Sections between CPP-GVI and CPP-SGDM.

22.2 The occupation and clearance of the axle counter section are indicated on the VDU by 'RED' and 'GREEN' light.

22.3 If any Block proving Axle Counter [LVCD] section fails, the Last Stop 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 CPPcking Device is to be resorted to either Section.

22.4. No train shall 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 taken OFF. [Refer Para No:5 of appendix 'B' for procedure of resetting of LVCD Axle counter].

23.0 TELECOMMUNICATIONS:

- [a] The Station is connected to VSKP-PSA Control Circuit.
- [b] Telephone attached to SGE type Lock and Block Instruments for sections CPP - GVI and CPP - SGDM.
- [c] Railway Auto telephone is provided at this station.
- [d] Telephone communication is provided between SS/DY.SS at station with adjacent stations.
- [e] Telephone communication is provided between SS/DY.SS on duty to UP & DN Crank Handle locations.
- [f] Telephone attached to L.C Gate at Km748/5-7, 746/17-19 and 749/23-25.
- [g] The station is connected to VSKP-PSA traction power control circuit.
- [h] The station is connected to VSKP-PSA traction Loco control circuit
- [i] VHF set is provided at the station.
- [j] BSNL telephone is provided.

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24.0 POWER SUPPLY ARRANGEMENT FOR SIGNALLING INSTALLATIONS

Power signaling and interlocking installations and the auxillary 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 signalling and interlocking installation at the station is drawn from the traction power sources. Whenever traction power supply fails the SS/Dy. SS on duty shall operate the change over switch provided in the SM's office connecting the power supply from the healthy sources to the installation.

The SS/Dy. SS 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 change over switch is provided in the SM's office with the three power supplies viz., UP AT , DN AT and local 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.

[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/Dy. SS 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/Dy. SS has to CPPck whether the circuit breaker has tripped [Three circuit breakers are provided in the change over 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] When ever there is failure of power supply in one AT the SS/Dy. SS on duty shall take prompt action to inform to all concerned for rectification.

The on duty SS/Dy. SS himself during each shift shall CPPck & test the availability of power supply on both AT.s and make an entry in the station dairy duly initiating for rectification of failure if any.

25.0 WORKING OF INTEGRATED POWER SUPPLY [IPS, INDICATIONS & ACTION TO BE TAKEN BY SS/Dy. SS ON DUTY:

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/Down AT traction power selected SS/Dy. SS on duty. Standby power supply is through AP TRANSCO local supply. One change over switch is provided in the SM's room for

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selection of output of either traction power supply or local power supply. The available traction/local supply is fed to the IPS through auto-change over switch provided in IPS.

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.

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.DC 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/Dy. SS on duty is tabulated below:

SN	Instruction	Health of Battery Bank/Equipment.	Visual Indication	Audio Indication	Action to be taken by SS/Dy. SS on duty
A	-	50% DOD	Red	Alarm	Alarm shall be acknowledged by SM on duty.
B	-	60% DOD	Red	Alarm	-do-
C	System shutdown	70% DOD	Red	Alarm	Signal feed cut off and all DC-DC converters to Work. Audio alarm will continue till power Supply is restored.
D	Call S&T staff.	Equipment fault.	Red,	Alarm	Failure of any module will give the alarm in ASM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

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

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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:

- i) DOD indicates depth of discharge of battery bank of IPS
- ii) In case of failure of all AC supply sources IPS battery bank can provide power supply maximum up to 8 to 10 hours before system shut down indication of IPS

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APPENDIX 'C' TO STATION WORKING RULES OF CHIPURUPALLI STATION

ANTI COLLISION DEVICE [[RAKSHA KAVACH]

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APPENDIX-'D' TO STATION WORKING RULES OF CHIPURUPALLI STATION

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

1. STATION SUPERINTENDEDNT:

He is restored for 8 hrs of train passing duties. He is responsible for the general and satisfactory working of the station and for the efficient discharge of duties by staff working under him. He shall keep all Rulebooks, Registers, Files and documents neat and up to date. 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. 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 XXII. He shall follow the instructions laid down in SR.3.68.01 © and (d) and SR 14.07.01 and B.W.M.2.09 (e). He shall promptly attend to accidents and report them. He shall supervise the work of safe working staff and conduct night inspections and report lapses of staff working under him.

2. DY.STATION SUPERINTENDANT:

He is responsible for trains passing during his shift. He shall promptly bring to the notice of Station Superintendent all irregularities and accidents in course of his shift duties. During the absence of S S, the duties of the Station Superintendant will devolve on him. He shall follow SR 3.68.01© and (d) SR 14.07.1 and OM Chapter XXII. His special attention is drawn to Chapter-2 of G&SR 1976 and GR 5.01 to 5.08 with relevant SRs. As an assistant to . SS, he shall carry out the instructions given to him by the Station Superintendent.

3. TRAFFIC POINTS MAN :

He shall work under the orders Dy. SS /S.S. on duty. He shall couple and uncouple vehicles under the supervision of Dy. SS /S.S./Guard. He shall operate ground lever/levers clamp and padlock the necessary points for shunting operations. He shall watch and guard the packages and other Railway property lying in the Station premises. He shall be through of displaying hand signals. He shall report any irregularities coming to his notice. He shall do loading and unloading of parcels, smalls and Guard's boxes. He shall do piloting IN and OUT. He shall deliver any official message to the proper person/office. He shall carry out any other duties entrusted to him by the SS/Dy. SS on duty.

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He shall attend to the sanitation of the Railway premises including SS/Dy. SS's Office, platforms, Staff Quarters, Latrines and cleaning of drainage's etc. He shall clean and fill with oil in the hand signal lamps and other lights. He shall carry out any other work entrusted to him by the Station Master on duty.

NB: - All staff should be in uniform while on duty and fallow their rosters issued by DPO/WAT from time to time.

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APPENDIX 'E' TO STATION WORKING RULES OF CHIPURUPALLI STATION**ESSENTIAL EQUIPMENT**

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

Sl. No	Description	Station
1.	Detonators	20
2.	Hand Signal lamps	3(1 Spare)
3.	Hand Signal Flags	3(1 Spare)
4.	Clamps with Padlocks	8
5.	Safety chains with Pad locks	6
6.	Fire & Sand buckets	5
7.	Minimax Fire Extinguishers DCPT	2
8.	Reminder collars	6
9.	First Aid Box	1
10.	Stretcher	1
11.	Blanket	1
12.	Iron Skid	2

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APPENDIX 'F' TO STATION WORKING RULES OF CHIPURUPALLI STATION**RULES OF WORKING OF DK STATION, HALTS, IBH, AND OUTLYING SIDINGS****RULES FOR WORKING INTERMEDIATE BLOCK SIGNALLING BETWEEN
CHIPURUPALLI-SIGADAM**

- a) The block section between CHIPURUPALLI-SIGADAM has been split into two block sections by providing Intermediate Block Stop signals at KM 779.318 [controlled by CHIPURUPALLI station] for DN line and, on up line at KM 778.458 [controlled by SIGADAM station]. Intermediate Block stop signals are controlled through double line lock and block instruments at the respective receiving ends.

The Block working for section between CHIPURUPALLI-SIGADAM on UP and Down lines is controlled by the provision of Double line Lock and Block Instruments (SGE type) and are provided at CHIPURUPALLI station and at SIGADAM . The Down Advanced starter signal No. S 12 of CHIPURUPALLI and UP Advanced Starter signal No. S 15 of SIGADAM are controlled by the clearance of IB section through respective IB section monitoring axle counters and the IB Home signal are controlled in turn through the line clear position of respective Double line lock and block instruments at the receiving stations.

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.

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 VDU provided at CHIPURUPALLI station.

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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 CHIPURUPALLI-SIGADAM:

SN	Signal Aspect [S-14]	IB Section Indication [14A XT]	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 SIGADAM.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

IB SECTION SIGADAM-CHIPURUPALLI:

SN	Signal Aspect [S-15]	IB Section Indication [15A XT]	IB Home Aspect [S-15]	Block Section Indication	Remarks.
1	Green.	While Illuminated.	-	-	Advance starter No: 15 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 CHIPURUPALLI.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

a) **Buzzer/Bell**

One audio buzzer is provided in the SM room at CHIPURUPALLI to detect Train Entering section for out going trains. After train passes the intermediate block stop signal, the buzzer/bell will start ringing CHIPURUPALLI station. On hearing the buzzer/bell the Dy. 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

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report to the cabin master 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.

- b) 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 Dy. 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 CPP-SGDM shall be shall be treated as single section.
- c) 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 circuit are last stop signal is restored to normal.
- d] **NORMALIZATION OF THE TRACK CIRCUIT AND OF BLOCK WORKING BY RESETTING FEATURE:**
- i) 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 can not be taken off and provision stipulated in **Para III to be followed.**
- ii) A Resetting arrangement for the resumption of I.B. Axle counter under failure condition through co-operative features of both the SS/Dy. SS 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/Dy. SS at the receiving station through exchange of private number.
- iii) 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 VDU at CHIPURUPALLI station and operating panels [re-setting panels] provided at SIGADAM .. 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 SIGADAM should normally be kept sealed by the S&T staff and SS/Dy.SS will inform the Maintainer for resealing the same whenever the seal has been broken.
- iv) The SS/Dy.SS on duty at CHIPURUPALLI 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 VDU and reasons for resetting and initial each such entry.

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- v) The procedure for resetting of the I.B. Axle counters in terms of clause g.II above shall be as follows:

SECTION CHIPURUPALLI-SIGADAM ON DOWN LINE:

	DISPATCHING STATION [CHIPURUPALLI]		RECEIVING STATION [SIGADAM]
1	Dy.SS/SM on duty shall call the attention of SS/Dy. SS of SIGADAM station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/Dy. SS on duty at SIGADAM after verifying that the said dispatched train arrives fully, shall exchange private number with Dy.SS/SM on duty at CHIPURUPALLI 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 VDU Dy. SS/SM on duty shall acknowledge by clicking on 'Permission received from SGDM' acknowledgement button icon. For each such operation the reset counter provided in VDU shall increase by one digit. Dy. SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.	2	SS/Dy. SS on duty at SIGADAM shall continue to press the 'Permission Granting' button.
3	Dy. SS/SM on duty then shall re-set the I.B. Axle counter by clicking on 'DN Reset Key' and select 'Key In'. After which he shall click on the 'Re-set button' icon, which will reset the Axle Counter.	3	SS/Dy. SS SIGADAM shall also press 'Re-set' button provided on re-set panel at SIGADAM 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 VDU.	4	The SS/Dy. SS on duty at SIGADAM shall record in his train register the re-setting operation giving train number, time and private number exchanged with the Dy. SS/SM of CHIPURUPALLI station giving reasons for the re-setting operation.

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SECTION SIGADAM-CHIPURUPALLI ON UP LINE:

	DISPATCHING STATION [SIGADAM]		RECEIVING STATION [CHIPURUPALLI]
1	SS/Dy .SS on duty shall call the attention of SS/Dy. SS of CHIPURUPALLI station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	Dy. SS/SM on duty at CHIPURUPALLI after verifying that the said dispatched train arrives fully, shall exchange private number with SS/Dy. SS on duty at SIGADAM and gives permission to re-set by clicking the 'Permission Grant' push button [To SGDM] provided on the VDU.
2	On getting re-set permission on re-set Panel SS/Dy. SS on duty shall acknowledge by pressing 'Permission received from CPP' acknowledgement button. For each such operation the reset counter provided in Operating Panel shall increase by one digit. SS/Dy. SS on duty shall make an entry of changed Reset counter number in re-setting register.	2	Dy. SS/SM on duty at CHIPURUPALLI shall continue to click the 'Permission Granting' button'.
3	SS/Dy. SS on duty then shall re-set the I.B. Axle counter by turning 'DN Re-set Key' and press the 'Re-set button' on the re-set panel, which will reset the Axle Counter.	3	Dy. SS/SM CHIPURUPALLI shall also click 'Re-set' button provided on VDU at CHIPURUPALLI 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 re-set panel.	4	The /Dy. SS/SM on duty at CHIPURUPALLI shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/ Dy. SS of SIGADAM station giving reasons for the re-setting operation.

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e) **DISPATCH OF TRAINS:**

Dispatch of trains is governed by the provision of G & SR 3.42, 3.70 and Block working manual rules.

f) **From CHIPURUPALLI towards SIGADAM.**

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.

g) **CHIPURUPALLI TO IBS ON UP AND DOWN LINES:**

The Dy. 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 VDU and shall also ensure any non-isolated shunting at their respective ends suspended and shunting authority issued if any is with drawn 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.

j] **IBS SIGNAL TO THE STATION IN ADVANCE:**

The SS/Dy. SS 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 of CHIPURUPALLI.

After the train passes the intermediate Block Stop signal of CHIPURUPALLI a buzzer will ring in the VDU. On hearing the buzzer/bell the Dy. 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 CHIPURUPALLI into the Block section between CHIPURUPALLI 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 and shall exchange Private Number with the Cabin Master in advance indicating the occurrence and the number of the train. On getting the information from the Cabin Master supported by Private Number, the SS/Dy. SS on duty at CHIPURUPALLI in turn will inform SCR on duty about this.

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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 Dy. SS/SM's diary book of both the Stations.

- k) Dispatch of trains towards SIGADAM in case of failure of the Down Advanced Starter signal at CHIPURUPALLI Station due to failure of "Axle Counter" device or otherwise. If the failure of the Advanced starter of CHIPURUPALLI 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 Dy. SS/SM's office for resorting the normal function of the signal, should be operated accordingly to the following instruction whenever the Advance starter signal of CHIPURUPALLI is found defective by the Station Master and the following procedure shall be adopted.

On receipt of this information, the SS/Dy. SS on duty after ensuring that all trains which had left his Block Station had arrived complete and intact at SGDM station (by exchange Private Number with the SS/Dy. SS **CHIPURUPALLI** 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 SS/Dy. SS office at **CHIPURUPALLI**. 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/Dy.SS, 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/Dy. SS concerned and ask him to reset the axle counter by pressing the reset push button. Where after the SS/Dy. SS on duty, after ensuring that all the trains which had left his Block Station had arrived complete and intact at **SIGADAM**(byexchanging of P.N with **SS/DY.SS /SIGADAM** confirming this) shall press the resetting button provided in the VDU at CHIPURUPALLI station and resume the normal working.

- l) **ACTION TO BE TAKEN IN CASE OF FAILURE OF INTERMEDIATE BLOCK STOP SIGNAL:**

During the failure of Intermediate Block Stop Signal, GR 3.75 and SRs there to shall be followed.

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m) **INDICATION CUM RESETTING PROVISION IN THE VDU AT CHIPURUPALLI:**

The VDU 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 indication 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.
- n) For resetting of I.B. Axle counter refer Para No: 5.0 of Appendix 'B' of this SWR

Every Case of re-setting shall be entered in a register in the following proforma.

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 Dy. SS/SM
1	2	3	4	5	6	7

- o) 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).

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p) **RUNNING OF MOTOR TROLLYS ON IBS ZONE:**

- a) i) While allowing motor trolley/4 wheeler tower wagon/material trolley etc., entire section between **CHIPURUPALLI-SIGADAM** 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 Trolley/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.
- b) 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.

SIGNAL POST TELEPHONE:

A telephone socket (RE Type portable telephone kept with Loco Pilot) 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 DY.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.

NORMAL POWER SUPPLY TO IBS GOOMTY AT KM 778.904

Normal power supply to the Signalling and Interlocking installation at the IBS goomty is drawn from the traction power sources (230V-50 HZ, AT1 and AT2) with auto-change over arrangement in IB Goomty through a panel. When ever any traction power supplies fails, the auto-change over unit will automatically connected to the other available AT supply.

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