

EAST COAST RAILWAY
WALTAIR DIVISION

STATION WORKING RULES OF RAYAGADA STATION PANEL
INTERLOCKING (BROAD GAUGE)

Date of Issue: _____.

Date brought into Force: _____.

NO:WTF/5/SWR/ RGDA

Ref.Lr.No.2000/Safety (A&R)/19/36 of Rly. Board dt.27.10.05.

NOTE: The Station Working Rules must be read in conjunction with General and subsidiary Rules, Operating Manual and Block Working Manual. These rules do not in any way supersede any rules in the above Rule Books.

1. **STATION WORKING RULES DIAGRAM:**(i) The Station Working Rule diagram No: **SI-23075**(ii) CSTE/E.Co.Rly signalling and interlocking plan No: **SI-23075 Alt-A**

(iii) Date up to which corrected:

2. **DESCRIPTION OF STATION:**2.1 a) **GENERAL (LOCATION):**

(a) Name of the station	: RAYAGADA
(b) Class of station	: 'B' Class
(c) Section	: VIZIANAGARAM-Tie Line 'B' cabin
(d) Double line/ Single line	: Double line
(e) Electrified/Non Electrified	: Non- Electrified.
(f) Railway	: East Coast Railway.
(g) Route	: 'D' special.
(h) Situated at	: 342.266 KM.
(i) Reckoned from	: Raipur
(i) Number of cabins	: Centrally operated Domino type full fledged Panel.

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

(a)

Block section	Distance	Direction
Ladda	8km	South-west
Singapur Road	9.20km	North-East

(b) Outline Sidings/D.K.Stations_: NIL

(c) Privision of IBS : Nil

(d) Automatic signals: Nil

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

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 "Block Section" Ends
RGDA-LDX	a) The advance block section commence at DN advanced starter signal No 12 of LDX on DN line.	a) Ends at Facing point No.32A on Down line of RGDA South end.
	b) The rear block section commence at Up advanced starter signal No. 29 of RGDA on Up line.	b) Ends at Facing point No. 21A on Up line of LDX station.
RGDA-SPRD	a) The advance block section commence at UP advanced starter signal No.15 of SPRD on UP line.	a) Ends at Point No. 31A on UP line at North end of RGDA station.
	b) The rear block section commences at DN Advance starter signal No. 28 of RGDA on DN line.	b) Ends at Point No. 24A on Down line at south end of SPRD station.

a. GRADIENTS IF ANY:

(a) From the centre line of the station towards Ladda:

Sl no	Chainage in Mtrs from CSB		Stretch	Gradient
	From	To		
1	0.000	704M	704M	1 in 540 Falling on DN line.
2	704M	854M	150M	1 in 142 Falling on DN line.
3	854M	1681.041M	827.041M	1 in 150 Falling on DN line.
4	1681.041M	1883.81M	202.769M	Level on DN line.
5	1883.81M	In to section	----	1 in 320 falling on DN line.
6	0.000M	680M	680M	1 in 540 Falling on UP line
7	680M	808.8M	128.8M	1 in 100 falling on UP line
8	808.8M	950M	141.2M	1 in 112 falling on UP line
9	950M	1650M	700M	1 in 150 falling on UP line
10	1650M	1925M	275M	Level on UP line
11	1925M	In to section	-----	1 in 150 raising on UP line

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

(b) From the centre line of the station towards Singapur Road:

Sl no	Chainage in Mtrs from CSB		Stretch	Gradient
	From	To		
1	0.000	1297M	1297M	1 in 1200 raising on both UP&DN lines
2	1297M	1591M	294M	1 in 1500 falling on both UP&DN lines
3	1591M	1791M	200M	1 in 1000 falling on both UP&DN lines
4	1791M	2091M	300M	Level on both UP&DN lines
5	2091M	2391M	300M	1 in 1000 raising on both UP&DN lines
6	2391M	3029M	638M	Level on both UP&DN lines
7	3029M	3425M	396M	1 in 175 raising on DN line
8	3425M	In to section	----	1 in 200 raising on DN line
9	2391M	3106M	715M	Level on UP line
10	3106M	4129M	1023M	1 in 200 raising on UP line
11	4129M	In to section	----	1 in 300 raising on UP line

2.5 LAYOUT:

A. Number of running lines: seven

Running Line/Non Running line	Electrified/Non Electrified
Route-1(Common loop)	Non Electrified
Route-2 (UP main)	Non Electrified
Route-3(DN main)	Non Electrified
Route-4(Goods loop)	Non Electrified
Route-5 (Goods loop)	Non Electrified
Route-6(Goods loop)	Non Electrified
Route-7(Goods loop)	Non Electrified
Route-8(ARME/ART siding)	Non Electrified
Saloon siding	Non Electrified
Shunting neck(SPRD END)	Non Electrified
Shunting neck(LDX END)	Non Electrified
Goods reception and dispatch line	Non Electrified
Wheel siding	Non Electrified
Diesel Engine siding	Non Electrified

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

b. PLATFORMS:

- (i) One high level passenger platform is provided on line no-1 with a measurement of 407.82x8M.
- (ii) One high level passenger platform is provided on L-2 & L-3 with a measurement of 396.96x 9.39M.

c. GOODS SIDING/SIDINGS:**(i) ARME/ART SIDING:**

ARME/ART siding takes off from line no-7 and is isolated by derailing switches at both ends and is operated by motor points. The ARME/ART will be received by taking off calling-on signal C-1A/B/C towards SPRD end and C-2A/B/C towards LDX end. The loco pilot after passing the calling-on signal shall come to a stop at Inner home signal no- S-9/C-9/SH-9 towards SPRD end and at Inner home signal no-S-8/C-8/SH-8 towards LDX end. Then the shunt signal no-SH-9 'F' route towards SPRD end and SH-8 'F' route towards LDX end shall be taken off for ARME/ART siding. After observing off aspect of the respective shunt signal, the loco pilot shall proceed towards ARME/ART siding. However, departure signals are provided for ARME/ART siding at both ends for dispatching.

(ii) SALOON SIDING:

One saloon siding takes off from line no-1 (common loop) and is isolated by derailing switch towards SPRD end. The entrance point is operated by motor point towards SPRD end and the other end i.e. LDX end is operated by arc lever. Hand plunger locks fitted and unlocked by key 'B' from EKT provided in location box through control 59 from panel. When control 59 is transmitted from panel, signal routes of S-1A, C-1A, SH-3A/B, S-13, S-2C, C-2C, SH-4D, S-24 will be locked in their normal position.

(iii) WHEEL SIDING:

The wheel siding takes off from ARME/ART siding at SPRD end terminates into dead end. The entrance point is operated by arc lever. Hand plunger locks fitted at the entrance point unlocked by key 'C' from EKT provided in location box through control-52 from panel. When control 52 is transmitted from panel, signal routes SH-9F, S-11, SH-11, SH-8F, S-10, SH-10 will be locked in their normal position.

(iv) DIESEL ENGINE SIDING (OIL SIDING):

The diesel engine siding takes off from ARME/ART siding and is extended to join the loco line at LDX end of the yard. The entrance point is operated by arc lever. Hand plunger locks fitted at the entrance point unlocked by key-'C' from EKT provided in location box through control 52 from panel. When control 52 is transmitted from panel, signal routes SH-9F, S-11, SH-11, SH-8F, S-10, SH-10 will be locked in their normal position.

(v) CONCRETE SLEEPER FACTORY SIDING:

The concrete factory siding with one loop takes off from loco line and terminates into dead end towards LDX end of the yard. The entrance point is hand operated locally at site.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

(vi) LOCO LINE:

Loco line takes off from shunting neck towards LDX end and extends in the form of a triangle and merges into Goods reception and dispatch line. The points are hand operated locally at site. The loco movements to and from loco line are controlled by shunt signals.

(vii) QUARRY SIDING:

Quarry siding takes off from loco line and terminates into a dead end at LDX end of the yard. The entrance point is hand operated locally at site.

2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT AND HOLDING CAPACITY IN CSL:**a.**

Running Lines	CSL
Line 1 (Common Loop)	822 M (STR TO STR)
Line 2 (UP Main)	1061 M (STR TO STR)
Line 3 (DN Main)	1068 M (STR TO STR)
Line 4 (Goods loop)	855 M (STR TO STR)
Line No.5(Goods loop)	852M (STR TO STR)
Line No.6 (Goods loop)	855M (STR TO STR)
Line No.7 (Goods loop)	728M (STR TO STR)
Goods reception & dispatch line	665M (STR TO STR)

b. Direction of Movements: Trains arriving at this station from SPRD and proceeding towards LDX are UP trains and trains leaving LDX and proceeding towards SPRD are DN trains.

2.5.2 NON RUNNING LINES AND CAPACITIES:

Non Running lines	CSL/CAL
Saloon siding	CAL 172.5M
ARME/ART Siding	CSL 380M(STR-FM)
Wheel siding	CAL 114M
Diesel Engine Siding (Oil siding)	CAL 305M
Shunting Neck (Ladda end)	CAL 391M
Shunting Neck (SPRD end)	CSL 777M (SH TO SB)
Shunting Neck (SPRD end)	CSL 87M (SH TO DE)
Quarry siding	----

2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT:

In view of point nos. 41A,41B, 43, 45, 47 and 51A are provided with 1 in 8^{1/2} SS turn out 10KMPH speed restriction boards are provided below UP home signal S-1and DN

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

L-4 starter S-20, L-5 Starter S-18, L-6 Starter S-16, L-7 Starter S-14, L-8 starter S-10 and starter S-26 of salon siding respectively.

2.6. LEVEL CROSSINGS:

i) One 'C class Interlocked level crossing gate is situated at km no. 341.14(341/2-3), LC no. RV-250 between DN starter signals and DN advanced starter signal.

3. SYSTEM AND MEANS OF WORKING:

a) Trains are worked under absolute block system in accordance with GR 7.01(1) (a), 8.01(1) (a)&(c), 8.01(2) (b), 8.03(2)(a),(b),(c)(ii), 14.01 to 14.07, 14.08(b), 14.09 to 14.11, 14.12, 14.13 and BWM Chapter-IV part I either direction.

b) BLOCK INSTRUMENTS:

Double line block instruments are provided for block Section RGDA-LDX and RGDA-SPRD vide GR 14.01(a) and the OFF aspect of the last stop signal is the authority for the drivers of all trains to enter into the block section vide GR 14.08(b) (iv).

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

c) **CO OPERATIVE / NON CO- OPERATIVE:** Non co- operative.

d) PROVISION OF BLOCK TELEPHONE:

Telephone attached to Block instrument connecting the adjacent block stations concerned.

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

4. SYSTEM OF SIGNALLING AND INTERLOCKING:

4.1

a) Standard of Interlocking: Standard. III

b) Equipment of Signals: MACLS.

c) Method of operation: Points and signals are operated from central SM's panel board.

d) Provision of Axle Counter/Track Circuits on running lines: Axle Counters are provided between RGDA-LDX for proving LVV as UDAXT (UP line) and DDAXT (DN line) & RGDA-SPRD for proving LVV as DDXT (DN line) and UDXT (UP line).

Analog axle counter provided on Goods reception and dispatch line towards SPRD end as GSAXT.

Track circuits are also provided in the yard as 1AT, 1T₁, 1T₂, 28T, 28AT, 35BT, 35AT, 31BT, 31AT, 41BT, 41AT, 37AT, 37BT, 39T, 43T, 51T, L1T₁, L1T₂, L1T₃, L2T₁, L2T₂, L2T₃, L-2T₄, L3T₁, L3T₂, L3T₃, L-3T₄, L4T₁, L4T₂, L4T₃, L-5T₁, L-5T₂, L-5T₃, L-6T₁, L-6T₂, L-6T₃, L-7T₁, L-7T₂, L-7T₃, 50T, 42T, 46T, 40AT, 40BT, 36BT, 34AT, 34BT, 32AT, 32BT, 29AT, 29T, 2AT, 2T₁, 2T₂.

e) Calling on Signals/IBS: Calling on signals are provided below both UP and DN Home and Inner Home signals.

IBS signalling is not applicable to this station.

f) A Panel board installed in the SM's office for operation of points, signals and crank handle control etc with a locking arrangements in order to prevent unauthorised accessibility to panel operation. The lock affects the panel locking either in normal position or operating positions.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

g) CH1 controls point 31 A/B & 37A/B, CH 2 controls point 36 A/B, 39A/B & 51A/B, CH3 controls point's 33, 35A/B, 41A/B & 55, CH4 controls points 43, 45,47 A/B & 49A/B, CH-5 controls points 32A/B & 34A/B, CH-6 controls points 38, 40A/B & 42A/B and CH-7 controls points 44 A/B. 46, 48 & 50A/B.

h) **CRANK HANDLE**

When any point fails to operate normally by the Route Setting operation through Panel, it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-20.06. CH1 controls 31A/B, 37A/B; CH2 controls 36A/B, 39A/B, 51A/B; CH3 controls 33, 35A/B, 41A/B, 55; CH4 controls 43, 45, 47A/B 49A/B; CH-5 controls 32A/B, 34A/B; CH-6 controls 38, 40A/B, 42A/B; CH-7 controls 44A/B, 46, 48, 50A/B.

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

These crank handles are interlocked with the signalling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals are not taken 'OFF' and the route is not locked

for whatever reasons. Crank Handle can be released by pressing common 'TRANS' push button and concerned Crank handle control push button simultaneously. When the keys are taken out no signal can be taken 'OFF' over the particular route on the points nominated by the crank handle. This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points.

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

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

Relay room is provided with two independent locks, key of one lock is under custody of SM on duty and the key of other lock is with the S&T maintainer. Whenever required by the maintainer the key should be handed over by the SM on duty for the maintenance or to attend failure. After completion of the work the key shall be returned back to SM on duty after closing and locking the Relay room. The transactions shall be recorded in the relay room key register maintained at the station for these purposes vide OM 1.14.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

4.3 **POWER SUPPLY:**

NORMAL: - Local supply (230v, 50HZ)

STANDBY: - standby power supply is from two nos. of D.G. Sets.

- (i) A changeover switch is provided in the Station Master's Office with the two power supplies viz., Local and DG 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) For IPS system that provides to PI, auto-change over has been provided.
- (iii) There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

(B)REMOTE MONITORING ASM BOX: Remote monitoring ASM Box gives alarm to the ASM for the following fault conditions:-

- (a) 50% 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 AT or Local 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 AT and Local and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

5. **TELECOMMUNICATIONS:**

- a) Telephone attached to double line block instruments are connected to adjoining stations on either side.
- b) Electric communication equipment (Magneto phone) is provided for block stations on either side.
- c) The station is connected to VZM-Tie line 'B' cabin control circuit.
- d) The station is connected to crank handle locations at either end of the yard.
- e) The station is connected to Goods siding location.
- f) The station is connected to 'C' class L.C. gate at km 341.14 (RV-250).
- g) The station is connected with BSNL telephone.
- h) 25 watts VHF set.

5.1 **FAILURE OF COMMUNICATIONS:**

1. In the event of partial failure of communications between the adjacent block stations, SR 6.02.06 shall be observed, for working the train.
2. In the event of total failure of communications between the adjacent stations SR 6.02.04 shall be observed.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

6. SYSTEM OF TRAIN WORKING:**6.1 DUTIES OF TRAIN WORKING STAFF:**

The movement of trains is controlled by section controller on duty whose orders shall be complied with provided they do not contravene any provisions of General Rules, Subsidiary Rules, Station Working Rules, Block working manual and any other safe working instructions issued from time to time.

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

6.1.1 STATION WORKING STAFF IN EACH SHIFT:

Dy. Station Supdt / SM I/C	1
Station Master/ASM	2
TPM/TP	3

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.

6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF THE LINE AND ZONES OF RESPONSIBILITY:

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

6.1.3 ASSURANCE OF STAFF IN ASSURANCE REGISTER:

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

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

- a. The conditions laid in GR. 8.03(2) (a) (b) (c) (ii) shall be complied with the SM on duty before line is considered clear and line clear is granted.
- b. Before granting line clear for a train the SM on duty shall personally ensure that the reception signals pertaining to a train are in the "ON" position and burning properly vide GR 3.49(4).
- c. Line shall not be considered clear and line clear shall not be granted to an up train unless.
 - i) Whole of the last preceding up train has arrived complete.
 - ii) Up home signal No. 1A/B/C and/or C1A/B/C is put back to ON and

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

- iii) Line is clear up to point No. 31A.
- d. Line shall not be considered clear and line clear shall not be granted to a down train unless.
 - i) Whole of the last preceding down train has arrived complete.
 - ii) Down Home signal No. 2A/B/C and /or C2 A/B/C is put back to ON and
 - iii) Line is clear up to Point No. 32A.

6.2.1 ANY 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 at the station etc., the points at either end should be immediately set against the blocked line except when shunting or any other movement is required to be done on that line. 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 in that order so that, in case of mishap, the chance of causalities are minimized. In case of all the lines are occupied by passenger train, points should be set for a loop line to negotiate which the speed of incoming train would be reduced which in turn, would minimize the consequences/causalities .

6.2.1.2 RECEPTION OF TRAIN ON BLOCKED LINE:

- a) In case of reception of a train on an obstructed line the station master shall send the written permission referred in GR 5.09[2] [C] shall be sent on form T/509 and shall endorse the reason for such admission, the line number and the nature of obstruction on that line. The rules mentioned in GR 5.09 to be observed.
- b) Setting and locking of points shall be done as per SR 3.69.03.
- c) A stop hand signal shall be exhibited by Station Master at a distance of not less than 45meters from the point of obstruction to indicate to the loco pilot as to when the train shall be brought to a stand.

RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

The rules laid down in GR 5.10 and relevant SRs shall be followed.

6.2.1.3 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:

The rules laid down in GR 5.11 and relevant SRs shall be followed.

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

Nil

6.2.1.6. ANY OTHER SPECIAL CONDITIONS:

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

(a) SPECIAL RESTRICTIONS:

- i) Shunting in the face of an approaching train is prohibited as per the conditions prevailed in terms of SR 8.09.02 (b) (ii) (b).
- ii) Hand shunting is prohibited.
- iii) Fly shunting is prohibited as per the conditions prevailed in terms of SR 5.21.01 (C).
- iv) The overrun line/sand hump must not be used as shunting neck or for stabling of vehicles or harbouring an engine with or without vehicles vide SR 3.40.01
- v) Shunting shall not be permitted towards LDX end of the yard unless the section LDX-RGDA is blocked back and also the engine in leading towards the falling side of the gradient as per GR 5.20(b).
- vi) For shunting of vehicles at station, the SM shall see that vehicles standing at the station are properly secured in accordance with special instructions as per GR 5.23 and other relevant SRs shall be followed.

(b) SPECIAL INSTRUCTIONS:

- i) After any non- signalling movement has taken place over a point/ points operated by an electric machine, whether in the facing or trailing direction the SM on duty shall operate the points to normal and reverse setting for the purpose of testing the points. After SM has ensured that indications regarding the normal and reverse setting are correctly available, further movements may be permitted over the point.
- ii) Station Master shall ensure that over run line / sand hump is clear of any obstruction before admission of any train on the concerned running line even the overrun line/ sand hump is in trailing direction.

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

- i) Conditions for taking off approach signals are governed by GR 3.40(1) (a), 3.40(3) (b) and relevant SRs there to.
- ii) calling-on signal may be taken off for the admission of train in the event of failure of Home signal in terms of SR 3.69.02(a) or for the admission of a train on obstructed line in terms of GR 5.09 and SRs thereto.

a) ADEQUATE DISTANCE: (SIGNAL OVERLAP)

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

(b) CLEARANCE OF ADEQUATE DISTANCE (SIGNAL OVERLAP)

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

CLEARING OF ADEQUATE DISTANCE				
LINE NO.	UP TRANS		DOWN TRAINS	
	FROM	TO	FROM	TO
LINE NO. 1	UP common loop Starter No. 13	Up to the end of over run line or up to the UP Advanced starter No 29	DN Starter No. 24	Up to the end of DS No. 39B or up to the DN Advanced starter No 28.
LINE NO. 2	UP Main starter No. 15	UP Advanced starter No 29	----	----
LINE NO. 3	----	----	DN Main Starter No. 22.	Up to the DN Advanced starter No 28
LINE NO.4	UP loop starter No. 17	Up to the end of DS 38 or up to the Up Advanced starter No. 29.	DN loop starter No. 20	Up to the end of DS 33 or up to the DN Advanced starter No. 28.
LINE NO.5	UP loop starter No. 19	Up to the end of DS 38 or up to the Up Advanced starter No. 29.	DN loop starter No. 18	Up to the end of DS 33 or up to the DN Advanced starter No. 28.
LINE NO.6	UP loop starter No. 21	Up to the end of DS 38 or up to the Up Advanced starter No. 29.	DN loop starter No. 16	Up to the end of DS 33 or up to the DN Advanced starter No. 28.
LINE NO.7	UP loop starter No. 23	Up to the end of DS 38 or up to the Up Advanced starter No. 29.	DN loop starter No. 14	Up to the end of DS 33 or up to the DN Advanced starter No. 28.

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

iii) Procedure for taking off reception signals:

a) The SM on duty shall nominate a clear line which is free from all obstructions including signal over lap.

b) The Panel provided at this station is Route setting type, the trailing and facing points can be set to the desired position by pressing Signal button and concerned Route button simultaneously. However the points can also be set to desired position by pressing concerned point button along with common Normal or Reverse button simultaneously.

c) On pressing signal and concerned route buttons, a white strip of light will appear throughout the entire route and the signal will assume 'OFF' position (provided the entire initiated route is clear and free from all obstructions).

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

d) As the train enters on the route the white strip lights will turn to red showing occupancy of the route. As the route gets clear the strip lights extinguish indicating clearance of the zone on the route.

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO 'ON':

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

6.3.2 SIMULTANEOUS RECEPTION/DESPATCH, CROSSING AND PRECEDENCE OF TRAINS:

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

a	UP TRAINS: Reception of an UP train on line No. 1 (common loop)	AND	Reception of DN train on line no-3 or 4 or 5 or 6 or 7. OR Despatch of another UP train either from line No. 2 or 4 or 5 or 6 or 7.
b	Reception of an UP train on line No. 4	AND	Reception of DN train on line no-1. OR Despatch of another UP train either from line No. 1 or 2.
c	Reception of an UP train on line No. 5	AND	Reception of DN train on line no-1. OR Despatch of another UP train either from line No. 1 or 2.
d	Reception of an UP train on line No. 6	AND	Reception of DN train on line no-1. OR Despatch of another UP train either from line No. 1 or 2.
e	Reception of an UP train on line No. 7	AND	Reception of DN train on line no-1. OR Despatch of another UP train either from line No. 1 or 2.
f	DN TRAINS: Reception of a DN train on line No. 1 (common loop)	AND	Reception of an UP train on line no- 4 or 5 or 6 or 7. OR Despatch of another DN train either from line No. 3 or 4 or 5 or 6 or 7.

g	Reception of a DN train on line No. 4	AND	Reception of an UP train on line no- 1 or 2. OR Dispatch of another DN train either from line no-1 or 3.
h	Reception of a DN train on line No. 5	AND	Reception of an UP train on line no- 1 or 2. OR

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

			Dispatch of another DN train either from line no-1 or 3.
i	Reception of a DN train on line No. 6	AND	Reception of an UP train on line no- 1 or 2. OR Dispatch of another DN train either from line no-1 or 3.
j	Reception of a DN train on line No. 7	AND	Reception of an UP train on line no- 1 or 2. OR Dispatch of another DN train either from line no-1 or 3.

B. CROSSING OF TRAINS:

In addition to the normal provision of reception and despatch of train the rules laid down in SR 3.47.01, 3.47.02 and SR 3.51.06 shall be followed.

6.5 COMPLETE ARRIVAL OF TRAINS:

The entire block section between RGDA-LDX and RGDA-SPRD 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 Panel at SM's office. As soon as train enters in to that block section the RED indication appears on Panel. After whole train clears the block section GREEN indication appears on the Panel. This confirms the complete arrival of train and the SM on duty shall give 'Train out of Block Section' report on seeing the section clear indication GREEN on the Panel.

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

In case of failure of 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 shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide SR 4.16.05 that the train arrived complete.

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

6.6 DISPATCH OF TRAINS:

a) To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy himself by

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

observing the visual indication on the Panel Board. He shall suspend all non-isolated shunting and then shall take "OFF" the concerned route starter and

advanced starter signal. The 'OFF' aspect of the advanced starter is the authority to proceed into the block section. As soon as the train passes the advanced starter signal, the SM will then send the train entering given section signal to the station in advance.

[Refer GR 3.38, 3.42, SR 3.36.04(b), 3.42.04 and BWM 2.07.5(a)]

b)ISSUE OF CAUTION ORDERS:

Whenever in consequence of the line being under repairs or for any other reasons special precautions are necessary a Caution Order detailing the Kilometres and Speed at which train should run with reasons for taking such precautions shall be handed over to the Guard and Driver in terms of GR 4.09 and SR thereto.

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 anything wrong is noticed on train.

For this purpose the Station Master on duty shall stand in such a position that he sees a clear view of the passing train and that his hand signals can clearly be seen by the Loco Pilot and Guard of the train.

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

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. [Ref GR 3.42, 4.17 4.42, & SR 4.42.02 (b) (i), (ii), (iii), c & (d)]

6.8 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) DEFECTIVE POINTS

Procedure prescribed in GR 3.77 and relevant SRs shall be followed.

c) FAILURE OF SIGNALS AND INTERLOCKING

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

d)AXLE COUNTER:

If the axle counter fails between the block sections, resetting procedure will be adopted as per Para 14.0 of SWR (APP-B) if the axle counter indication does not

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

appear 'GREEN' & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal Maintainer /JE/SE (signal) for rectification.

6.9 PROVISIONS FOR WORKING OF MOTOR TROLRIES / MATERIAL TROLRIES:

Motor trolries shall be worked as per GR 15.25 and SR thereto, BWM 5.11(1) (2), 5.12, 5.13, 5.14(2) (a) and circulars and orders issued from time to time. Material Lorries shall be worked as per GR 15.27 and SRs thereto and in accordance with the provisions of Block Working Manual.

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

7. BLOCKING OF LINE:

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. A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained.

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

A. SECURING OF VEHICLES: -

As far as practicable, loose vehicle shall not be allowed to stand on the running line. However under unavoidable circumstances, if it is necessary to detach vehicle from a train or to stable a train and leave them standing on the running line, the SS on duty at Platform shall be responsible to secure the vehicle/stable loads to prevent rolling down of vehicles and arrest obstruction and fouling.

NOTE

Special care should be taken to secure special type vehicles fitted with roller bearing while standing in siding or in running lines. [Refer GR 5.23 & SR 5.23.01]

B. USE OF REMINDER BLOCK COLLARS :-

Whenever any running line is blocked or when a train is stopped to cross another train or detained for any other reason, even for a short while or during shunting operations, reminder collars shall be used by the SM on duty on the push buttons concerned.

8. SHUNTING:

8.1 GENERAL PRECAUTIONS :

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

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

NOTE

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

8.2 SHUNTING IN THE FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approaching train is strictly prohibited. Vide GR 8.09 & SR thereto.

8.3 PROHIBITION OF SHUNTING - SPECIAL FEATURES:

- (i) Hand shunting is prohibited at both ends of the yard vide GR 5.20.
- (ii) Fly shunting is prohibited at both ends of the yard vide SR 5.21.01 (c).

8.4 SHUNTING ON SINGLE LINE:

Not applicable

8.5 SHUNTING ON DOUBLE LINE:**SHUNTING OUT SIDE THE HOME SIGNAL:**

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

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

8.6 SHUNTING IN THE SIDING TAKING OFF FROM STATION YARD / GOODS SIDING.

The shunting from and to Goods siding is governed by signals. The relevant provision of GR 5.14 and SRs there to shall be meticulously observed.

9. ABNORMAL CONDITIONS:**a) RULES TO BE OBSERVED IN THE EVENT OF FOLLOWING ABNORMAL CONDITIONS.**

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

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

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

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

(iv) Failure/passing of Intermediate block stop signal at 'ON' position:
Not applicable.

(iii) Failure of Axle counter block/BPAC: Procedure to be followed vide GR 14.1& 14.14.

(iv) Failure of MTRC: Not applicable.

b)PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE.

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

Crank handle operation is interlocked with the signalling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'TRANS' push button and concerned Crank handle control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

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

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

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

operation shall be recorded in the station diary and in the register meant for this purpose. Each such emergency operation of points is registered by next higher number in the counter provided for this purpose. SM shall ensure sealing of Emergency point operation button after completion of each such operation by S&T staff.

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

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

c) CERTIFICATIONS OF CLEARANCE OF TRACK BEFORE CALLING ON SIGNAL OPERATION IS INITIATED.

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

d) REPORTING FAILURE OF POINTS, TRACK CIRCUITS 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 Signalling 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 register to be done with message to the section controller.

9.1 TOTAL FAILURE OF COMMUNICATIONS:

Rules and regulations for working of trains during total interruption of communication on single line section shall be followed vide SR 6.02.04 and instructions laid down in BWM.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

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

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

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

(i)In the event of total failure of communications, trains shall run on the authority to proceed without line clear in terms of SR 6.02.03.

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

10. VISIBILITY TEST OBJECT:

The lights of Up starter signal No 13 and DN starter No 24 of common loop line are earmarked to serve as visibility test objects during day and night vide GR 3.61(2)(b)(i)

11. ESSENTIAL EQUIPMENT AT THE STATION

(Details are given in Appendix-'E')

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

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

In case of thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco Pilot of an approaching train the

locality of a signal, the SM on duty at station shall arrange for signalling 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 signalling Rules.

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

12.1 STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

12.2 INSTRUCTIONS:

This register contains the following parts.

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

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

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

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

- a. In charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects.
- b. Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

13. APPENDICES:

APPENDIX 'A'	Working of level Crossing gates.
APPENDIX 'B'	System of signalling and interlocking and Telecommunications
APPENDIX 'C'	Anti Collision Device (Raksha Kavach).
APPENDIX 'D'	Duties of Train Passing Staff in each shift.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

APPENDIX 'E'	List of Essential equipment provided at the station.
APPENDIX 'F'	Working of DK s, halts, IBH, IBS and outlying sidings.
APPENDIX 'G'	Rules for working of trains in electrified sections.
APPENDIX 'H'	Rules for Working of Private Sidings

CERTIFICATE

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

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

EAST COAST RAILWAY
WALTAIR DIVISION
APPENDIX 'A'

WORKING OF LEVEL CROSSING GATES RAYAGADA STATION

GATE WORKING RULES:

Working rule for 'C' Class manned interlocked level crossing gate situated at KM 341.14 between DN starter and DN advanced starter towards SPRD end.

1. GENERAL

1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

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

1. Number of Level Crossing Gate:	<u>RV 250</u>
2. Engineering or Traffic Gate:	<u>TrafficGate.</u>
3. Under control of Station Master/Senior Section Engineer:	<u>SS/RGDA</u>
4. Location at KM:	<u>341/2-3</u>
5. At Station:	RAYAGADA
6. In between stations:	<u>RGDA & SPRD</u>
7. BG/MG/NG:	<u>BG</u>
8. Single line/Double line/Multiple line:	<u>Double Line</u>
9. Normal Position:	<u>Open To Road Traffic.</u>
10. Interlocked/non-interlocked:	<u>Interlocked</u>
11. Means of Interlocking	Mechanical Interlocking
12. Provisions of Gate signal at Kms.	
i) UP Line	—
ii) DN Line	—
13. Signalling arrangements	
14. Means of Communication – Telephone/Bell etc:	<u>Telephone</u>
15. Width of level crossing gate	<u>5.0 Mtrs</u>
16. Type of Road (NH/SH/Others)	<u>Others</u>
17. Name of Road	Panchayat Road
18. Metalled/non-metalled	<u>Metalled.</u>
19. Approach road	<u>Metalled</u>
20. Width of the road	<u>4.85 Mtrs.</u>
21. Angle of road crossing (In case of skew gates)	Straight
22. Road gradient (if any)	
i) North/East side	<u>Level.</u>
ii) South/West side	<u>Level.</u>
23. Road alignment (straight/curve)	
i) North/East side	<u>Straight</u>
ii) South/West side	<u>Straight</u>
24. Provision of height gauges	<u>Not required.</u>
25. Type of Barriers	<u>Lifting Barriers.</u>
26. Length of Check Rails	<u>8.5 Mtrs</u>
27. Road Surface in between L – Xing gates	<u>Provided with C C Blocks</u>

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

28. Length of Rumble strip/speed breakers
29. Road signs
30. Speed breaker indication board
31. TVU
32. Census next due on
33. Demarcation for placement of Detonators
34. No. of Gatemen working
35. Nearest Medical Assistance
36. Nearest Private Medical Assistance available (if any)
37. List of equipment available Yes/No

4.85 Mtrs
Available.
Available
47373 on Dec 2009
Dec 2012
Available
2
SrDMO/RGDA
Rayagada
Yes

1.2. EQUIPMENT

<u>ITEMS</u>	<u>QUANTITY/NUMBERS</u>
(1) Hand Signal Lamp Tri Colour	3 (5 on Quadruple/Line or twin single line)
(2) Hand Signal Flag Green	1 Mounted on sticks
(3) Hand Signal Flag Red	3 (6 on Quadruple/Line or twin single line and 7 in case Hexaple Section mounted on sticks)
(4) Banner Flag Red	3 (5 on Quadruple/Line or twin single line)
(5) Posts for exhibiting red banner flag	2 (4 on Quadruple/Line or twin single line)
(6) Spare chains with padlocks	2 with stop mark.
(7) Detonators	10 in tin case
(8) Fusee	1 (3 on multiple line, double line, parallel lines suburban sections, automatic signalling and ghat sections)
(9) Gate lamps	2
(10) Tommy Bar	1
(11) Mortar Bar	1
(12) Spade/Fowrah	1
(13) Rammer	1 (In case of asphalted road this may not be provided)
(14) Pick Axe	1 (In case of asphalted road this may not be provided)
(15) Tin case for flags	1
(16) Can of oil	1
(17) Water pot/Bucket	1
(18) Canister for Muster Roll	1
(19) Set of spare spectacles for gateman wearing glasses	1
(20) Board demarcating protection of level crossing gate diagram in case of obstruction on gate.	1
(21) Basket	1
(22) Whistle	1
(23) Wall Clock	1

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

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 of tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gateman, including date of passing vision test, Initial/refresher course, safety camp, etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.
12. S&T Register in case of Interlocked Engineering Gate.

1.4 DUTIES OF GATE MAN:**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

2 POSITION DURING PASSAGE OF TRAINS:

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

- i) Gateman will stand attentively 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 with white light facing the track.
- iv) He shall keep the whistle slung around in his neck from a cord.

3 ROUTINE DUTIES OF GATE MAN:

- i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle/wagon/train/battery

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

- box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also be prepared to repeat any signal which guard may give to driver on Walkie-talkie or in other way.
 - vii) If lifting barrier/leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
 - viii) Gateman shall report to the nearest Station Master, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
 - ix) In the event of gate signal becoming defective the Gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
 - x) At the gate whose signal have become defective, the Gateman shall close and lock the lifting barriers/leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the driver to report the defect at the next station.
 - xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
 - xii) Gateman shall ensure that his having competency certificate in his possession while on duty.
 - xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
 - xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
 - xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
 - xvi) Gateman shall keep the road surface well watered and rammed in case of unhealed roads.
 - xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
 - xviii) Gateman 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.
 - xix) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4) ACTION IN CASE OF UNSUAL OCCURENCE ON TRAINS:

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

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

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

- 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 low as possible.
- vi) In case the train does not stop, 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 on telephone, to take appropriate action, 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 of the 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 duty provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, fusees and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600meters, on BG and 400 meters on MG/NG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG and 800 meters on MG/NG 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 driver of the approaching train.
- vii) On those meter gauge sections where trains run at more than 75 kmph, Detonators shall be placed at distance to be specified under Special Instructions by the Administration.
- viii) 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 as he can go.
- ix) Thereafter, he shall light up and fix the fusees to warn the driver and stop the approaching train by waving red flag by day red hand signal lamp by night repeatedly.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

b) Other action to be taken by Gateman:

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- ii) If the gate is broken by a road vehicle, which is fouling the track, or if lifting barriers/leaf gates or any other obstruction at the gate, the Gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, Owner and relay these details to the nearest Station master/Cabin Master or Sr. Section Engineer regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

APPENDIX 'A'
ANNEXURE – II

WORKING INSTRUCTIONS FOR TRAFFIC LEVEL CROSSING GATES INTERLOCKED WITH STOP SIGNALS OF THE STATION PROVIDED WITH TELEPHONE, WITH NORMAL POSITION "OPEN TO ROAD TRAFFIC" - IT IS A "C" CLASS GATE AT KM 341.14:

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

1. MODE OF OPERATION:

Detailed mode of operation for opening and closing the level crossing gate shall be provided in the respective Station Working Rules and Gate Working Instructions incorporating local operational requirements. When level crossing gate is required to be opened for passage of road traffic, the gate must first open the gate on the side nearest the approaching road traffic.

Gate shall normally be kept open to road traffic. When ever it is required to close and transmit the control key to station, the gateman shall have to adopt the following procedure.

1. Key 'M' is obtained after closing the Level crossing gate at West cabin and releases Lever No GF-2.
2. Lever No GF-2 when reversed Locks the Level crossing Boom and releases Lever No GF-1 and Key 'N'.
3. Key 'N' is transmitted electrically to Panel in conjunction with Lever No GF-1 reversed, controls concerned UP and DN signals.
4. Lever No GF-1 is provided in the gate lodge to put back the concerned signals to 'ON' in case of Emergency.
On completion of the Train movement SS on duty shall transmit back the Key 'N' through RKT to open the L.C.Gate.

2. EXCHANGE OR PRIVATE NUMBER:

- i) Before taking off reception/departure signals Station Master shall inform the Gateman, the number, description and direction of the train..
- ii) The gateman shall close the gate and transfer the key to the Station Master.
- iii) The reception/departure signals will then be taken 'OFF'.
- iv) In order to ensure that road traffic is not held up for along time, the Station Master must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.
- v) If the gate is operated from the cabin itself, Station Master shall ensure that the gate is closed against road traffic, before taking 'OFF' reception/departure signals.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

- vi) When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train or to perform the shunting across the gate shall be personally responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate.

3. FAILURE OF TELEPHONIC COMMUNICATION:

When Telephone Communication falls or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adapted:

- i) Station Master on duty shall send written advice to the Gateman through the Porter with full details of number, description and direction of the train. Gateman on receipt of such advice shall close the gate and transmit the key to the Station Master, which will enable him to take 'OFF' reception/departure signals.
- ii) When sufficient time is not available because of greater frequency of train service, Station Master issue written authority to the train loco pilot to pass the signal at 'ON' position.
- iii) In addition Station Master shall also issue a caution order advising the loco pilot to whistle continuously and approach the gate cautiously.
- iv) The train loco pilot shall be instructed to pass the gate cautiously, on being hand signalled by the Gateman. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and ensure that gate is closed vide GR 3.73(2)(b)
- v) 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.
- vi) The Station Master at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in to the block section from his end.
- vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- viii) Normal working will be resumed only after staff rectifies the telephone and issue reconnection/fit memo for the same.

4. FAILURE OF LIFTING BARRIERS OR LEAF GATES:

- i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the Gateman will immediately inform the Station Master on duty, under exchange of private number, end ensure the 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 gateman 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 a caution order to the loco pilot of a departing train.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

- 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 driver before dispatching a train in the block section from this end.
- vii) Station Master will advise maintenance staff responsible for maintenance of lifting barriers gates to repair the defect at the earliest.
- viii) Normal working will be resumed only after the maintenance staff repairs the barrier gates to repair the defect at the earliest.

NOTE:

- a) In case of failure of lifting barriers/leaf gates worked from the cabin, Station Master will send station porter to secure the gate against road traffic by safety chains and padlocks.
- b) Authority to pass signals at 'ON' position as per rules shall also be issued to the loco pilots of both departing and arriving trains.

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

- i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter, then Gateman must immediately inform the Station Master on duty on telephone, under exchange or private number.
- ii) If emergency key is available at the gate lodge, he will take it out from the sealed box by breaking the seal and open the gate for road traffic. Emergency key provision is not available.
- iii) The record of the data and time of breaking the sealed cover of Emergency key box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) Station Master on duty shall issue a 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 the train in the block section from his end.
- vii) Station Master will advise S&T staff responsible for maintenance of winch/gate levers/key transmitter to rectify the defect at the earliest.
- viii) Normal working will resume only after S&T staff repairs the winch/gate lever/key transmitter and issue reconnection/fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

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

- i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter, then Gateman must immediately inform the Station Master on duty on telephone, under exchange or private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gate should be adopted.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

- iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass the trains on hand signals.
- iv) Station Master on duty shall issue a caution order to the loco pilot of a departing train.
- v) 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 the train in the block section from his end.
- vi) Station Master will advise S&T staff responsible for maintenance of winch/gate levers/key transmitter to rectify the defect at the earliest.
- vii) Normal working will resume only after S&T staff repairs the winch/gate levers/key transmitter and issue reconnection/fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

7. OBSTRUCTION AT THE GATE:

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the Gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gates, for this purpose.
- ii) Immediately after this, the Gateman shall advise the Station Master on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Station Master, on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, fusee 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 Inspection 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, vehicle number, name of the driver, owner and relay these details to the Station master who shall not start the train unless he has been assured by the Gateman that the road vehicle or the lifting barriers/leaf gates 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 obstructions.
- ix) After the track has been cleared of all obstructions the Gateman shall inform the Station Master accordingly, under exchange of private number.
- x) Station Master shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the reception/departure signal at 'ON' position on green hand signal of the Gateman, if the gate is broken, but is clear of any obstructions.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest.
- xiii) Normal working will be resumed after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

8. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the Gateman, the Gateman and Station Master will adopt the procedure given under Item No.7 above. If the obstruction fouls the Level Crossing Gate, Gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

APPENDIX 'B'**SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATIONS
ARRANGEMENT AT THE STATION RAYAGADA (RGDA)**

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

**1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING
INSTALLATIONS:**

RAYAGADA is a 'B' Class station with Standard III Interlocking (with isolation). The points and signals are power operated from a composite miniature 'DOMINO TYPE' full fledged panel installed in the Station Master's office. This station is equipped with manually operated Multi Aspect Colour Light Signalling.

1.1 Description of Panel :

The yard layout is depicted on the panel board in a miniature form and is fixed parallel to the track, so that when the Station Master on duty faces this panel, the Yard drawing on the panel corresponds to the actual field layout in either direction.

1.2 Point Buttons :

Push buttons Black for individual operation of points are provided for each point. Point group push buttons (black with red dot) for operation of points normal/reverse are also provided. Point button and point Group button normal/reverse shall conjunctively be pressed for operation of point to required position. To indicate the position of point, a small indicator lamp is provided on panel above the concerned points.

1.3 When a point is set correctly in normal, a white steady strip indication appears suggesting that the point is in normal position.

1.4 When a point is set correctly in Reverse, a white steady strip indication appears suggesting that the point is in Reverse position.

1.5 When the points of any route have been correctly set and relevant signals taken off a Red indication appears indicating the concerned points are locked either in normal or Reverse position as the case may be.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

1.6 When the point starts to operate to normal/reverse position, the white strip indication will start flashing till the concerned point housed in required position. After the point housed in required position i.e. normal/reverse, the white flashing indication extinguished and steady point indication will glow for normal/reverse suggesting the point in correctly housed.

1.7 OPERATION OF POINTS :

Points are operated to normal or Reverse by pressing individual point button in conjunction with the point group button there by the white strip indication will start flashing till the points are set to normal or reverse position and locked. Then the white steady strip indication will appear for Normal point zone or reverse point zone will appear as the case may be. During automatic route setting for train operation also, the same indications will glow.

1.8 All running line points are operated by Electric point machine.

2. In the event of the point could not be set in the desired position, the said points are to be checked by the Station Master on duty according to G&SR 3.68.01(c) and if there is a defect other than obstruction the point has to be considered as defective and action shall be taken for clamping and pad locking these points in the desired position by the Station Master on duty himself for all trains according to SR 3.69.03(c).

2.1 Description of Points :

Sl.	Point Button No.	Colour	Description
1.	31	Black	Cross over point between Up & Dn. main lines at SPRD end.
2.	32	Black	Cross over point between UP & Dn. main lines at LDX end.
3.	33	Black	Isolation point (DS) for shunting neck towards SPRD end.
4.	34	Black	Cross over point between Dn Main line and Common loop at LDX end.
5.	35	Black	Cross over point between Dn main and Common path L-4 to L-8 & Goods reception & dispatch line at SPRD end.
6.	36	Black	Cross over point between DN main and common loop at LDX end.
7.	37	Black	Cross over point between Up & Dn. main lines at SPRD end.
8	38	Black	Isolation point (DS) for shunting neck towards LDX end.
9	39	Black	Cross over point between UP Main line and common loop at SPRD end.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

10	40	Black	Cross over point between DN main and common path of L-4 to L-8 at LDX end.
11	41	Black	Cross over point between shunting neck and Goods reception & dispatch line at SPRD end.
12	42	Black	Cross over point between shunting neck and Diesel Engine siding at LDX end.
13	43	Black	Isolation point between L-5 & L-6 at SPRD end.
14	44	Black	Cross over point between shunting neck and L-7 at LDX end.
15	45	Black	Isolation point between L-4 & L-5 at SPRD end.
16	46	Black	Cross over point between shunting neck and L-6 at LDX end.
17	47	Black	Cross over point between shunting neck and L-7 at SPRD end.
18	48	Black	Cross over point between shunting neck and L-5 at LDX end.
19	49	Black	Control button for ARME/ART siding at SPRD end.
20	50	Black	Control button for ARME/ART siding at LDX end.
21	51		Control button for Saloon siding at SPRD end.
22.	Point group button (Normal)	Black with red dot.	Common button for normal operation of points.
23.	Point Group Button (Reverse)	Black and Red dot.	Common button for Reverse operation of points.

3. SIGNAL BUTTONS :

Sl.	Button No.	Colour	Description
1.	C1	Red with White dot	Up calling-on signal for Line No 1,2 & C-1C route released by S-9 or C-9.
2.	S1	Red	Up Home Signal for Line No.1, 2 & S-1C route released by S-9.
3.	C2	Red with white dot	Dn. Calling-on signal for Line No.1, 3 & C-2A route released by S-8 or C-8.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

4.	S2	Red	Dn. Home signal for Line No.1,3 and S-2A route released by S-8.
5.	SH3	Yellow	Shunt signal for Line No.1, 2, 3, SH-3A route on Saloon siding & SH-3E route released by SH-9.
6.	SH4	Yellow	Shunt signal for Line No.1, 2, 3 & SH-4A route released by SH-8.
7	SH-5	Yellow	Released by SH-9.
8	SH-6	Yellow	Released by SH-8.
9	SH-7	Yellow	On Goods siding.
10	S8	Red	DN inner Home signal for Line No. 4, 5, 6 &7.
11	C-8	Red with white dot	DN calling-on signal below S-8 for Line No. 4, 5, 6&7.
12	SH-8	Yellow	Shunt signal below S-8 for Line No. 4,5,6,7 & Loco.
13	S9	Red	UP inner Home signal for Line No.4, 5, 6, 7 & S-9E route on Goods siding.
14	C-9	Red with white dot	Calling-on signal below S-9 for Line No. 4, 5, 6, 7 & C-9E route on Goods siding.
15	SH-9	Yellow	Shunt signal below S-9 for Line No. 4,5,6,7 & SH-9E route on Goods siding.
16	S-10	Red	DN Starter signal on L-8.
17	SH-10	Yellow	Shunt signal below Starter signal No-10 for shunting neck.
18	S-11	Red	UP Starter signal on L-8.
19	SH-11	Yellow	Shunt signal below Starter signal No-11 for shunting neck.
20	S12	Red	Starter signal on Goods Reception and Dispatch line.
21	SH12	Yellow	Shunt signal on Goods Reception and Dispatch line for shunting neck at SPRD end.
22	S13	Red	UP L-1 starter at LDX end.
23	S14	Red	DN L-7 starter.
24	SH-14	Yellow	Shunt signal on L-7 for shunting neck at SPRD end.
25	S-15	Red	UP L-2 starter.
26	S-16	Red	DN L-6 starter.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

27	SH-16	Yellow	Shunt signal on L-6 for shunting neck at SPRD end.
28	S-17	Red	UP L-4 starter.
29	SH-17	Yellow	Shunt signal on L-4 for shunting neck at LDX end.
30	S-18	Red	DN L-5 starter.
31	SH-18	Yellow	Shunt signal on L-5 for shunting neck at SPRD end.
32	S-19	Red	UP L-5 starter.
33	SH-19	Yellow	Shunt signal on L-5 for shunting neck at LDX end.
34	S-20	Red	DN L-4 starter.
35	SH-20	Yellow	Shunt signal on L-4 for shunting neck at SPRD end.
36	S-21	Red	UP L-6 starter.
37	SH-21	Yellow	Shunt signal on L-6 for shunting neck at LDX end.
38	S-22	Red	DN L-3 starter.
39	S-23	Red	UP L-7 starter.
40	SH-23	Yellow	Shunt signal on L-7 for shunting neck at LDX end.
41	S-24	Red	DN L-1 starter.
42	SH-25	Yellow	Shunt signal on Loco for shunting neck at LDX end.
43	S-26	Red	DN starter on saloon siding at SPRD end.
44	S-27	Red	Fixed stop signal on Goods Reception and Dispatch line at LDX end.
45	S-28	Red	DN Advanced starter.
46	S-29	Red	UP Advanced starter.

3.1 Signal Indication :

The aspect of signal as obtained at any time is shown on the panel on the Signal indication (along side of the track).

4. ROUTE BUTTONS :

Route buttons are provided separately on each running line on the panel for indication of route (viz L1/1 UN, L1/2 UN, L2 UN, L-3 UN, L-4/1 UN, L4/2 UN, L-5/1 UN, L-5/2 UN, L-6/1 UN, L-6/2 UN, L-7 UN, L-8UN). Common route buttons are also provided viz

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

28A UN and 29A UN for Up and Dn starter signals respectively. For taking of Dn and Up advanced starter route buttons 28 UN and 29 UN are also provided. Siding buttons SN-1 UN, SN-2UN, SN-3 UN, SS-UN, GS UN, LOCO UN are also provided for sidings.

4.1 Descriptions of Route Buttons :

Sl.	Button No.	Colour	Description
1.	L-1/1UN	White with Black dot	Common route button for UP & DN Home signal, calling on signal and SH-3B & SH-4D for Line No.1 setting overlap on over run line at LDX end and up to DS 39B at SPRD end respectively.
2.	L-1/2-UN	White	Common route button for UP & DN Home signal, calling on signal and SH-3B & SH-4D for LineNo.1 setting overlap on main line.
3.	L-2 UN	White	Route button for UP Home signal, UP Calling on signal and SH-3C & SH-4C for LineNo.2 UP Main line.
4.	L-3 UN	White	Route button for DN Home Signal, DN Calling on signal and SH-3D & SH-4B for Line No.3 DN main line.
5.	L-4/1 UN	White with Black dot	Common route button for Up & Dn. Inner Home Signal, Calling on signal and SH-9A & SH-8E for Line No.4 setting over lap on shunting neck.
6.	L-4/2 UN	White	Common route button for Up & Dn. Inner Home signals and Calling on signals for Line No.4 setting over lap on main line.
7.	L-5/1UN	White with Black dot	Common route button for Up & Dn. Inner Home signals and Calling on signals for Line No.5 setting over lap on shunting neck.
8.	L-5/2 UN	White	Common route button for Up & Dn. Inner Home signals and Calling on signals for Line No.5 setting over lap on main line.
9.	L-6/1UN	White with Black dot	Common route button for Up & Dn. Inner Home signals and Calling on signals for Line No.6 setting over lap on shunting neck.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

10.	L-6/2 UN	White	Common route button for Up & Dn. Inner Home signals and Calling on signals for Line No.6 setting over lap on main line.
11.	L-7/1UN	White with Black dot	Common route button for Up & Dn. Inner Home signals and Calling on signals for Line No.7 setting over lap on shunting neck.
12.	L-7/2 UN	White	Common route button for Up & Dn. Inner Home signals and Calling on signals for Line No.7 setting over lap on main line.
13	L-8 UN	White	Common route button for S-8F & SH-9F route.
14.	Group (Trans)	White with Black dot	Common release button for crank handle and siding control.
15.	Group Release	White with Black dot	Common release button for crank handle and siding control.
16	SN1 UN	White	Common route button on shunting neck at SPRD end for SH-12B, SH-14, SH-16, SH-18 and SH-20 routes.
17	SN2 UN	White	Common route button on shunting neck at LDX end for SH-17, SH-19, SH-21, SH-23 and SH-25B routes.
18	SN3 UN	White	Route button on shunting neck at SPRD end for SH-12A route.
19	LOCO UN	White	Route button on Loco at LDX end for SH-8A route.
20	GS UN	White	Common route button on Goods Reception and Dispatch line at SPRD end for 9E, C9E, SH-9E and SH-7 routes.
21	SS UN	White	Route button at SPRD end on SH-3A route.
22.	28- UN	White	Route button for DN advanced starter.
23.	29- UN	White	Route button for UP advanced starter.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

4.2 CRANK HANDLE PUSH BUTTONS:

SL.No	Button No	Color	CONTROL POINTS
1	CH-1	Blue	To be pressed to extract Crank Handle Key for operation of point No 31A/B, 37A/B.
2	CH-2	Blue	To be pressed to extract Crank Handle Key for operation of point No 36A/B, 39A/B, 51A/B.
3	CH-3	Blue	To be pressed to extract Crank Handle Key for operation of point No 33, 35A/B, 41A/B, 55.
4	CH-4	Blue	To be pressed to extract Crank Handle Key for operation of point No 43, 45, 47A/B, 49A/B.
5	CH-5	Blue	To be pressed to extract Crank Handle Key for operation of point No 32A/B, 34A/B.
6	CH-6	Blue	To be pressed to extract Crank Handle Key for operation of point No 38, 40A/B, 42A/B.
7	CH-7	Blue	To be pressed to extract Crank Handle Key for operation of point No 44A/B, 46, 48, 50A/B.

4.3 MISCELLANEOUS PUSH BUTTONS:

SL. NO	Button No	Colour	Description
1	SM's EMERGENCY POINT OPERATION KEY	---	This key is to be inserted and operated in the event of Emergency point operation.
2	SM's PANEL KEY	---	To lock the control panel to prevent unauthorized operation.
3	RESET PUSH BUTTON FOR GSAXT AXLE COUNTER	RED	To be pressed to reset axle counter on Goods reception & dispatch line.
4	GROUP TRANS PUSH BUTTON	WHITE WITH BLACK DOT	To be pressed to initiate slot of crank handle or LC gate operation along with concerned slot/Crank Handle/L.C.Gate button.
5	GROUP RELEASE PUSH BUTTON	WHITE WITH BLACK DOT	To be pressed to withdraw/Normalize the control of slot of crank handle or LC gate operation along with concerned slot/Crank Handle/L.C.Gate push button.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

6	POINT GROUP NORMAL PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate 'NORMAL' setting of point along with concerned point push button
7	POINT GROUP REVERSE PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate 'REVERSE' setting of point along with concerned point push button
8	EMERGENCY ROUTE RELEASE PUSH BUTTON	WHITE WITH RED DOT	To be pressed for emergency Route Release
9	SIGNAL CANCELLATION PUSH BUTTON	RED	To be pressed for cancelling a signal which is already taken 'OFF' or to release a route after passage of a train.
10	SIGNAL LAMPFAILURE /POINT FAILURE ACKNOWLEDGEMENT	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp/point failure

5. Power Failure Indication/Buzzer And Power Acknowledgement :

Power supply to the signaling installation is through integrated power supply system. The IPS is normally fed through AT supply. The 1st standby power supply is Andhra Pradesh state Electricity Board supply and 2nd standby is Diesel Generator. The available Local/DG supply is fed to the IPS through auto change over switch provided in IPS.

In the event of failure of the local power supply the SM on duty shall start the Diesel Generator. The power supply of the DG set is fed to the auto change over switch provided in IPS. The IPS system is connected with battery for safe working during transition of power. Remote monitoring ASM console for IPS is provided at SM's office which will give the following instructions.

	Instructions	Condition	LED indication	Remarks
A	Run DG set	50% DOD	Red	Auto/visual alarm. Alarm shall be acknowledged by SM on duty.
B	Emergency start	60% DOD	Red	Auto/visual alarm. Alarm shall be acknowledged by SM on duty.
C	System shut down	70% DOD	Red	Signal feed cut off and all DC-DC converters to work. Audio alarm will continue till Generator is started.
D	Call staff S&T	Equipment fault	Red	Failure of any module will give the alarm in SM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

5.1 LED SIGNAL FAILURE INDICATION (RED SIGNAL LAMP MUTTING BUTTON RED WITH WHITE DOT):

Whenever LED signal becomes blank, a miniature flashing Red light indication appears along with an audible buzzer indicates Signal lamp failure. The Station Master on duty shall press the signal lamp/point failure Ack. Button thereby the buzzer stops but the Red indication lamp becomes steady which continues till either the LED signal is replaced/rectified or signal assumes other aspect.

5.2 BUTTON HELD INDICATION WHITE/BUTTON BUZZER WHITE WITH RED DOT:

Whenever any button remains held up in pressed condition 'Button Held' white. Indication starts flashing along with an audible buzzer. The Station Master on duty then acknowledge it by pressing the "Button Held" push button (white with red dot) the buzzer stops but the white indication continues to flash till the same is rectified.

6. TRACK CIRCUITS / AXLE COUNTERS:

At this station all the berthing lines and point zones are provided with track circuits to indicate the occupation/clearance of berth/point zone portion. Point Zone Track circuits will automatically replace starters. Last Vehicle Track (LVT) and first Vehicle Track (FVT) are provided near Home and advance starter signals for their automatic replacement release of block instruments. In addition 90 mts rail length track circuits are provided in rear of UP and DN home signal for control of calling on signal indication panel is installed in station to indicate the occupation/clearance of track circuits.

6.1. When a train is to be dispatched from the station yard on signals, the Station Master on Duty must ensure that the route between the starter signal and the Advance Starter is clear of any obstruction (which includes point zones track circuits) before he takes off departure signals.

6.2. CRANK HANDLE FOR EMERGENCY OPERATION OF POINTS CRANK:

Crank handle key of point machine is inter locked with the signalling and inter locking system at this station and the crank handle key of point machine which is normally locked up in the RKT instrument at the East and West location can be taken out when the signals for the connected route, are in the normal position and the route is not locked for any reason. Even when the route is locked the crank handle key of point machine can be extracted from the RKT through emergency operation by pressing crank handle key of point machine button along with Group Trans button. The release can be affected by pressing the push button for its release and when this key is taken out the signals leading over the particular point in either direction cannot be taken off.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

CRANK HANDLE CONTROL FOR OPERATION OF POINTS:

S.No	Crank Handle	Control points
1	CH 1	31A/B, 37A/B.
2	CH 2	36 A/B, 39A/B, 51A/B.
3	CH 3	33, 35 A/B, 41A/B, 55.
4	CH 4	43, 45, 47 A/B, 49A/B.
5	CH5	32A/B, 34A/B.
6	CH6	38, 40A/B, 42A/B.
7	CH7	44A/B, 46, 48, 50A/B.

6.3. On account of the doubtful operation of any track circuit by light vehicle/ vehicle including self propelled vehicles such as motor trolley or a diesel shunting engine or a tower wagon, indication of the occupancy of the track it is necessary that the station master on duty satisfied himself that the said vehicle/ vehicles has/have cleared the point zone track circuits by observing the track indication of the tracks on either side of the cross over by positively checking of the ENTRANCE and EXIT track circuit are showing occupancy and clearance in accordance with the train movement.

7. STATION MASTER'S KEY:

The panel is also fitted with Station Master's lock up key to prevent unauthorized operation of this panel but with the arrangement to put back the signal to the ON position in the case of emergency without altering the route when the panel is in locked position.

8. EMERGENCY OPERATIONS:

The following are the instructions for Emergency operations.

8.1 CANCELLATION BUTTON OR COUNTER:

For the purpose of the emergency operations there is an emergency Route cancellation and also there is a counter for counting emergency operations involving the concurrent operation of the emergency route cancellation button. The station master on duty must press the emergency route button by breaking the seal along with concerned signal button for which emergency route releases is required. A yellow indication will appear below the signal indicating that the timer has started operation and after lapse of 120 seconds. The desired route will be released provided all other conditions are favourable for the route release. The counter registers to next higher number every time emergency route cancellation is initiated. SM on duty shall ensure sealing of emergency route cancellation button by S&T maintenance staff after completion of the work.

8.2 The numbers on the counter register the number of operations performed for such emergency cancellation and the station master on duty should specify

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

cause for such usage giving the particulars of cause and the time of operation as related to a particular train etc. in the train signal register. The detailed operation instructions are as follows:

8.3 CANCELLATION OF UNINTENDED LOCKING OF POINTS:

Whenever there is an intended locking of any points (indicated by RED indication lamp near the concerned point) such a locking has to be released (after the concerned signal are in the normal position) by concurrently pressing the Emergency Group cancellation button (provided at the counter of the panel) and the concerned signal button provided the track circuits are clear and are in working condition. This operation is registered in the counter as already pointer out.

8.4 CANCELLATION OF LOCKING OF ROUTE AND POINTS AFTER THE SINGAL HAS BEEN PUT BACK TO 'ON':

OR

THE SINGAL HAS GONE BACK TO ON EITHER AFTER THE MOVEMENT OF THE TRAIN IS CANCELLED:

OR

THE TRAIN HAS COME TO A STOP OUT SIDE THE STOP SIGNAL:

In case the route is set and the signal is taken off and if it is warranted that the signal has to be put back to ON and cancel the route.

- a) Firstly the signal has to be put back to the ON position
- b) Emergency route cancellation operation must be initiated as detailed in para 8.1.

9. EMERGENCY OPERATIONS:

Cancellation of the locking of points not released after the passage of the train for any reason.

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

- a) Firstly, it must be ensured that the signal and signal buttons are in normal position.
- b) Operation as detailed in para 8.1 to be followed.

10. EMERGENCY OPERATIONS OF POINT

a) IN CASE OF POINT ZONE TRACK CIRCUIT FAILURE:

The Station Master on duty can operate points from panel in case of point zone track circuits fails. The Station Master on duty after physical verification inserts the SM's emergency point key and turn. Keeping Emergency point key in that position the Station Master on duty must press the individual point button along with emergency point operation button (Black with Red dot) by breaking the seal. He shall then release the emergency point operation button only and press the point group Normal or Reverse button as per requirement keeping the individual point button is pressed condition. Points will be set to Normal or Reverse position as per operation. During the initiation one RED indication will appear above the

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

emergency operation button. This operation will be registered in and emergency point operation counter placed above the emergency point operation button and counter registers to next higher number each time emergency point operation is initiated. SM on duty shall ensure sealing of emergency point operation button by S&T maintenance staff after completion of emergency point operation.

IN CASE OF AXLE COUNTER FAILURE

In case of failure of Digital Axle counter of LVV, or Analog Axle counter failure on Goods Reception and Dispatch line resetting can be done after ensuring last vehicle intact from the Guard of the train. Procedure for resetting is given in Para No 26 of Appendix B.

11. INTERLOCKING OF SIGNALS:

11.1 All running line points are fitted with point machine and are electrically detected by the relevant Home signals and starters.

11.2 Advanced starters are interlocked with respective Double line SGE block instrument in LINE CLEAR position.

11.3 Home signals are interlocked with respective Double line SGE block instruments. The Block instruments cannot be made to normal unless the respective Home signals are in Normal position.

11.4 Signals once taken OFF can be put back to ON. In case of emergency by pressing the concerned signal button in conjunction with signal cancellation button even when the panel is locked up with Station Master's key.

12. LOCKING OF RELAY ROOM:

The relay room shall be locked with a double lock which can be opened only after both the keys are inserted and turned. One key of the lock shall be kept with the Station Master on duty in his custody and other with Maintainer. Whenever required for maintenance, the key in the custody of Station Master shall be given to the Maintainer. After completion of the work the Maintainer shall return the key to the Station Master. The details of transaction should be properly recorded in relay room register maintained at the station and duly signed by the Station Master and the Maintainer concerned as per OM 1.14. In addition, the Station Master shall also observe SR 3.51.05.

13. MAINTANANCE OF S&T INSTALLATION AND ADHERENCE TO MAINTENANCE SCHEDULES:

13.1 The regular maintenance of S&T installations and adherence to the schedules of maintenance is also the mandatory schedules of testing of points, track circuits, signal lever machines, level crossing gates, the associated interlocking apparatus i.e., cables and finally the interlocking functional tests is a must for the safe and satisfactory working of those installations at RAYAGADA Station.

13.2 The tests, checks and replacements etc. including overhauling shall conform to the schedule of maintenance as indicated in the signal engineering manual as also in the current and extent instruction / circulars on the subject.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

14. PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF A SIGNAL AND INTERLOCKING INSTALLATIONS:

Whenever there is a failure of points, track circuits, signals, Axle counters or any other interlocking gears at the station, the failure report should be communicated by the Station Master on duty through a memo to the Sectional Maintainer and the Signal Engineer of the Section along with others as per G& SR 3.51.04 and 3.68.04 and document all such transactions.

14.1 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

However, before declaring a Signal as defective the setting of point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the switches on the Panel in terms of SR 3.68.04(c).

14.2 RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

It is only after receipt of this information the sectional maintainer (Electrical or Mechanical) shall attend to the failure after giving a disconnection memo. After rectification of the fault the sectional maintainer shall give a reconnection memo detailing rectification and it is only after the Station Master of duty has personally checked this defective gear and is satisfied that it is in good and proper working order, he shall resume the normal working of the said defective gear in terms of SR 3.64.04 (c) and (d).

15. PROCEDURE FOR CARRYING OUT PLANNED MAINTANANCE WORK:

However any normal maintenance or special works for heavy renewals etc. are involved, these works should be pre-planned by the signal & Telecommunication field staff and the Inspector of the section should give to the Station Master in writing "Advance Intimation" about this planned work in terms of GR 15.08.01.

16. EMERGENCIES:

Notwithstanding anything contained in above said Para Nos. 14 and 14.1 and 14.2, when a gear is found to be defective and unsafe for passage of trains, the Signal and Telecom. Staff shall at once suspend the working of such gear and the associated installation and issue a "Suspension Memo" explaining the seriousness of the defect or damage to the interlocking installation to the Station Master and obtain SM's acknowledgement. After this, the usual practice of issuing disconnection memo and reconnection memo can follow and the Station Master must promptly act on such messages and take adequate precautions treating the S&T installations as defective and pass trains over the affected interlocking gears according to extent instructions as contain in GR 3.77 and SR thereto.

17. LIGHTING OF SIGNAL LAMPS AND THEIR MAINTENANCE:

The Station Master on duty at every shift must also ensure from the Panel Board that all the signals lights are burning properly and brightly. This fact must also be recorded in the diary under a separate entry and confirm to the section controller on duty as per instruction contained in Divisional Safety Circular No. 82/82, Dated 2.5.82 and GR 3.49(3) and SR thereto.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

18. CORRECTING TIME IN STATION CLOCK:

The Station Master shall set the time on his clock according to the time signal given by the Section Controller on duty at 16.00 Hours. Every day according to SR 4.01.01 and 4.01.02.

19. NORMAL POWER SUPPLY AND STANDBY POWER SUPPLY:

The Station works on 230 Volts power supply from Local. The standby power supply is from two numbers of D.G.sets.

19.1 NORMAL POWER SUPPLY-MAINTANACNE OF POWER SUPPLY, POWER FAILURE AND REPORTING SUCH FAILURES:

Normal power supply to the Signalling and interlocking installations at this station is drawn from Local [at 230V-50Hz]. The standby power supply is taken from two numbers of Diesel generators. The Station Master must however, maintain the record of the power failure of the local supply and he must promptly report the failure to the Section controller and the concerned Electrical and S&T maintenance staff.

20. WORKING OF POINTS – POSITION OF POINTS:

The normal position of all points shown in the Station Working Rule Diagram No. SI/WRD 23075 and also in the mimic indication panel provided in the Station Masters office.

20.1 All crossover points and independent points on the running lines are worked by Electric Point Machines. The point machines have in-built locking and detection arrangements. These points are remotely controlled from the panel situated in the Station Master's office.

20.2 The operation and indication of the points and their route locking over them is already explained in earlier paras of Appendix-B.

21. PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNAL POINTS AND USE OF EMERGENCY CRANK HANDLE:

21.1 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 Station.

21.2 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.

21.3 The crank handle key can be extracted from concerned point crank handle RKT provided at location by pressing common trans button along with conceded crank handle button. After setting the point by crank handle the key will be inserted again into the concerned crank handle RKT and will be

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

turned. Key indication will appear on panel and the SM has to press the common receive buttons along with concerned crank handle button for further normal operations.

21.4 The case of failure of Motor Operated Points should be promptly reported to the concerned Signal Inspector/ESM for immediate rectification.

21.4.1 Whenever an emergency Crank handle is required to be used by a Signal Official for maintenance of work attending to failure, the Signal Official will give a disconnection memo to the Station Master on duty and after making necessary entries in the emergency Crank Handle register, the Station Master on duty will obtain acknowledgement of the Signal Official in the emergency Crank Handle Register and then handover to him the emergency Crank Handle for the Points concerned. All the concerned Points will be treated as defective till the Emergency Crank Handle is returned back to the Station Master on duty.

21.4.2 Emergency release of crank handle after the lapse of 120 sec., in case of emergency release of crank handle during any of the route remains locked.

21.5 Both 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.

21.5.1 The Emergency Crank Handle Register is to be maintained in the following Performa 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 of 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 or dispatch for which Points are set, Clamped and Padlocked.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

8. Train number to be admitted or dispatched
9. Signature of the SM on duty to ensure correct setting, Clamping
10. and Padlocking of the points,
11. Date & Time fault rectified.
12. Time of Emergency Crank Handle is received back by SM on duty.
13. Signature and Designation of the Signal Official who rectified the fault.
14. Remarks

22. INTERLOCKING OF SIGNALS WITH BLOCK INSTRUMENTS:

22.1 INTERLOCKING WITH HOME SIGNALS:

All the UP and DOWN Home signals are Electrically interlocked with the respective Double line SGE Block Instrument so that before the handle of the instrument can be turned from TRAIN COMING FROM position to LINE CLOSED position, all the buttons controlling the Home Signals of UP or DOWN direction as the case may be must be in their NORMAL position.

- 22.2** The UP and DOWN Advanced Starter Signals are Electrically interlocked with the respective Double line SGE Block Instrument so that these signals can not be taken OFF until the Handle of the concerned Block Instrument is in TRAIN GOING TO position.

22.3 SUSPENSION OF LAST STOP SIGNALS:

When the Double line SGE Block Instrument is suspended with its handle in TRAIN GOING TO position for whatever reason the concerned Last Stop Signals controlled by the Double line SGE Block Instrument must be treated as suspended and trains shall be Piloted Out.

23. BURNING OF SIGNAL LIGHTS:

The Station Master of duty shall not grant LINE CLEAR unless he has ensured that the lamps of fixed signals that apply to the train are burning brightly. If the Signal Lights cannot be kept burning the Station Master on duty shall before giving LINE CLEAR initiate action in accordance with the procedure prescribed in GR 3.68 to 3.71 and relevant SR's vide GR 3.49(4).

24 TELECOMMUNICATIONS:

The details of the Telecommunication is as follows

- 1) Telephone attached to Lock and Block instruments of adjoining stations.
- 2) Magneto telephones attached to adjacent stations.
- 3) Magneto telephones provided at crank handle locations at either end locations.
- 4) Telephones connected to L.C.Gate at Km 341/2-3.
- 5) Section Control Phone.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

- 6) Auto Telephone
- 7) BSNL Phone
- 8) VHF set.

25. FAILURE OF COMMUNICATIONS – FAILURE OF BLOCK INSTRUMENTS:

- 1) In the event of suspension / failure of Block instrument line clear transaction shall be made on block telephone attached to Block instrument exchanging identification number and supported by a Private number vide SR 6.02.06(1)(a).
- 2) In the event of. suspension / failure of Block instrument and Block telephone attached to Block instrument line clear transaction shall be made on station to station Magneto phone exchanging identification number and supported by a Private number vide SR 6.02.06(1)(a).
- 3) In the event of suspension / failure of s Block instrument, telephone attached to Block instrument and station to station magneto phone, line clear transaction shall be made on control telephone exchanging identification number and supported by a Private number vide SR 6.02.06(1)(a).(C).
- 4) In the event of. failure of all communications trains shall be worked in terms of SR 6.02.04.

26 RESETTING OF LVV AXLE COUNTER (DIGITAL):

- A) Whenever after complete arrival of train the LVV axle counter continue to show Red on the panel board, the on duty SS/SM at both ends of the section shall resort to the reset of axle counter.
For this purpose SS/SM at receiving end shall first verify that Block Section is clear of trains. If the failure has occurred after arrival of train, SS/SM shall obtain signature from the guard of stopping train on the train intact register (vide GR & SR No 4.17, 4.17.01) or by exchanging signal with the guard of through train, so that he can ensure that the train has arrived completely before resorting to the reset of LVV axle counter.
SS/SM of receiving end shall inform the failure of axle counter to on duty SS/SM of despatching end for UP/Dn section.
- B) SS/SM at receiving end then send an operating person to verify that the last vehicle is clear of block Section. After verifying the clearance of last vehicle of concerned block section, the operating person exchanges private number over field telephone or crank handle location telephone.
- C) On exchanging private number the SS/SM at both ends will insert the reset key for corresponding section and shall press the nominated reset button. By this operation LVV axle counter will reset and associated counter will change to next higher number at both ends .
- D) SS/SM at both ends shall record the higher number so changed due to reset of axle counter in the reset register and also in the train signal register mentioning the purpose of reset. After the reset operation is completed preparatory reset indication will appear on panel at both ends which suggests that the reset operation is successfully completed and the first train has to be Piloted out. On arrival of the piloted train the axle counter track cct zone of the section shows clear and Normal working shall be resumed. Even after arrival of piloted train, LVV axle counter zone does

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

not show clear indication S&T staff to be informed for getting rectified the failure of Axle counter..

- E) It is mandatory that for every reset operation of LVV Axle counter first train after reset process shall have to be piloted out.

Para No 26 of Appendix 'B' will come into force after proper intimation by ASTE/P/VSKP on written authority of Dy.CSTE/P/VSKP after commissioning of LVV axle Counter for section RGDA-LDX and RGDA-SPRD. Till such time the last vehicle will be verified by the SS/DY,SS on duty physically as per existing rules in vogue.

27. RESETTING OPERATION FOR GOODS RECEPTION AND DISPATCH LINE AXLE COUNTER (ANALOG AXLE COUNTER):

Analog Axle counter is provided to prove clearance/occupancy of berthing portion on Goods Reception and Dispatch line. The occupation/clearance of the axle counter section is indicated on the panel by RED & GREEN indications respectively.

When after clearing of a train or due to any failure, if the berthing zone axle counters of Goods Reception and Dispatch line does not show clear indication and section occupied indication continue to glow on panel, Dy. SS/SM on duty shall initiate resetting procedure.

Before initiating resetting on duty SS/DY. SS at RYAGADA Station shall send an operating staff who in turn, verify that the concerned Goods Reception and Dispatch line clear of all obstruction and open the respective verification line verification box and press the verification button provided in the line verification box near Location.

On obtaining verification indication which is indicated by glow of light on the panel below the verification indication, DY. SS / SM shall reset the concerned axle counter and the same will be reset by this operation and concerned counter will change to the next higher number. Number thus changed due to resetting shall be recorded in the TSR and in the reset register provided for this purpose.

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

EAST COAST RAILWAY

WALTAIR DIVISION

APPENDIX- 'C'

RAYAGADA STATION

ANTI COLLISION DEVICE (RAKSHA KAVACH)

NOT APPLICABLE TO THIS STATION.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

APPENDIX 'D'**DUTIES TO BE PERFORMED BY THE STAFF AT RAYAGADA STATION.****1) STATION SUPERINTENDENT:**

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

He shall conduct surprise night inspection and safety meetings/fire drills etc. as per instructions issued from time to time. He shall see that all the staff under his control working safely according to the rules in force.

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

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

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

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

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

2. SM/ASM

He is responsible for train passing during his shift. He shall promptly bring to the notice of SS all irregularities and accidents in course of his shift duties. During the absence of SS the duties of Station Superintendent will devolve on him. He shall follow GR 3.49, SR 3.68.01 (c) & (d), SR 14.07.01. His special attention is drawn to chapter II of G & SR 1976 and SR 5.01 to 5.08 with relevant SRs. He shall carry out the instructions given to him by the SS. He should have thorough knowledge in PC operation.

3. TRAFFIC POINTSMAN/TOKEN PORTERS:

He shall work under the orders of SS/SM on duty. He shall couple and un couple vehicles under the supervision of SS/SM/Guard. He shall operate

(D.K.M.YADAV)

(M.A.HAQUE)

Dy. CSTE/Project/VSKP

SR.DOM/G/WAT

ground lever/levers and clamp and pad lock the necessary points for shunting operations and during piloting of trains. He shall watch and guard the packages and Rly property lying in the station premises. He shall be thorough with the correct usage of displaying hand signals. He shall report to SM on duty any irregularities coming to his notice. He shall do loading and unloading of parcels, smalls and Guard boxes. He shall carry out any other duties entrusted to him.

4. SAFAIWALA-CUM LAMP MAN:

He shall attend to sanitation of Railway premises including SM's office, platforms, staff quarters, and latrines and cleaning of drainages etc., He shall carry out any work instructed to him by SS/SM on duty.

NOTE: All staff should be in uniform while on duty and follow the rosters issued by Sr.DPO/WAT from time to time.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

ESSENTIAL EQUIPMENT

A List of essential equipments is given below which shall be maintained in good working order.

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

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

EAST COAST RAILWAY

WALTAIR DIVISION

APPENDIX 'F'

RAYAGADA STATION

Rules for working of DK Station, Halts, IBH, IBS and outlying sidings.

No 'DK' station", Halt, IBS/IBH and "Out lying sidings" are connected to this station

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

EAST COAST RAILWAY

WALTAIR DIVISION

APPENDIX 'G'

RAYAGADA STATION

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS

NOT APPLICABLE TO THIS STATION.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT

EAST COAST RAILWAY

WALTAIR DIVISION

APPENDIX 'H'

RAYAGADA STATION

RULES FOR WORKING OF PRIVATE SIDINGS

NOT APPLICABLE TO THIS STATION.

(D.K.M.YADAV)

Dy. CSTE/Project/VSKP

(M.A.HAQUE)

SR.DOM/G/WAT