

No. 163

STATION WORKING RULES OF ANGUL STATION

BG Station.
Date of Issue: 07.08.12
Date brought in force:08.08.12

NOTE:

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

1. **STATION WORKING RULE DIAGRAM:**

The Station Working Rule diagram No. SI/WRD/10681 ALT-'E' based on CSTE/East Coast Railway's Signal Interlocking Plan No. SI/10681 ALT-'E' shows the complete layout of the yard, siding, normal position of points, the Signaling and Interlocking arrangements, Gradients and Level Crossings within the station limits. This must be referred to for giving details of the point numbers and signals when reporting accidents.

2. **DESCRIPTION OF STATION:**

2.1. **LOCATION:**

ANGUL (Code: ANGL) is a 'B' class five lined station on the Sambalpur-Talcher branch line (BG) section in Khurda Road division of East Coast Railway. It is situated at Km. 719.212 from Howrah (Via: JSG-SBP) and 156.212 from SBP. The station is provided with Standard-III Interlocking and equipped with Central Panel and Multiple Aspect Colour Light signals. The station is worked under Absolute Block System of GR & SRs.

[Refer GR. 8.01(1) a, c, 2(b), 8.03(2), a, b, c (ii), 8.09, 8.10(1)(2), 8.12, 8.13, 8.14, 8.15, 14.01 to 14.13 and Chapter-V of Block Working Manual]

2.2. **BLOCK STATIONS:**

ANGUL station is situated between Talcher Junction (Code: TLHD) at East end situated at a distance of 12.012 Km. and Kerejanga (Code: KPJG) at West end situated at a distance of 13.58 Km.

2.2.i. **IBH, IBS, OUTLAYING SIDINGS, DK STATIONS:**

NIL

2.2.ii. **PASSENGER HALTS:**

NIL

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

Between Stations		The Point from which the 'Block Section' Commences	The Point at which the 'Block Section' end
ANGL-TLHD	Single Line section	UP Advanced Starter Signal of ANGL station.	DN Advanced Starter Signal of TLHD station
ANGL-KPJG	Single Line section	DN Advanced Starter Signal of ANGL station	UP Advanced Starter Signal of KPJG station.

b. **STATION SECTION:**

Station Section	The Point from which the 'Station Section' Commences	The Point at which the 'Station Section' end
Single Line section	UP Advanced Starter No. 14 of ANGL.	DN Advanced Starter No. 5 of ANGL.

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c. **STATION LIMITS:**

The station limit lies between the UP & DN Distant Signals.

2.4. **GRADIENTS:**2.4. **GRADIENTS: (SAMBALPUR END)**

From	To	Gradients
CSB	CH.700M	1 in 400 'R'
CH.700M	CH.3600M	1 in 150 'R'
CH:3600M	Towards Block section	Level.

b. **TALCHER END:**

From	To	Gradients
CSB	CH.730 M	1 IN 400 'F'
CH.730 M	CH.2586 M	1 in 150 "F"
CH.2586 M	CH.2800 M	Level
CH.2800 M	Towards Block section	1 in 150 "F"

2.5. **LAYOUT:**

The station is provided with five running lines in the Main yard, namely 1st Loop Line [Line No. 1], Main Line [Line No. 2], 2nd Loop Line [Line No. 3], 3rd Loop Line [Line No. 4], 4th Loop Line [Line No. 5] and one non running line i.e. Hot Axle cum Engg. Siding.

HOT AXLE CUM ENG SIDING:

The Hot Axle cum Engg. Siding at TLHD end of the yard with one side entry is taking off from 1st Loop Line [Line No.1]. The entrance point and corresponding derailing switch are coupled and operated by an arc lever at site. The entrance points are fitted with hand plunger locks. These hand plunger locks are unlocked the siding keys released by pressing the siding control button No.30 provided on panel at SM's office. Reception signals (i.e. 18A. C18A. in UP direction and 10A. C10A. in DN direction, shunt signal Nos. SH10A and SH 35A and starter signal No.2 & 16 are electrically interlocked in such a way that these signals cannot be taken 'OFF' if the Hot Axle cum Engg. Siding key is taken 'OUT' from the RKT provided at SM's office.

PLAT FORMS:

- 1) Line No. 1 (1st Loop Line) : H.L.P.F.
- 2) Line No. 2 (Main Line) : H.L.P.F.
- 3) Line No. 3 (2nd Loop Line) : H.L.P.F.

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

The trains coming from SBP end are UP trains and the trains coming from TLHR end are DN trains.

2.5.2 **HOLDING CAPACITIES (CSL):**

Line No.1	1 st Loop Line	CSL:	920.0 m	From Starter to Starter (Electrified)
Line No.2	Main Line	CSL:	1059.40m	From Starter to Starter (Electrified)
Line No.3	2 nd Loop Line	CSL:	772.40m	From Starter to Starter (Electrified)
Line No.4	3 rd Loop Line	CSL:	692.40m	From Starter to Starter (Electrified)
Line No.5	4 th Loop Line	CSL:	692.40m	From Starter to Starter (Electrified)

2.5.3. **NON RUNNING LINES AND THEIR CAPACITIES IN (CSL):**

Hot Axle cum Engg. Siding CSL: 230m. From DS to DE (Electrified)

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

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NIL

b. SPECIAL RESTRICTIONS:

- i. The over run lines shall not be obstructed for stabling of vehicles or harboring engine.
- ii. Hand Shunting is not permitted over the outer most points at TLHD end.
- iii. While performing shunting, engine shall be leading towards falling gradient at TLHD end

c. SPECIAL INSTRUCTIONS:

- i) Entire station yard is track circuited except the Hot Axle cum Engg. Siding. In case of failure of track circuit the clearance of the concerned line should be ensured physically before a train is piloted.
- ii) Movement of non-insulated push trolley is prohibited between ANGL-TLHD and ANGL-KPJG section vide SR 15.25.04(c).
- iii) Through coaching trains on Line No.5 (4th Loop) is restricted vide DRM/KUR's Letter No. DRM/KUR/CON/2008, dt.07.06.2008.

2.6 LEVEL CROSSINGS:

- a) There is a mid-section manned non-interlocked 'C' Class level crossing gate No. ST-100 situated at Km. 154/3-4 between ANGL-KPJG Station. Telephone communication is provided between the gate lodge and SM/ANGL Station.
- b) There is a manned 'C' class interlocked level crossing gate No. ST-102 situated at Km. 155/12-13 towards KPJG end of the station yard. Telephone Communication is provided between the Gate lodge and SM/ANGL station.
- c) There is a manned 'C' class interlocked level crossing gate No. ST-103 situated at Km. 157/2-3 towards TLHD end of the station yard. Telephone communication is provided between the Gate lodge and SM/ANGL station.
- d) There is a manned mid-section "A" class interlocked level crossing gate (ST-105) situated at Km. 159/7-8 between Talcher Junction and Angul station. Telephone communication is provided between the gate Lodge and ANGL Station.
- e) There is a manned mid-section "SPL" class interlocked level crossing gate (ST-107) situated at Km. 163/6-7 between Talcher Junction and Angul station. Telephone communication is provided between the gate Lodge and Angul Station.
- f) There is a manned mid-section 'SPL' class interlocked level crossing gate (ST-108) situated at Km. 164/4-5 between Talcher Junction and Angul station. Telephone communication is provided between the gate Lodge and Talcher Junction station.

3. SYSTEM AND MEANS OF WORKING:

Trains are worked under Absolute Block System with Token less Block Instrument (TLBI) for section ANGL-TLHD and ANGL-KPJG. The instruments are cooperative type. The Block Instruments shall be operated by the Station Master on duty and keys of the block Instruments shall remain under personally custody of SM on duty.

Authority to proceed for the Loco Pilot between ANGL-TLHD and ANGL-KPJG is taking off the Last Stop Signal. 'Line clear' is obtained/granted through the telephone attached with the Block instrument. [Refer Chapter-XIV of GR & SRs and Chapter-V of Block Working Manual & GR 14.08(b) (iv)]

4. SYSTEM OF SIGNALLING AND INTERLOCKING:

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

The Station is provided with central panel interlocking and having no end cabins. All signals and points are electrical operated from the central panel provided at SM's

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Office. Calling-on signals are provided below Home signals (i.e. in both UP & DN directions as well as DN Routing Signal) as per GR 3.13 (1)(b), (2)(3)(4) & (6) (b). Central Panel with miniature push buttons are provided in the Station Master's office to electrically control all signals, points, Gate key, etc. The control panel is provided with SM's key which shall always remain in the personal custody of the Station Master on duty in terms of SR 3.36.03(a).

The entry of train in to ELS siding is controlled by shunt signal placed below Routing Signal No. 10 and slotted by ELS. A separate ELS indication is provided on DN Routing signal which will glow only when shunt signal for ELS is taken off for admission of train on ELS. Departure of train for ELS is also controlled by shunt signal No. 29.

4.1.1. **CRANK HANDLES:**

When any point fails to operate normally by the route setting operation or through the concerned point button through panel, it is inevitable to operate the points with crank handle. Station Master on duty shall personally ensure clamping and pad locking of all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The CH push button Nos. 13,23,31,39 and group button (White with Black Dot) are provided at the top of the panel board. Each button has three indications, viz. WHITE, GREEN AND RED. The Green indication suggests that the crank handle key is in its interlocked position of the panel. This is called crank handle key IN indication. The WHITE indication suggests that the crank handle key is in out position. This is called Crank handle Key 'OUT' indication'. The Red indication suggests that the crank handles key is locked and not free for its extraction from RKT. This is called 'Crank Handle Key Locked Indication'. The White indication when glows suggest that the 'CRANK HANDLE' key is extracted from RKT. This is called 'KEY OUT' indication. The key out White indication of the crank handle locks all reception and departure signals in their normal position. The crank handles are attached to the key in RKT at the Station Master's room and in the end locations and can be released from either of the RKT. The Station Master has to press CH1/CH2/CH3/CH4 buttons and Trans button. This will enable Station Master to extract key from RKT, which in turn can be transmitted from the adjacent RKT to end location for release from RKT and crank handle there. After completion of point work, the crank handle to be inserted in the end location RKT and transmitted to station. The Station Master on getting information will press economizer button and will extract key from RKT and insert in original RKT and turn to lock in and key IN indication will appear on panel on pressing release button in the group. The TPM after extracting the crank handle (attached to the RKT key) will operate the required points to the desired position. After the work is over, the TPM shall transmit the key back to Station Master on duty through RKT.

The Station Master on duty shall take back the key and put it in original RKT and turn to key 'IN' position. On pressing the release button on the group along with CH1/CH2/CH3/CH4 steady GREEN light glows indicating key 'IN'. The cases of failure of motor operated points should be promptly reported to the concerned Signal Maintainer/Signal Inspector for immediate rectification. Station Master as per Operating Manual 20.06 (d) shall maintain an Emergency Crank Handle Register. The procedure for use of crank handle for motor operated points shall be followed in terms of Operating Manual 20.06.

After any non-signal movement has to take place over a point/points operated by an electric point machine, whether in the facing or trailing direction, the SM on duty shall operate point/points to "NORMAL" or "REVERSE" settings for the

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purpose of testing the points and after ensuring correct indications of “NORMAL” or “REVERSE” setting of points, further movement shall be permitted over the points.

<u>CRANK HANDLE</u>	<u>PUSH BUTTON</u>	<u>CONTROL POINTS</u>
CH-1	13	7.6.24
CH-2	23	8.9.
CH-3	31	19.20.21.22.33.34.
CH-4	39	32.

4.1.2. **TAKING OFF CALLING-ON SIGNAL:**

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

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home/Routing signal, occupying the track circuit in rear of the signal. When a train occupies the track circuit a RED light strip will appear on the panel. The particular route on which train is intended to be received shall be set by operating the point push button and group button individually or by operating signal and route button or by crank handling in the event of failure of operation of points through panel. After the route is set, the Calling-on signal switch 'C1 /C18, 'C10' (Red with White dot)(as the case may be), shall be pressed simultaneously along with the concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the Calling-on signal clears i.e. a Yellow light glows at the concerned Calling-on signal on the panel. Every such operation has to be recorded by the on duty SM along with the reasons to do so. Every such operation is registered in respective calling-on counters.

NOTE:

No train can pass through while receiving on Calling-on signal.

4.1.3. **SHUNT SIGNALS:**

Back shunt signals 35A/B/C/D/E is provided at SBP end of the yard for shunting purpose.

4.1.4. **EMERGENCY CROSS OVER:**

NIL

4.1.5. **L.C. GATE OPERATION:**

Details described in Appendix-'A'.

4.1.6. **EMERGENCY POINT OPERATION (BLACK WITH RED DOT):**

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit and SM's emergency point key is 'IN' shall press emergency point operation button along with relevant point button simultaneously. Then retaining point button pressed emergency point operation 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'. All such operations will be registered in the emergency point operation counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

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4.1.7. EMERGENCY ROUTE RELEASE COUNTER:

This counter is provided to register the number of operations made for emergency cancellation of route. The Station Master must record the last number registered on the counter while taking over/handing over duty.

4.1.8. EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):

The panel interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and the concerned signal button. After this first the emergency route release button (white with red dot) positioned in the top of panel to be pressed and subsequently the concerned signal button is to be pressed releasing the emergency route release button. A white flashing light will lit indicating that the timer is working. After 120 seconds, the white flashing light along with the white strip of light will disappear suggesting the route has been released.

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

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

4.1.9. TRACK CIRCUITS:

All the lines including point zones between UP and DN advanced starter signals are track circuited. Normally the panel is dark except for point and Block section indication. The position of the running line is indicated in the illuminated diagram at the SM office. It shows RED when the line occupied and white when the route is set and signal cleared. The position of points at either end also indicated in the illuminated diagram. Whenever a signal is cleared the route set indication YELLOW appears for the particular route set. As the train occupies the track circuit the yellow indication disappears and RED indication appears.

4.1.10. AXLE COUNTER:

- i) Both Block Sections are monitored by Analog Axle counter along with associated entrance and exit trolley suppression tracks are provided at both end of the station just ahead of advanced starters. A pair of Analog axle counter is provided between KPJG-ANGL, one beyond DN advanced starter of ANGL and another just before UP advanced starter of KPJG station for counting the axle 'IN' and counting the axle is 'OUT' to indicate whether the block section is clear of trains as well as to verify the last vehicle of the incoming train. Similarly a pair of axle counter is provided just beyond UP advanced starter signal of ANGL and another just before DN Advanced Starter of TLHD for counting the axles IN and OUT to indicate whether the Block section is clear of trains as well as to verify the last vehicle of the in coming train.

The position of block section i.e. clear/occupied is reflected in the illuminated panel diagram provided in the station master's office which shows GREEN when the block section is clear and RED when the block section is blocked.

When ever a train enters in to the block section, the section clear indication GREEN disappears and occupied indication appears. If after complete arrival of the train the RED indication does not change to GREEN it should be assumed as Block instrument failure and necessary action as per GR 14.13.to be followed. The axle counter is interlocked with the Token Less Block Instrument.

All points are power operated through motors and all signals are power operated. RKT with crank handles are provided at both end location as well as SM's office for the operation of points in case of failure of motors.

The level crossing gate closed indication is also available in the SM's office.

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

The Relay room should be kept locked with two separate locks. The arrangement should be such that one key is kept with the on duty SM & the other key with the Signal Maintainer. Whenever required the SM shall handover the key to the maintainer with proper acknowledgement in the basement/relay room key register. The maintainer on receipt of the key from the SM may use the same and the key in his custody to open the basement/relay room by inserting the keys one after another separately into the earmark locks. After completion of the work, the relay room is to be locked using both the keys separately and designated key should be handed over to the SM on duty.

The details of transaction is to be properly recorded in the basement/relay room key register maintained at the station and duly signed by the SM and maintainer respectively.

4.3 **POWER SUPPLY:**

(a) **POWER FAILURE:**

- (i) A change over switch is provided in the Station Master's office with the two power supplies viz., AT and Local for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the supply.
- (ii) Normally the switch will be kept towards in AT position.
- (iii) In case of failure of AT supply, the Local supply shall be utilized by operating the switch. If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any other mean and a message shall be given to the AEE and CTFO/PSI for prompt rectification.

IPS (Integrated Power Supply) arrangement has been provided at the station to take care of the signaling system as well as to avoid blanking of signals in case of power failure. An SM panel indicating the status of IPS is provided in the SM room having the following indicators.

- Start generator
- Emm. Start generator
- System shut down
- Call S&T staff.

In case of AT/GRIDCO Power failure the IPS takes care of the signaling system approximate for 6 to 8hrs. However, the SM should start the DG set where "Start generator" indications appear on the ASM panel with buzzer. This will be acknowledged by pressing the ACK P.B. provided on the SM panel, But the LED indicator disappears after starting the DG.

One Indication panel for monitoring of IPS voltage has been provided in SM Room. The Indication panel shall display the voltage of IPS as well as health of the IPS provided to operate signaling gears. Audio Visual alarm has been

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provided in the panel to guide on duty SM to take action in case of low voltage or no voltage or any defect in IPS is shown in the SM panel. Detail indications and alarm have been described below:

SM INDICATION PANEL FOR IPS:

An indication panel for IPS is provided at the Station Master room which gives Audio Visual indications depending on the condition of the IPS and IPS battery voltage. The different indications available in the panel are as mentioned below.

Call S&T	- Red indication
Signal system shut down	- Red indication
Emergency start DG	- Red indication
Start DG	- Red indication
Stop DG	- Green indication

To acknowledge the indication on panel two push buttons are provided. Besides this the panel also has digital display of IPS battery voltage.

Whenever alarm appears on the SM panel due to any fault in the IPS system or due to low battery voltage on duty shall acknowledge the alarm by pressing the push button provided on the panel. Pressing on the push button shall mute the buzzer but relevant indication will continue to show till the fault is rectified by S&T staff. After acknowledgement of the alarm on duty SM shall immediately inform S&T staff at station regarding the alarm.

STARTING DG AND MAINTENANCE OF DG LOG BOOK:

After getting the indication of "Start Generator" the SM should start the Generator which is provided with self starting arrangement. The DG sets provided in the DG room one marked as DG1 & DG2. At a time only one of the DG sets is to be started and the handle of the change over switch (provided in the DG room) is to be operated accordingly in order to extend the power supply to the IPS.

Oil level indicators are provided in both the diesel tanks of the DG sets. The SM should maintain the DG Log book in the following format.

Date	Diesel Received	DG No.	Time		Starting level	Balance diesel on hand in Ltr	Signature of SM
			Started	Stopped			

When the on hand diesel balance falls below 20 Ltrs. information should be given to Fault Control. In addition to this another GRIDCO power failure register is to be maintained in the following format.

Sl. No.	Date	Power Failure Time	Power Resumption Time	Signature of SM

5 **TELECOMMUNICATIONS:**

- The Station is connected to SBP-ANGL and ANGL-TLHR Control Circuit by a telephone.
- Telephone attached with TLBIs at either end of the Block Section.
- Railway Auto Telephone is provided at this station.
- Telephone communication is provided between Station Master on duty and both end Locations.
- Telephone communication is provided between Station Master on duty with L.C. Gates at Km. 154/3-4, 155/12-13, 157/2-3, 159/7-8 & 163/6-7.

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- f) VHF set is provided at this station.
- g) This Station is connected with TLHR-ANGL Traction Control Circuit.
- h) BSNL Phone is provided at the station.

NOTE:

- i). For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
- ii). VHF & Walkie-talkie sets should not be used for un-necessary discussion with Loco Pilot/Guards and any other staff.

6 SYSTEM OF TRAIN WORKING:

The movement of trains is controlled by section controller on duty whose orders shall be complied with provided they do not contravene any 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 DUTIES OF TRAIN WORKING STAFF IN EACH SHIFT:

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

		<u>In each shift</u>
SS (Supervisory)	1 (One)	-
SS (In-Charge)	1 (One)	In each day shift
SM/ASM	1 (One)	In each night shift
Traffic Pointsman	1 (One)	In each shift
Traffic Gateman	1 (One)	In each shift.

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 SS (Supervisor)'s office and in Gate lodge for traffic gate man (details duties are given in APPENDIX-'D').

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

The SM on duty is responsible to ascertain the clearance of the nominated line between Home signal and Advanced Starter Signal in each direction.

6.1.3. ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER:

All staff before taking up independent charge of their duties at this station shall make a written declaration in the Assurance Register that they have read the SWR thoroughly and understood the system of working in force at the station and must sign such declaration.

No Railway servant shall be entrusted with any duty involving the safety of the public unless the SS (Supervisor) is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS (Supervisor) is responsible to see that all the staff are well conversant with the Station Working Rules of the Station and their signature obtained in the Assurance Register after he is satisfied that they have thoroughly understood the working Rules of the Station. In case of Class-IV staff, their signature/thumb impression must be obtained after explaining full about their duties and responsibility.

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The SS (Supervisor) is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Group-'C' staff and other for Group -'D' staff & duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SS (Supervisor).

The declarations are to be renewed in the following cases:

- (i) Whenever there is any change in the Station Working Rules,
- (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days and over.

6.1.4 **USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:**
Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SS (In-charge), under lock and key by maintaining one register for this purpose.

6.2 **CONDITIONS FOR GRANTING LINE CLEAR:**

Before granting line clear to a train, the SM on duty shall ensure that :-

- i) The whole of the Last Preceding train has arrived complete inside the first facing point.
- ii) The relevant approach signals have been put back to "ON" position behind the said train.
- iii) The line is clear up to the edge of the L.C.Gate at Km. 155/12-13 for UP trains and up to the edge of the L.C. Gate at Km. 157/2-3 for DN trains.[Refer GR 8.03 (2) (a) (b) (c) (ii)]

NOTE:

- I. All Signal lights pertaining to the train are burning properly. If the light of the reception signal is not burning, line clear shall not be granted for train till such time it is ensured that the concerned Loco Pilot is notified of the fact in writing by the Station Master of the Station to which such line clear is to be granted.
- II. Before granting line clear to an UP train, the SM on duty shall ensure closure of the L.C.Gate at Km. 154/3-4 from the gateman on duty supported by a Private Number.

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

6.2.1.1 **SETTING OF POINTS AGAINST BLOCK LINE:**

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train, the points in rear at either end shall be set against the blocked line except when shunting or any other movement is required to be done on that line. [Refer SR 3.51.06(a)].

If all the lines at a station happen to be blocked, when line clear has been granted to a train, the point should be set for the line occupied by a stabled load or a Goods train in that order so that in case any mishap the chances of casualties are minimized.

In case all lines are occupied by passenger carrying trains points should be set for a loop line to negotiate the speed of the in coming train would be reduced which in turn would minimize the consequences casualties. While doing so points may be set for a loop occupied by a train if any whose engine is facing the direction of approach of the

incoming train rather than for a loop occupied by a train where a passenger coach will in case of collision receive the impact. [Ref: SR 3.51.06(b)]

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE:

Whenever trains are to be admitted on an obstructed line the Calling-on signal may be taken off. If Calling-on signal failed then the SM on duty shall authorize the on duty TPM with form T/509 indicating the reason for such admission the line number and the nature of obstruction on that line.

Before handing over the authority the SM on duty shall ensure the correct setting clamping and padlocking of both facing and trailing end of the concerned route vide SR 3.69.03.

A stop hand signal shall be exhibited by the SM on duty at a distance of not less 45mts. from the point of obstruction to indicate to the Loco Pilot, that the train shall be brought to a stand.

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

NIL

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:

NIL

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

NIL

6.2.1.6.a. For receiving UP & DN trains on common loop, the clearance of the overrun line should be ensured.

b. All running lines are track circuited. In case of failure of track circuits, the clearance of the nominated line has to be ensured physically before piloting 'IN' a train.

6.3 CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:

Reception of train is governed by GR 3.36, 3.38, 3.40, 3.47, 4.17 & SR 3.42.02 a (iv), 3.42.03, 3.36.02, 3.36.04, 3.47.01, 3.47.02 & other relevant provisions of GR and SR, BWM and SWR of the station.

6.3.1. RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO "ON":

If a signal once taken 'OFF' for reception/dispatch of a train, has to be, in an emergency put back to 'ON' In case of reception signal, the route over which the train would pass shall not be altered until after the train has come to stand unless the route has to be altered to avert an accident. In case of departure signal, before changing the points or allowing any other movements the "Authority to Proceed" if any, handed over to the Loco Pilot must be withdrawn and the Loco Pilot of the train concerned shall be advised of the change in writing and his acknowledgement will be obtained in a memo. [Refer SR 3.36.02 (a) & (b)(i)]

6.4. SIMULTANEOUS RECEPTION/DESPATCH, CROSSING AND PRECEDECE OF TRAINS:

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

1.	Reception of an UP train on line No. 1.	Reception of a DN train on Line No. 3 or 4 or 5 OR dispatch of an UP train from route 2 or 3 or 4 or 5.
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2.	Reception of an UP train on line No. 3.	Dispatch of an UP train from the Line No. 1 or 2 OR Reception of a DN train on line No. 1.
3.	Reception of an UP train on line No. 4.	Dispatch of an UP train from the Line No. 1 or 2 OR Reception of a DN train on line No. 1.
4.	Reception of an UP train on line No. 5.	Dispatch of an UP train from the Line No. 1 or 2 OR Reception of a DN train on line No. 1.
5.	Reception of a DN train on line No. 1.	Reception of an UP train on Line No. 3 or 4 or 5 OR dispatch of a DN train from the Line No. 2 or 3 or 4 or 5.
6.	Reception of a DN train on line No. 3.	Dispatch of a DN train from the Line No. 1 or 2 OR reception of an UP train on Line No. 1.
7.	Reception of a DN train on line No. 4.	Dispatch of a DN train from the Line No. 1 or 2 OR reception of an UP train on Line No. 1.
8.	Reception of a DN train on line No. 5.	Dispatch of a DN train from the Line No. 1 or 2 OR reception of an UP train on Line No. 1.

ADEQUATE DISTANCE (SIGNAL OVERLAP):

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

CLEARANCE OF ADEQUATE DISTANCE (SIGNAL OVERLAP)

FOR UP TRAINS		
Line Number	From	To
1.	Starter signal No. 16	The end of the overrun line OR UP Advanced Starter Signal No. 14
2.	Last trailing Point No. 6	UP Advanced Starter Signal No. 14.
3.	Starter signal No. 15	The DS point No. 32, keeping it in open condition OR the UP Advanced Starter Signal No. 14.
4.	Starter signal No. 25	The DS point No. 32, keeping it in open condition OR the UP Advanced Starter Signal No. 14.
5.	Starter signal No. 26	The DS point No. 32, keeping it in open condition OR the UP Advanced Starter Signal No. 14.

FOR DOWN TRAINS		
Line Number	From	To
1.	Starter signal No. 2	The end of the overrun line OR DN Advanced Starter Signal No. 5.
2.	Last trailing point No. 8A	DN Advanced Starter Signal No. 5.
3.	Starter signal No. 3	The far end of the overrun line OR DN Advanced Starter Signal No. 5.
4.	Starter signal No. 27	The far end of the overrun line OR DN Advanced Starter Signal No. 5.
5.	Starter signal No. 28	The far end of the overrun line OR DN Advanced Starter Signal No. 5.

6.5 COMPLETE ARRIVAL OF TRAINS:

The entire block section between ANGL-TLHD and ANGL-KPJG are monitored by axle counter system and the position of the block section whether occupied or clear is indicated in panel board at SM's office. As soon as train enters in to that block

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section, the RED indication appears on control panel. After whole train clears the block section GREEN indication appears on the control 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 control panel.

If a train passes through the station without confirming the last vehicle indicator, the Station Master on duty shall advise the station in advance to stop the train for last vehicle verification & he need not withhold closing the 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 at either end of the Block Section, the concerned traffic gateman shall ensure that the train has arrived complete and shall give one Private Number to the SM on duty vide SR 4.17.01 (e) (iv). 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. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the SM on duty shall take action in terms of SR 15.25.03 (b) (vi).

6.6 **DESPATCH OF TRAINS:**

To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy himself by observing the visual indication on the panel board. He shall suspend all non-isolated shunting and the Station Master will ensure that the Level crossing Gate is closed against road traffic and then shall take "OFF" the concerned route starter and Advanced Starter Signal. The 'OFF' aspect of the route starter and Advanced Starter is the authority to proceed into the block section. [Refer GR 3.38, 3.42, SR 3.36.04 (b), 3.42.04 and BWM 2.07.5(a)]

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

NOTE:

Before dispatching a DN train the SM on duty shall ensure closure of L.C. Gate at Km.154/3-4 supported by a Private Number from the Gateman on duty.

6.7 **TRAINS RUNNING THROUGH:**

The procedure detailed in Para 6.4, 6.5 of this SWR shall be observed. The Station Master is responsible to observe/watch the condition of the vehicles on a passing train and shall wave green hand signal horizontally until any thing wrong is noticed on train. For this purpose the Station Master on duty shall stand in such a position that he sees a clear view of the passing train and that his hand signals can clearly be seen by the Loco Pilot and Guard of the train. [Refer GR 3.42, 4.17, 4.42 & SR 4.42.2]

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The SM on duty shall depute his pointsman with his hand signal to the other side of the passing train to observe the passing train. The TPM on duty at the other side shall wave Green hand signal horizontally until any thing wrong is noticed in the train.

If the TPM on duty deputed at the other side notices anything is wrong with the passing train then he shall at once change his Green hand signal to the RED and report 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. [Refer GR 4.17 & SR 4.17.02]

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

i. **TRACK CIRCUIT:**

In the event of failure of track circuit in the yard trains shall be admitted in to yard after piloting 'IN' before piloting a train in to the yard the clearance of the track must be ensured by physical verification.

ii. **AXLE COUNTERS:**

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

iii. **BLOCK INSTRUMENT:**

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

iv. **RECEPTION OF A TRAIN ON BLOCKED LINE:**

Whenever trains are to be admitted on an obstructed line the Calling-on signal may be taken off. If calling-on signal failed then the SM on duty shall authorize the on duty TPM with form T/509 indicating the reason for such admission the line number and the nature of obstruction on that line.

Before handing over the authority the SM on duty shall ensure the correct setting clamping and padlocking of both facing and trailing end of the concerned route vide SR 3.69.03. A stop hand signal shall be exhibited by the SM on duty at a distance of not less 45mts. From the point of obstruction to indicate to the Loco Pilot as to whose the train shall be brought to a stand.

vi. **DEFECTIVE SIGNALS:**

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for which it applies and if it is found impossible to take OFF a signal, the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.46, 3.52 to 3.56, 3.71, 3.80 and SR 3.68.01 (c)].

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

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vii. **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**

However, before declaring a signal is defective, the setting of the point on the route to which it applies shall be inspected by the Station Master irrespective of the position of the switches point laid down in GR with relevant SRs shall be followed. [Refer GR 3.68, 3.70 & SR 3.77.01(b)].

Initiate action in accordance with the procedure prescribed in GR and relevant Subsidiary Rules there to. [Refer GR 3.49(4) and 3.68, 3.77]

viii. **DEFFECTIVE INTERLOCKING:**

When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping and padlocking of points for reception/dispatch of a train. [Refer SR 3.69.03 (c)]

ix. **DEFFECTIVE/DAMAGED POINTS:**

When any point fails to operate normally by the route setting operation or through the concerned point button through panel, it is inevitable to operate the points with crank handle. Station Master on duty shall personally ensure clamping and pad locking of all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The CH push button Nos 13,23,31,39 and group button (White with Black Dot) are provided at the top of the panel board. Each button has three indications, viz. WHITE, GREEN AND RED. The Green indication suggests that the crank handle key is in its interlocked position of the panel. This is called crank handle key IN indication. The WHITE indication suggests that the crank handle key is in out position. This is called Crank handle Key 'OUT' indication'. The Red indication suggests that the crank handles key is locked and not free for its extraction from RKT. This is called 'Crank Handle Key Locked Indication'. The White indication when glows suggest that the 'CRANK HANDLE' key is extracted from RKT. This is called 'KEY OUT' indication. The key out White indication of the crank handle locks all reception and departure signals in their normal position. The crank handles are attached to the key in RKT at the Station Master's room and in the end locations and can be released from either of the RKT. The Station Master has to press CH1/CH2/CH3/CH4 buttons and Trans button. This will enable Station Master to extract key from RKT, which in turn can be transmitted from the adjacent RKT to end location for release from RKT and crank handle there. After completion of point work, the crank handle to be inserted in the end location RKT and transmitted to station. The Station Master on getting information will press economizer button and will extract key from RKT and insert in original RKT and turn to lock in and key IN indication will appear on panel on pressing release button in the group. The TPM after extracting the crank handle (attached to the RKT key) will operate the required points to the desired position. After the work is over, the TPM shall transmit the key back to Station Master on duty through RKT.

The Station Master on duty shall take back the key and put it in original RKT and turn to key 'IN' position. On pressing the release button on the group along with CH1/CH2/CH3/CH4 steady GREEN light glows indicating key 'IN'. The cases of failure of motor operated points should be promptly reported to the concerned Signal Maintainer/Signal Inspector for immediate rectification. Station Master as per Operating Manual 20.06 (d) shall maintain an Emergency Crank Handle Register. The procedure for use of crank handle for motor operated points shall be followed in terms of Operating Manual 20.06.

After any non-signaled movement has taken place over a point/points operated by an electric point machine, whether in the facing or trailing direction, the SM on

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duty shall operate point/points to “NORMAL” or “REVERSE” settings for the purpose of testing the points and after ensuring correct indications of “NORMAL” or “REVERSE” setting of points, further movement shall be permitted over the points.

<u>CRANK HANDLE</u>	<u>PUSH BUTTON</u>	<u>CONTROL POINTS</u>
CH-1	13	7.6.24
CH-2	23	8.9.
CH-3	31	19.20.21.22.33.34.
CH-4	39	32.

6.9 **PROVISIONS FOR WORKING OF TROLLIES/ MOTOR TROLLIES/MATERIALS LORRIES ETC**:

Motor trolleys are run in accordance with rules laid down in SR 15.25.07. Material Lorries will work in accordance with SR 15.27.05 to 15.27.08.

7.0. **BLOCKING OF THE LINES:**

Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points at either end should immediately be set against the blocked line except during shunting movement and also reminders collars shall be placed on the concerned point push button controlling the blocked line. 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]

SECURING OF VEHICLES:

As far as practicable, loose vehicles 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 SM on duty shall be responsible to secure the vehicle/stable loads to prevent rolling down of vehicles and arrest obstruction and fouling. [Refer GR 5.23 & SR 5.23.01]

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, the reminder collars shall be used by the SM on duty on the push button concerned. [Refer SR 3.36.03 (b)]

ALTERATION OF A POINTS TO A CLEAR LINE WHENEVER A RUNNING LINE IS BLOCKED:

- a) When a running line is blocked by stable load, wagon, vehicles or by a train, which is to cross or to give precedence to another train or immediately after the arrival of a train at the station etc, the points at either end should immediately be set against the blocked line except when any shunting or any other movement is required to be done immediately in that direction on that line.
- b) If all the lines at a station happen to be blocked, when “Line Clear” has been granted to a train, the points should be set for the line occupied by a stable load or a goods train in that order, so that in case of any mishap, the chances of causalities are minimized. In case all the lines are occupied by passenger carrying trains, points should be set for a loop line to negotiate of which the speed of the incoming train would be reduced, which in turn would minimize the consequences/causalities. While doing so, points may be set for a loop occupied by a train, if any, whose engine is

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facing the direction of approach of the incoming train rather than for a loop occupied by a train whose passenger coach will incase, of collision, receive the impact.

8.0 **SHUNTING:**

Shunting will be carried out at the station in accordance with General Rules and relevant Subsidiary Rules and Block Working Manual. [Refer GR 5.13, 5.14, 5.16, 5.19, 5.20 to 5.23, 8.09, 8.10, 8.12, 8.13, 8.14 & 8.15]

The Guard/SM/Traffic Pointsman on duty is authorized to supervise shunting operation. Normally back shunt signals and caution aspect of starter signals shall be used for shunting operations. The official supervising shunting shall ensure the correct setting, clamping and padlocking of points incase of non-signaling movements.

The SM on duty and the official supervising shunting shall co-operate with each other regarding shunting operations. Neither reception signals nor departure signals shall be taken 'OFF' unless the shunting is isolated and the path of incoming/outgoing train is free from obstructions. The over-run line may be used as shunting neck.

8.1 **SHUNTING IN THE FACE OF AN APPROACHING TRAIN:**

Shunting in the face of an approaching train is prohibited.

8.2. A. **SHUNTING OUTSIDE HOME SIGNAL:**

The concerned section shall be blocked back for shunting outside Home Signal provided the section is clear.

B. **SHUNTING OUTSIDE STATION SECTION:**

Shunting outside Advanced Starter Signal and up to the First Stop Signal of the opposite direction is permitted vide Para 5.36 of Block Working Manual provided the Block Section is clear and Home Signal is kept at 'ON' position.

8.3 **PROHIBITION OF SHUNTING SPECIAL FEATURE IF ANY:**

- a). Hand shunting is not permitted beyond the outermost point at TLHR end.
- b). While performing shunting engine shall be leading towards falling gradient at TLHR end.

8.4. **SHUNTING IN THE SIDING:** **HOT AXLE CUM ENGG SIDING:**

While performing shunting in the Hot Axle cum Engg. siding, it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted as long the lines occupied in shunting. The relevant provision of GR 5.14 and SRs thereto shall be meticulously followed for shunting operations in Hot Axle cum Engg. siding.

The Hot Axle cum Engg. Siding at TLHR end of the yard with one side entry is taking off from 1st Loop Line [Line No.1]. The entrance point and corresponding derailing switch are coupled and operated by an arc lever at site. The entrance points are fitted with hand plunger locks. These hand plunger locks are unlocked the siding keys released by pressing the siding control button No.30 provided on panel at SM's office. Reception signals (i.e. 18A. C18A. in UP direction and 10A. C10A. in DN direction, shunt signal Nos. SH10A and SH35A and starter signal No. 2 & 16 are electrically interlocked in such a way that these signals cannot be taken 'OFF' if the Hot Axle cum Engg. Siding key is taken 'OUT' from the RKT provided at Hot Axle cum Engg. siding location at site.

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9.0(a) **ABNORMAL CONDITION:**(i) **PARTIAL FAILURE:**

In the event of suspension of Lock and Block Instrument and during partial failure of other available means of communication, the procedures detailed below shall be followed for working of trains in different situations.

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

The authority to proceed for the Loco Pilot of a train is a Paper Line Clear Ticket to pass the last stop signal at 'ON' position. [Refer SR 6.02.06 & Chapter –V of BWM]

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

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

After sending a train on Block ticket, a following train shall not be dispatched in the same direction unless:

- a) The previous block ticket is collected & cancelled, or
 - b) Necessary endorsement is given on the previous block ticket with the advice to wait at the site for a next train to follow ,or
 - c) The previous train has met with an accident or has been disabled, or
 - d) The block ticket has been collected from the Loco Pilot of the previous train by the official in-charge at the site & kept in the personal custody & shall be kept until the arrival of the next train & such assurance is given over the telephone installed at the site quoting the serial number of the Block Ticket so collected.
- (a) SM will suspend the absolute block system of working and both SM's concerned should arrange for running of trains on the authority of Block Ticket.
 - (b) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which shall include.
 - i). Caution order: Existing speed restriction shall be indicated in the Caution Order portion. The speed restriction to 15 Kmph during clear visibility and 10 Kmph when visibility is obstructed shall be clearly indicated.
 - ii). An authority to pass the stop signals at 'ON' position.
 - (c) Before resumption of normal working a message between the SM's of the concerned station shall be exchanged with private number. [Refer SR 6.02.05(d)(vi)].

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The block ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstructions from the Loco Pilot/Guard of the train and cancels it.

FAILURE OF AXLE COUNTER (BPAC):

- (a) If any Block Proving Axle Counter section fails, the Last Stop Signal at the rear station cannot be taken 'OFF' and Block Instrument at Advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last vehicle Checking Device is to be resorted to either Section.
- (b) No train should be allowed on signal to leave a station in any particular direction unless:-
Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF.
- (c) A resetting arrangement for the resumption of the track circuit by means of Axle counter under failure condition of the Block section is provided at ANGL Station, which should only be resorted after the train that was lastly sent, arrives fully at the receiving station under exchange of Private Number.
- (d) Reset arrangement is provided in the Reset panel in SM's office of ANGL for TLHD-ANGL section. The UP & DN resetting key along with reset push button for all sections are provided on the resetting Panel for resetting the axle counter in case of its failure. Every such operation of the resetting button and shall be recorded giving details of date of use, train number, time, number registered on the counter and reasons for resetting and initial each such entry.
- (e). Procedure for emergency operation of points by crank Handle: The detailed procedure for emergency operation of points by crank Handle of Motor operated points is given in Main body.
- (f). Procedure for emergency operation of points with point zone axle counter / Track circuit failure & emergency route release: (Illustrated in App-B)
- (g) Certification of clearance of track before calling on signal, operation initiated: Before taking 'Off' calling on signal during failure of track circuits / Axle counter, the route & the clearance of the track over which train would pass to be verified SM on duty.
- (h) Reporting failure of points, Track circuit / Axle counter and interlocking:- Whenever there is a failure of points, track circuit / Axle counter or any other interlocking gear at the station, the failure should be reported by SM on duty to the concerned signaling maintenance staff on duty responsible for attending to the and only after receipt of the written memo from signaling maintainer for rectification of the fault, SM should restore the normal working.

The entries in failure register to be done with message to SCR.

9.1 TOTAL FAILURE OF COMMUNICATION:

In the event of total failure of Communications either between ANGUL–Talcher Jn. and ANGUL-KPJG Station as the case may be, trains shall be worked between these Sections in terms of SR 6.02.04, which is summarized in brief as follows.

- i. The train which is to be dispatched to the effected section will be stopped and the Loco Pilot and Guard of the Train shall be informed about the situation. To open communication of the affected Block Section, SM on duty may send any one of the modes of transport.

- | | |
|--------------------------------|---|
| a) Light engine | d) Tower Wagon with Guard/SM |
| b) Train Engine | e) Trolley with Guard/SM. |
| c) Motor Trolley with Guard/SM | f) Diesel Car/Rail Motor Car/Empty DMU/Rake detraining passengers |

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- ii. The train shall be brought to a stand and LOCO PILOT and GUARD are to be apprised of the situation & then engine to be detached.
- iii. An authority for opening of communication during to the interruption of communication on single line section shall be given the Loco Pilot which shall include.
 - a. An authority to proceed without line clear on prescribed form.
 - b. A caution order restricting the speed of the train to 15 Kmph by day or when view ahead is clear and 10 Kmph during Night or when the view ahead is obstructed in addition to other speed restriction in force.
 - c. An authority to pass the last stop Signal at "ON" Position.
 - d. A line clear enquiry message asking line clear for the waiting train.
 - e. A conditional Line Clear Message for the light engine to return with or without a train attached supported by private number.

On arrival of the engine at the next station the conditional line clear message and enquiry message shall be collected by the SM on duty who shall prepare a conditional line clear ticket for engine to return either light or a train attached to it, and conditional line clear reply message for the enquiry message giving the line clear for the train waiting at other and shall be handed over to the Loco Pilot of Light engine on return trip the Loco Pilot will come on booked speed subject to any other speed restriction in force.

If there be an even flow of trains in both directions, enquiry and conditional line clear message for each succeeding train may be sent through the guard of preceding train.

If the Station master at one end has more than one train to dispatch in the same direction he may ask line clear not only for one train but also for following trains. It must be stated that these later trains will be dispatched after the first train at an interval of 30 minutes. When dispatching, the second and subsequent trains particulars of last preceding train along with its departure time will be endorsed on the line Clear ticket and the train which will follow and a caution order restricting the speed to 25 Kmph over straight when view ahead in clear and 10 Kmph when view ahead is obstructed is to be issued while adopting this produce the guard and the Loco Pilot should be instructed to keep a sharp look out and be prepared to stop short of any obstruction. Trains must continue to work on this system until any one of the means of communication is restored. As soon as any one of the means of communication has been restored, the conditional line clear working of trains shall be cancelled when there is no train in the affected block section and message shall be exchanged supported by Private Number keeping section controller in formed.

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

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

- a) SM will suspend the absolute block system of working and both SM's concerned should arrange for running of trains on the authority of Block Ticket.
- b) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which includes
 - (i) **CAUTION ORDER:**

The speed restriction to 15Kmph during clear visibility and 10Kmph when visibility is obstructed shall be clearly indicated. The existing speed restrictions shall be indicated.

- (ii) Paper Line Clear Ticket to pass the last stop signal at 'ON' position.
- c) Before resumption of normal working a message between the SM's of the concerned section shall be exchanged with private number. [Refer SR 6.02.05(d)(vi)].
The block ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstructions from the Loco Pilot/Guard of the train and cancels it.

10. **VISIBILITY TEST OBJECT:**

The light of DN starter signal No. 2 and UP starter signal No.16 of 1st loop line during day and night are earmarked to serve as Visibility Test Object vide GR 3.61(2)(b)(iii).

11. **ESSENTIAL EQUIPMENT AT THE STATION:**

(Details are given in Appendix-'E')

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

In case of thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco Pilot of an approaching train the locality of a signal, the SM on duty at station shall arrange for signaling in terms of General Rules 3.61 and Subsidiary Rules thereto. The assurance of the staff shall be obtained in the month of OCTOBER every year in the Fog Signal Register vide SR 3.61 as a token of their acknowledgement in fog signaling Rules. Fog signalmen shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gang man and must not be substitutes or casual labour but regular employees of the railway.

STATION DETONATOR REGISTER (OPT/124):

A Register regarding detonator is maintained at the station.

a) **INSTRUCTIONS:**

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

APPENDICES

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

APPENDIX 'A' TO STATION WORKING RULES OF ANGUL STATION

1.0 WORKING OF MID SECTION MANNED 'C' CLASS NON-INTERLOCKED LEVEL CROSSING GATE No. ST-100 AT KM. 154/3-4 IN BETWEEN ANGUL-KEREJANGA STATIONS.

1.1 A DESCRIPTION OF LEVEL CROSSING GATE:

1	No. of Level Crossing Gate	:	ST-100
2	Engineering or Traffic gate	:	Engineering
3	Under control of station master or permanent way inspector.	:	SSE/P.Way/TLHR
4	Location at Km.	:	At Km.154/3-4
5	At station	:	---
6	In between station	:	ANGL-KPJG
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Single line
9	Normal position	:	Closed
10	Interlocked/ Non-Interlocked	:	Non-Interlocked
11	Means of Interlocking	:	---
12	Provision of gate single at Km.	:	---
13	Signaling arrangement	:	---
14	Means of communication Telephone.	:	Telephone with SS/ANGL
15	Width of the level crossing gate	:	5.5m
16	Type of road	:	Others
17	Name of road	:	Kunanda
18	Metalled /Non-Metalled	:	Non-metalled
19	Approach road	:	Metalled
20	Width of the road	:	6.0m
21	Angle of road crossing (in case of the SKEW gates)	:	---
22	Road gradients (if any)	:	[a] North East Side. 1:30 [b] South West Side. 1:30
23	Road alignment (straight/Curve)	:	[a] North East Side: Straight [b] South West Side: Straight
24	Provision of height gauges	:	Not provided
25	Type of barriers	:	Lifting barriers
26	Length of check rails	:	7.50m
27	Road surface in between level crossing gates.	:	Morrum
28	Length of rumble strip/ speed breakers.	:	5.50m
29	Road signs	:	Yes
30	Speed breakers indication board	:	Provided
31	TVU	:	38560, on October 2006
32	Census next due on	:	October 2009
33	Demarcation for placement of detonators.	:	Yes
34	No. of gateman working	:	02(two)
35	Nearest Railway Medical Assistance	:	TLHR
36	Nearest Private Medical Assistance available (if any)	:	ANGL
37	List of equipment available (Yes/No)	:	Yes

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1.1 B. EQUIPEMENTS TO BE AVAILABLE AT THE GATE:

1.	Battery operated LED based flashing lamps	3
2.	Hand Signal Flag Green	1 mounted on stick
3.	Hand Signal Flag Red	3 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
6.	Spare Chains with Padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade/ Fowrah	1
12.	Rammer	1
13.	Pick Axe	1
14.	Tin Case for Flags	1
15.	Cane for oil	1
16.	Water pot/Bucket	1
17.	Canister for Muster roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small chain with padlock	2

1.2. RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipments, following records shall also be kept at the Gate Lodge.

- I. Gate Working Instructions in Hindi/English.
- II. Gate Working, Instructions in local vernacular language.
- III. Gateman Rule Book in local vernacular language.
- IV. List for tools and books.
- V. Duty Roster.
- VI. Certificate for working as gateman.
- VII. Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- VIII. Accident Register.
- IX. Record of last census of road traffic at Level Crossing gate.
- X. Public Complaint Book.
- XI. Inspection Book.

1.3 MODE OF OPERATION**NORMAL WORKING OF THE LEVEL CROSSING GATE (NON-INTERLOCKED)**

The level crossing gate is normally kept closed against road traffic. If the gate is required to be opened to pass the road traffic the gateman shall exchange private number with the SM and confirm that the train has passed completely from his gate. Thereafter the SM may allow the gateman to open the gate. In such a situation the SM before dispatching or giving line clear for any other train in the block section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the gateman is taken through exchange of Private Number.

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1.4 DUTIES OF GATEMAN:**(1) ALERTNESS:**

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

(2) POSITION DURING PASSAGE OF TRAINS:

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

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

(3) ROUTINE DUTIES OF GATEMAN:

- (i) Gateman shall ensure that 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, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vaccum 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 Loco pilot on walkie-talkie or in any other way.
- (vii) If lifting barriers / 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 SM, Gangmate 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 and 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 Loco pilot to report the defect at the next station.
- (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled 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.

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(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 UNUSUAL OCCURRENCE ON TRAIN:**

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

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

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

(iii) If Loco pilot /guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

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

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

(vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

(I) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.

(II) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.

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

(a) The gateman shall protect the line as under:-

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

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

iii). Gatemen shall then proceed to protect the gate along with detonators, battery operated LED based flashing lamps and red flag by day and red hand signal lamp by night.

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

v). Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (d) 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 like steps to remove the obstruction and warn the Loco pilot of the approaching train.

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- vii). In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii). Thereafter, he shall light battery operated LED based flashing lamp to warn the Loco pilot and stop the approaching train by waving this red flag by day red hand signal lamp by night repeatedly.

(b) **OTHER ACTION TO BE TAKEN BY GATEMAN:**

- (i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Paras (a) and (b) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- (iii) He shall note down the particulars of the road vehicle, vehicle number, Name of the Driver, owner and relay these details to use nearest SM or Permanent Way Inspection regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

1.5 **EXCHANGE OF PRIVATE NUMBER:**

- (i) Gateman must seek permission from station master for opening of the gate.
- (ii) If the gate is required to be opened to pass the road traffic, the gateman shall exchange private number with the SM, and confirmed that the train has passed completely from his gate, there after the SM may allow the gate man to open the gate. In such a situation SM before dispatching or giving line clear for any other train in the Block Section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the gate man is taken through exchange of private number.
- (iii) Suitable entries shall be made by the station master in the TSR and Private no book in the red ink.
- (iv) After passage of road traffic, the gateman shall close the gate and confirm this to Station Master under exchange of private number.
- (v) Before any train is allowed to enter the block section again, the station master must ensure that private number from gateman has been received in token of his having closed the gate.
- (vi) Gate once closed for the road traffic must on no account be opened unless this is authorized by the station master, under exchange of private number.

1.6 **FAILURE OF TELEPHONIC COMMUNICATION**

When telephonic communication fails or it does not get any response from gateman despite 2 or 3 attempts, the following procedure should be adopted:

- i) Station master at dispatching end shall issue caution order to the Loco pilot of the departing train.
- ii) The caution order shall advice the Loco pilot to whistle continuously and approach the gate cautiously.
- iii) The Loco pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gate man. If hand signal is not seen, the Loco pilot should prepared to stop short of the gate and depute his assistant Loco pilot to see the condition of the gate. If gate is closed, the assistant Loco pilot will give all right signal and if the gate is not closed the assistant Loco pilot must close the gate and then give all right signal. In the absence of the assistant Loco pilot, the Loco pilot may take the assistance of assistant guard/guard.
- iv) In case of an approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- v) The station master at the dispatching end shall then issue a caution order to the Loco pilot before dispatching a train in the block section from his end.

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- vi) The station master shall advise the gateman through Track Man/patrol man or the Loco pilot of the first train that the telephone has become defective.
- vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

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

1.8 **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 gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions 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, battery operated LED based flashing lamp, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate vide Para 1.4 (5) above.
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, Name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been 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 obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco pilot of all trains to proceed cautiously, and pass the reception/departure signal at "ON" position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.

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- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

1.9 **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 1.8 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

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2.0 WORKING OF MANNED 'C' CLASS INTERLOCKED LEVEL CROSSING GATE No. ST-102 AT KM. 155/12-13) TOWARDS KEREJANGA END OF ANGUL YARD.

2.1A DESCRIPTION OF LEVEL CROSSING GATE:

1	No. of Level Crossing Gate	:	ST-102
2	Engineering or Traffic gate	:	Traffic
3	Under control of station master or permanent way inspector.	:	SM/ANGL
4	Location at Km.	:	155.420(155/12-13)
5	At station	:	ANGUL
6	In between station	:	---
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Single line
9	Normal position	:	Open
10	Interlocked/ Non-Interlocked	:	Interlocked
11	Means of Interlocking	:	EKT
12	Provision of gate single at Km.	:	---
13	Signaling arrangement	:	Station Stop Signal
14	Means of communication Telephone.	:	Telephone with SS/ANGL
15	Width of the level crossing gate	:	5.00m
16	Type of road	:	Others
17	Name of road	:	Angul station Road.
18	Metalled /Non-Metalled	:	Non-metalled
19	Approach road	:	Metalled
20	Width of the road	:	5.00m
21	Angle of road crossing (in case of the SKEW gates)	:	---
22	Road gradients (if any)	:	[a] North East Side. 1:50 [b] South West Side. 1:50
23	Road alignment (straight/Curve)	:	[a] North East Side: Straight [b] South West Side: Straight
24	Provision of height gauges	:	Yes
25	Type of barriers	:	Lifting
26	Length of check rails	:	7.50m
27	Road surface in between level crossing gates.	:	CC Block
28	Length of rumble strip/ speed breakers.	:	5.00m
29	Road signs	:	Available
30	Speed breakers indication board	:	Available
31	TVU	:	1720 on October 2006
32	Census next due on	:	October 2009
33	Demarcation for placement of detonators.	:	Available
34	No. of gateman working	:	Three
35	Nearest Railway Medical Assistance	:	Talcher
36	Nearest Private Medical Assistance available (if any)	:	Angul.
37	List of equipment available (Yes/No)	:	Yes

2.1.B EQUIPEMENTS TO BE AVAILABLE AT THE GATE:

1.	Battery operated LED based flashing lamps	3
2.	Hand Signal Flag Green	1 mounted on stick
3.	Hand Signal Flag Red	3 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
6.	Spare Chains with Padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade/Fowrah	1
12.	Pick Axe	1
13.	Tin Case for Flags	1
14.	Cane for oil	1
15.	Water pot/Bucket	1
16.	Canister for Muster roll	1
17.	Set of spare spectacles of gateman wearing glasses	1
18.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
19.	Basket	1
20.	Whistle	1
21.	Wall clock	1
22.	Small chain with padlock	2

2.2. RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- i) Gate Working Instructions in Hindi/English.
- ii) Gate Working, Instructions in local vernacular language.
- iii) Gateman Rule Book in local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as gateman.
- vii) Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- viii) Accident Register.
- ix) Record of last census of road traffic at Level Crossing gate.
- x) Public Complaint Book.
- xi) Inspection Book.

2.3 MODE OF OPERATION:**INTERLOCKING AND NORMAL WORKING:**

This gate is interlocked with all UP reception signals and DN Advanced Starter Signals. The interlocking is achieved by means of Electrical Key Transmission system. The normal position of the gate is open. A two lever ground frame is provided at the gate lodge. The key of the L.C. Gate remains in the winch when the gate is opened. When it is necessary to close the gate for taking off signals or for shunting operation the Station Master on duty shall take the following steps.

INTIMATION TO GATEMAN:

- Before taking off reception/departure signals, station master shall inform the gateman, the number, description and direction of the train.

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- The gateman shall close the gate and transfer the key to the station master. (the detail procedure is described below)
- The reception/departure signals will be taken "OFF".
- In order to ensure that road traffic is not held up for a long 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.
- 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 trains 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.

The Gateman on duty shall then close the barriers of the L.C.Gate by operating winch. The key 'G' is to be extracted from the winch, which will be inserted in the GF2. When GF2 reversed locks the booms of the gates and releases Key 'P' and GF1'. This key 'P' will be inserted in the EKT and turned and GF1 will be reversed for taking "OFF" UP 18/C18-A/B/C/D/E and DN Advanced Starter Signal No. 5. Station Master on duty will press level crossing control button No. 12 (Chocolate) and group button (release), L.C.Gate closed indication will appear in the panel and concerned signals automatically get released.

After the passage of train or completion of shunting the Station Master on duty shall inform the Gateman and press L.C.Gate controlling button No.12 and group button (Trans) and keep it pressed till such time the Gateman extracts the gate control key 'P' from the EKT instrument. After getting the Key 'G' the Gateman will open the L.C.Gate by normalizing the levers.

Emergency gate release operation facility is provided in the panel when the route gets locked due to some failure. For emergency release of gate, the SM on duty shall press signal cancellation button and then emergency gate release button and gate button No.12. A red flashing (Gate lock) indication will appear and after a lapse of 120sec. Gate lock indication will disappear and a white light will glow over the emergency gate release button indicating that the operation is matured. The SM on duty shall then operate push button for gate 12 and group Trans button to release the key from EKT in gate Lodge. All such operation will be registered in the emergency gate operation counter. All such emergency operation shall be recorded in the station diary and in the register meant for it.

GF1 is provided in the gate lodge to put back concerned signals to danger in case of emergency.

To avoid the detention to the road traffic at the Level crossing gate, the L.C. Gate should not be kept closed for more than 10minutes at a stretch.

2.4 DUTIES OF GATEMAN:

(1) ALERTNESS:

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

(2) POSITION DURING PASSAGE OF TRAINS:

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

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

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(3) ROUTINE DUTIES OF GATEMAN:

- (i) Gateman shall place red banner flag across the track during emergencies and obstruction on track.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless 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, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vaccum 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 Loco pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / 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 SM, Gangmate 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 and 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 Loco pilot to report the defect at the next station.
- (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled 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 UNUSUAL OCCURRENCE ON TRAIN:

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco pilot/ guard of the passing train by showing red 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.

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- (iii) If Loco pilot /guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
- (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- (v) He shall endeavor to attract the attention of the Loco pilot /guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
 - (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
 - (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (a) The gateman shall protect the line as under:-
- (I) The Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
 - (II) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
 - (III) Gatemen shall then proceed to protect the gate along with detonators, LED tricolor hand signal lamps and red flag by day and red hand signal lamp by night.
 - (IV) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - (V) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in 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 like steps to remove the obstruction and warn the Loco pilot of the approaching train.
 - (VII) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - (VIII) Thereafter, he shall light up the LED tricolor hand signal lamp to warn the Loco pilot and stop the approaching train by waving this red flag by day red hand signal lamp by night repeatedly.

(b) **OTHER ACTION TO BE TAKEN BY GATEMAN:**

- i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to use nearest SM or Permanent Way

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Inspection regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

2.5. **FAILURE OF TELEPHONE COMMUNICATION:**

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

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

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

NOTE:

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilot of both departing and arriving trains.

2.7 **FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE:**

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- 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 private number.
- ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency Key Box shall be recorded and signaled 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 a train in the block section from his end.
- vii) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest.
- viii) Normal working will be resumed 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 by S&T maintainer.

2.8 FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:

- (i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- (iv) Station Master on duty shall issue 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 a train in the block section from his end.
- (vi) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest.
- (vii) Normal working will resumed only after S & T staff repair the winch/gate lever/key transmitter and issues 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.

2.9 OBSTRUCTION AT THE GATE:

- (I) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ 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 gate, for this purpose.
- (II) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects /obstructions 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, Battery Operated LED based Flashing Lamp, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate as per Para 2.4 (5) above.
- (VI) Thereafter he shall protect the gate from the other direction also.
- (VII) He shall note down the particulars of the road vehicle, Name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has

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- 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 obstruction.
 - (IX) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
 - (X) Station Master shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure signal at "ON" position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
 - (XI) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
 - (XII) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
 - (XIII) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

2.10 OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 2.9 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

3.0 **WORKING OF MANNED 'C' CLASS INTERLOCKED LEVEL CROSSING GATE No. ST-103 AT KM. 157/2-3 TOWARDS TLHD END OF ANGUL YARD.**

3.1 A **DESCRIPTION OF LEVEL CROSSING GATE:**

1	No. of Level Crossing Gate	:	ST-103
2	Engineering or Traffic gate	:	Traffic
3	Under control of station master or permanent way inspector.	:	SM/ANGL
4	Location at Km.	:	157.111(157/2-3)
5	At station	:	ANGL
6	In between station	:	---
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Single line
9	Normal position	:	Open
10	Interlocked/ Non-Interlocked	:	Interlocked
11	Means of Interlocking	:	EKT
12	Provision of gate single at Km.	:	---
13	Signaling arrangement	:	Station Stop Signal.
14	Means of communication Telephone.	:	Telephone with SS/ANGL
15	Width of the level crossing gate	:	5.5m
16	Type of road	:	Others
17	Name of road	:	Raniguda
18	Metalled /Non-Metalled	:	Un-metalled
19	Approach road	:	Metalled
20	Width of the road	:	5.5m
21	Angle of road crossing (in case of the SKEW gates)	:	---
22	Road gradients (if any)	:	[a]North East Side. 1:50
		:	[b] South West Side. 1:50
23	Road alignment (straight/Curve)	:	[a] North East Side: Straight
		:	[b] South West Side: Straight
24	Provision of height gauges	:	Provided
25	Type of barriers	:	Lifting
26	Length of check rails	:	7.5m
27	Road surface in between level crossing gates.	:	CC Block
28	Length of rumble strip/ speed breakers.	:	5.5m
29	Road signs	:	Available
30	Speed breakers indication board	:	Available
31	TVU	:	2025 on October 2006
32	Census next due on	:	October 2009
33	Demarcation for placement of detonators.	:	Available
34	No. of gateman working	:	Three
35	Nearest Railway Medical Assistance	:	Talcher
36	Nearest Private Medical Assistance available (if any)	:	Angul
37	List of equipment available (Yes/No)	:	Yes

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3.1 B. EQUIPEMENTS TO BE AVAILABLE AT THE GATE :

1.	Battery operated LED based flashing lamps	3
2.	Hand Signal Flag Green	1 mounted on stick
3.	Hand Signal Flag Red	3 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
6.	Spare Chains with Padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade/ Fowrah	1
12.	Pick Axe	1
13.	Tin Case for Flags	1
14.	Cane for oil	1
15.	Water pot/Bucket	1
16.	Canister for Muster roll	1
17.	Set of spare spectacles of gateman wearing glasses	1
18.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
19.	Basket	1
20.	Whistle	1
21.	Wall clock	1
22.	Small chain with padlock	2

3.2. RECORDS TO BE KEPT AT GATE LODGE

In addition to the above equipment, following records shall also be kept at the Gate Loge.

- I. Gate Working Instructions in Hindi/English.
- II. Gate Working, Instructions in local vernacular language.
- III. Gateman Rule Book in local vernacular language.
- IV. List for tools and books.
- V. Duty Roster.
- VI. Certificate for working as gateman.
- VII. Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- VIII. Accident Register.
- IX. Record of last census of road traffic at Level Crossing gate.
- X. Public Complaint Book.
- XI. Inspection Book.

3.3. INTERLOCKING AND NORMAL WORKING:

This gate is interlocked with all DN reception signals and UP Advanced Starter signals. The interlocking is achieved by means of Electrical Key Transmission system. The normal position of the gate is open. A two-lever ground frame is provided at the gate lodge. The key of the L.C. Gate remains in the winch when the gate is opened. When it is necessary to close the gate for taking off signals or for shunting operation the Station Master on duty shall take following steps.

INTIMATION TO GATEMAN

- Before taking off reception/departure signals, station master shall inform the gateman, the number, description and direction of the train.

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- The gateman shall close the gate and transfer the key to the station master. (the detail procedure is described below)
- The reception/departure signals will be taken “OFF”.
- In order to ensure that road traffic is not held up for a long 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.
- 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 trains 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.

The Gateman on duty shall then close the barriers of the L.C.Gate by operating winch. The key 'R' is to be extracted from the winch, which will be inserted in the GF2. When GF2 reversed locks the booms of the gates and releases Key 'Q' and GF1'. This key 'Q' will be inserted in the EKT and turned and GF.1 will be reversed for taking “OFF” DN Home Signal No: 10A/B/C/D/E, C-10A/B/C/D/E, and Advanced starter signal No.14. Station Master on duty will press level crossing control button No.11 (Chocolate) and group button (release), L.C.Gate closed indication will appear in the panel and concerned signals automatically get released.

After the passage of train or completion of shunting the Station Master on duty shall inform the Gateman and press L.C.Gate controlling button No.11 and group button (Trans) and keep it pressed till such time the Gateman extracts the gate control key 'Q' from the EKT instrument. After getting the Key 'R' the Gateman will open the L.C.Gate by normalizing the levers.

Emergency gate release operation facility is provided in the panel when the route gets locked due to some failure. For emergency release of gate, the SM on duty shall press signal cancellation button and then emergency gate release button and gate button No.11. A red flashing (Gate lock) indication will appear and after a lapse of 120sec. Gate lock indication will disappear and a white light will glow over the emergency gate release button indicating that the operation is matured. The SM on duty shall then operate push button for gate 11 and group Trans button to release the key from EKT in gate Lodge. All such operation will be registered in the emergency gate operation counter. All such emergency operation shall be recorded in the station diary and in the register meant for it.

GF1 is provided in the gate lodge to put back concerned signals to danger in case of emergency.

To avoid the detention to the road traffic at the Level crossing gate, the L.C. Gate should not be kept closed for more than 10minutes at a stretch.

3.4 DUTIES OF GATEMAN:

(1) ALERTNESS:

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

(2) POSITION DURING PASSAGE OF TRAINS:

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

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

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(3) ROUTINE DUTIES OF GATEMAN:

- (i) Gateman shall place red banner flag across the track during emergencies and obstruction on track.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless 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, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- (vi) Gateman shall also be prepared to repeat any signal which guard may give to Loco pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / 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 SM, Gangmate 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 and 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 Loco pilot to report the defect at the next station.
- (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled 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 UNUSUAL OCCURRENCE ON TRAIN:

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco pilot/ guard of the passing train by showing red 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.

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- (iii) If Loco pilot /guard fail to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
- (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- (v) He shall endeavor to attract the attention of the Loco pilot /guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
 - (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
 - (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (a) The gateman shall protect the line as under:-
- (i) The Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
 - (ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
 - (iii) Gatemen shall then proceed to protect the gate along with detonators, LED tricolor hand signal lamps and red flag by day and red hand signal lamp by night.
 - (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - (v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in 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 like steps to remove the obstruction and warn the Loco pilot of the approaching train.
 - (vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - (viii) Thereafter, he shall light up the LED tricolor hand signal lamp to warn the Loco pilot and stop the approaching train by waving this red flag by day red hand signal lamp by night repeatedly.

(b) **OTHER ACTION TO BE TAKEN BY GATEMAN:**

- (i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- (iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to use nearest SM or Permanent Way

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Inspection regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

3.5. **FAILURE OF TELEPHONE COMMUNICATION:**

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

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

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

NOTE:

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilot of both departing and arriving trains.

3.7 **FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE:**

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- (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 private number.
- (ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- (iii) The record of the date and time of breaking the sealed cover of Emergency Key Box shall be recorded and signaled 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 a train in the block section from his end.
- (vii) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest.
- (viii) Normal working will be resumed 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 by S & T maintainer.

3.8 FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:

- (i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- (iv) Station Master on duty shall issue 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 a train in the block section from his end.
- (vi) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest.
- (vii) Normal working will resumed only after S & T staff repair the winch/gate lever/key transmitter and issues 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.

3.9 OBSTRUCTION AT THE GATE:

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ 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 gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects /obstructions 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, Battery Operated LED based Flashing Lamp, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate as per Para 3.4 (5) above.
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, Name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has

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- 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 obstruction.
 - (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
 - (x) Station Master shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure signal at "ON" position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
 - (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
 - (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
 - (xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

3.10 OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 3.9 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

4.0 WORKING OF MID SECTION MANNED 'A' CLASS INTERLOCKED LEVEL CROSSING GATE No. ST-105 AT KM. 159/7-8 BETWEEN ANGUL AND TALCHER ROAD STATION.

4.1A BRIEF DESCRIPTION:

1	No. of Level Crossing Gate	:	ST-105
2	Engineering or Traffic gate	:	Engineering
3	Under control of station master or permanent way inspector.	:	SSE/P.Way/TLHR
4	Location at Km.	:	Km.159/7-8
5	At station	:	---
6	In between station	:	ANGL-TLHD
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Single line
9	Normal position	:	Open to road traffic.
10	Interlocked/ Non-Interlocked	:	Interlocked
11	Means of Interlocking	:	Gate Stop Signal
12	Provision of gate single at Km.	:	UP Direction : UP Gate Stop Signal DN Direction : DN Gate Stop Signal
13	Signaling arrangement	:	---
14	Means of communication Telephone.	:	Telephone to SM/ANGL
15	Width of the level crossing gate	:	5.50m
16	Type of road	:	Others
17	Name of road	:	Kudulu Road
18	Metalled /Non-Metalled	:	Un-metalled
19	Approach road	:	Metalled
20	Width of the road	:	6.00m
21	Angle of road crossing (in case of the SKEW gates)	:	---
22	Road gradients (if any)	:	a. North East side-1:30 b. South West side-1:30
23	Road alignment (straight/Curve)	:	a. North East side-Straight b. South West side- Straight
24	Provision of height gauges	:	Yes
25	Type of barriers	:	Lifting
26	Length of check rails	:	7.50m
27	Road surface in between level crossing gates.	:	Moorum
28	Length of rumble strip/ speed breakers.	:	6.00m
29	Road signs	:	Available
30	Speed breakers indication board	:	Available
31	TVU	:	45738 on October 2006
32	Census next due on	:	October 2009
33	Demarcation for placement of detonators.	:	Yes
34	No. of gateman working	:	02
35	Nearest Railway Medical Assistance	:	Talcher
36	Nearest Private Medical Assistance available (if any)	:	Angul
37	List of equipment available (Yes/No)	:	Yes.

4.1 B. EQUIPEMENTS TO BE AVAILABLE AT THE GATE:

1.	Battery operated LED based flashing lamps	3
2.	Hand Signal Flag Green	1 mounted on stick
3.	Hand Signal Flag Red	3 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
6.	Spare Chains with Padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade/ Fowrah	1
12.	Rammer	1
13.	Pick Axe	1
14.	Tin Case for Flags	1
15.	Cane for oil	1
16.	Water pot/Bucket	1
17.	Canister for Muster roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small chain with padlock	2

4.2. RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipments, following records shall also be kept at the Gate Lodge.

- I. Gate Working Instructions in Hindi/English.
- II. Gate Working, Instructions in local vernacular language.
- III. Gateman Rule Book in local vernacular language.
- IV. List for tools and books.
- V. Duty Roster.
- VI. Certificate for working as gateman.
- VII. Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- VIII. Accident Register.
- IX. Record of last census of road traffic at Level Crossing gate.
- X. Public Complaint Book.
- XI. Inspection Book.
- XII. S & T Register

**4.3 MODE OF OPERATION:
INTERLOCKING AND NORMAL WORKING:**

This gate is interlocked with independent Gate Stop Signals. The interlocking is achieved by mechanically Ground lever frame & closure of the L.C.Gate Boom. The normal position of the gate is open to road traffic. A four-lever ground frame is provided at the gate lodge. When it is necessary to close the gate for passage of a train, the SM on duty shall inform the Gateman to close and lock the gate. The function of the lever frames are illustrated below:

Lever No. 1 Spare.

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Lever No. 2 Boom locking lever.
 Lever No. 3 UP Gate Stop Signal.
 Lever No. 4 DN Gate Stop Signal.

The Gateman on duty shall then close the barriers of the L.C.Gate by operating winch. The key 'G' is to be extracted from the winch, which will be inserted in the lever No. 2. This lever No. 2 when reversed effects boom locking and releases UP & DN Gate signal lever No. 3 & 4 respectively. After passage of the train, these signal levers to be normalized and this lock lever to be made normal. This will unlock the gate booms and allow the key to be taken out. This key will be inserted in the winch and unlock to open the gate by operating the winch.

To avoid the detention to the road traffic at the Level crossing gate, the gate signals should not be taken off too early in advance and L.C. Gate should not be kept closed for more than 10 minutes at a stretch.

4.4 INTIMATION TO GATEMAN:

- i) The Station Master shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of the passage of the train at the gate.
- ii) If the actually running time of the train from either end of the section is less than 10 minutes, SM will convey this advice to the gateman before obtaining /granting line clear.
- iii) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

4.5 DUTIES OF GATEMAN:

1) ALERTNESS:

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

2) POSITION DURING PASSAGE OF TRAINS:

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

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

3) ROUTINE DUTIES OF GATEMAN:

- i) Gateman shall place red banner flag across the track during emergencies and obstructions on the track.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless 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, any vehicle / wagons / train / battery box

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- 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 Loco Pilot on walkie-talkie or in any other way.
 - vii) If lifting barriers / 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 SM, Trackman 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 and 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 Loco Pilot to report the defect at the next station.
 - xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
 - xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
 - xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
 - xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
 - xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
 - xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled 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 UNUSUAL OCCURRENCE ON TRAIN:**
In case gateman observes anything unusual with a passing train, he shall take following action.
- i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.
 - ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
 - iii) If Loco Pilot/guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
 - iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
 - v) He shall endeavor to attract the attention of the Loco Pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
 - vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
- 5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**
- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.

- (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

- (a) The gateman shall protect the line as under:-
 - (i) The Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
 - (ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
 - (iii) Gatemen shall then proceed to protect the gate along with detonators, LED tricolor hand signal lamps and red flag by day and red hand signal lamp by night.
 - (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - (v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in 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 like steps to remove the obstruction and warn the Loco pilot of the approaching train.
 - (vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - (viii) Thereafter, he shall light up the LED tricolor hand signal lamp to warn the Loco pilot and stop the approaching train by waving this red flag by day red hand signal lamp by night repeatedly.

- (b) **OTHER ACTION TO BE TAKEN BY GATEMAN:**
 - (i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
 - (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
 - (iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to use nearest SM or Permanent Way Inspection regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

4.6 FAILURE OF TELEPHONIC COMMUNICATION:

- When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:
- i) If the telephone fails at the gate connected with the Station at the dispatching end, station master shall then issue a caution order to the Loco Pilot of the departing train.
 - ii) Station master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
 - iii) In case the gate signal is ON he should stop short of gate signal and follow the procedure laid under GR 3.73.
 - iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.

- v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vi) Station master will also advise the gateman through gang man/patrolman/Loco Pilot of the first train that the telephone has become defective.
- vii) Station master should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- viii) Normal working will be resumed only after S & T staff rectify the telephone and issue reconnection/ fit memo for the same.

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

NOTE:

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

4.8 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 leaves or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- ii. If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii. The record of the date and time of breaking the sealed cover of emergency key box shall be recorded and signed with reasons.
- iv. Thereafter, the gate must be treated as non-interlocked and procedure for reception/ 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 a train in the block section from his end.
- vii. Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest.
- viii. Normal working will be resumed only after S & T staff repairs the winch/gate leaves/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 re-sealed by the S & T maintainer.

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4.9 FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:

- i. If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii. Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- iii. Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals
- iv. Station Master on duty shall issue 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 a train in the block section from his end.
- vi. Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest
- vii. Normal working will resumed only after S & T staff repair the winch/gate leaves/key transmitter and issues reconnection/ fit memo for the same.
- viii. After rectification, the emergency key shall be replaced in the emergency key box and re-sealed by the S & T maintainer.

4.10 DEFECTIVE GATE SIGNALS:

- i) The gateman shall treat the gate signal as defective and must not lower them under following circumstances:
- ii) If gate signals can be taken "OFF" without closing the gate, or
- iii) The key can be extracted from the operating winch when the gate is in open condition, or
- iv) If the Gate or the Gate Signal or Distant Signal becomes defective in "OFF" position, the gateman will make all efforts to put it at "ON" position even by cutting signal wires, if necessary.
- v) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- vi) 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.
- vii) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- viii) Station Master on duty will issue caution order to the Loco Pilot of a departing train.
- ix) He shall also advise the Station Master at the dispatching end, under exchange of private number; to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- x) Station Master shall advise S & T staff responsible for maintaining the gate signal to repair the same at the earliest
- xi) Normal working will be resumed after S & T staff rectifies the defective gate signal and issue reconnection/ fit memo for the same.

4.11 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 gate, for this purpose.
- ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions 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, Battery Operated LED based flashing lamp, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate as per Para 4.5 (5) above.
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been 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 obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- x) Station Master shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure signal at "ON" position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

4.12 OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 4.11 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

5.0 WORKING OF MID SECTION MANNED 'SPL' CLASS INTERLOCKED LEVEL CROSSING GATE NO. ST-107 AT KM. 163/6-7 BETWEEN TLHD-ANGL SECTION.

5.1 BRIEF DESCRIPTION:

1.	Number of Level Crossing Gate	ST-107
2.	Engineering or Traffic	Engineering
3.	Under control of	SSE (P.WAY)/TLHR
4.	Location at Km	163/6-7
5.	At station	-
6.	In between station	ANGL-TLHD
7.	BG/MG/NG	BG
8.	Single line /Double line	Single Line
9.	Normal position	Open to Road Traffic
10.	Interlocked/Non-interlocked	Interlocked
11.	Means of interlocking	Gate Stop Signal
12.	Provision of gate Signal	Up Gate Home at Km.163/2-3 & DN Gate Home at Km. 163/12-11
13.	Signaling arrangement	Up & Down Home, Up & Down Distant
14.	Means of communication	Magneto Telephone with SM/TLHD
15.	Width of Level crossing gate	6.0 M
16.	Type of Road	Others
17.	Name of Road	Balaram Prasad
18.	Metalled/Non Metalled	Non-metalled
19.	Approach Road	Metalled
20.	Width of the Road	5.5 M
21.	Angle of road crossing (in case SKEW Gates)	-
22.	Road gradient (If any)	a. North/East side : 1:50 b. South/East side : 1:50
23.	Road alignment (Straight/ curve)	Straight Straight
24.	Provision of height gauge	Available
25.	Type of Barrier	Lifting
26.	Length of check Rail	7.5 M
27.	Road surface in between L-Xing gates	Moorum
28.	Length of Rumbled strip/speed breaker	5.5 M
29.	Road Signs	Available
30.	Speed breakers indication boards	Available
31.	TVU	172140 on October-2009
32.	Census next due on	October-2012
33.	Demarcation for placement of detonators.	Available
34.	No. of gateman working	02+01
35.	Nearest Railway Medical Assistance	Talcher
36.	Nearest Private Medical Assistance	Angul
37.	List of equipment available Yes/No	Yes

5.2A EQUIPMENTS TO BE AVAILABLE AT THE GATE :

Sl. No.	Items	
1.	Battery operated LED based flashing lamps	3
2.	Hand signal flag Green	1 mounted on stick
3.	Hand signal flag Red	3 mounted on sticks
4.	Banner flag Red	3
5.	Posts for exhibiting Red Banner Flag	2
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy bar	1
10.	Mortar pan	1
11.	Spade/Fowrah	1
12.	Rammer	1
13.	Pick axe	1
14.	Tin case for flag	1
15.	Cane for oil	1
16.	Water pot/Bucket	1
17.	Canister for Muster roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small Chain with padlock	2

B RECORDS TO BE KEPT AT GATE LODGE

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- I) Gate Working Instructions in Hindi/English.
- II) Gate Working, Instructions in local vernacular language.
- III) Gateman Rule Book in local vernacular language.
- IV) List for tools and books.
- V) Duty Roster.
- VI) Certificate for working as Gateman.
- VII) Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- VIII) Accident Register.
- IX) Record of last census of road traffic at level crossing gate.
- X) Public Complaint Book.
- XI) Inspection Book.
- XII) S&T Inspection Register.

C. APPROACH WARNING.

Approach warning has been provided at this Gate. Approach warning device is installed in such a way that whenever an UP train occupies the track circuit UPAT and a DN train occupies track circuit No. 18T of TLHD then a audio visual alarm is initiated at this gate, which gives warning to gateman that train has already entered in block section, he is required to close the gate & muting of audio alarm is done by acknowledging & pressing the mute button.

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5.3 **MODE OF OPERATION**

INTERLOCKING AND NORMAL WORKING:

This gate is interlocked with independent Gate Stop Signals. The interlocking is achieved by mechanically Ground lever frame & closure of the L.C.Gate Boom. The normal position of the gate is open to Road Traffic. A four-lever ground frame is provided at the gate lodge. The function of the lever frame is as under:

- Lever No. 1 Spare.
- Lever No. 2 Boom locking lever.
- Lever No. 3 UP Gate Stop Signal cum Gate Distant of L.C.No. ST-108.
- Lever No. 4 DN Gate Stop Signal.

When it is necessary to close the gate for passage of a train, the SM on duty shall inform the Gateman to close and lock the gate. The Gateman on duty shall then close the barriers of the L.C.Gate by operating winch. The key 'G' is to be extracted from the winch, which will be inserted in the lever of GF2. GF2 when reversed locks the level crossing booms and releases UP & DN Gate Stop Signal No. GF3 & GF4 respectively. After passage of the train this signal levers to be normalized and this lock lever to be made normal. This will be inserted in the winch and unlock to open the gate by operating the winch.

The Gate Signal No. GF3 will function as Gate Stop Signal of L.C.No. ST-107 as well as UP Gate Distant of L.C.Gate No. ST-108 at Km. 164/4-5 and the arrangement is such that the Gate Stop Signal of L.C.No. ST-107 shall not display a less restrictive aspect than the "STOP" aspect until the L.C.Gate No. ST-108 is closed, locked and the Gate Signal No. GF3 of L.C.No. ST-108 has been taken "Off". The "Green" aspect of Gate Stop Signal No. GF3 of L.C.No. ST-107 is controlled by "Green" aspect of Gate Stop Signal No. GF3 of L.C. No. ST-108.

To avoid the detention to the road traffic at the Level Crossing Gate, the gate signals should not be taken off too early in advance and L.C.Gate should not be kept closed for more than 10 minutes at a stretch.

5.4 **INTIMATION TO GATEMAN:**

- i) SM shall advise the gateman through telephone the number, description, direction and expected time of the passage of the train at the gate.
- ii) SM will convey this advice to the gateman before obtaining /granting line clear.
- iii) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

5.5 **DUTIES OF GATEMAN:**

(1) **ALERTNESS:**

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

(2) **POSITION DURING PASSAGE OF TRAINS:**

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

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

(3) **ROUTINE DUTIES OF GATEMAN:**

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- (i) Gateman shall place red banner flag across the track during emergencies and obstruction on track.
 - (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
 - (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless 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, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vaccum 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 Loco pilot on walkie-talkie or in any other way.
 - (vii) If lifting barriers / 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 SM, Gangmate 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 and 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 Loco pilot to report the defect at the next station.
 - (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
 - (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
 - (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
 - (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
 - (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
 - (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled 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 UNUSUAL OCCURRENCE ON TRAIN :**
In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco pilot/ guard of the passing train by showing red 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.

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- (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- (v) He shall endeavor to attract the attention of the Loco pilot /guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

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

(a) The gateman shall protect the line as under:-

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

(b) **OTHER ACTION TO BE TAKEN BY GATEMAN :**

- i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to use nearest SM or Permanent Way Inspection regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

5.6 FAILURE OF TELEPHONIC COMMUNICATION:

- When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:
- i) If the telephone fails at the gate connected with the Station at the dispatching end, station master shall then issue a caution order to the Loco Pilot of the departing train.
 - ii) Station master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
 - iii) In case the gate signal is ON he should stop short of gate signal and follow the procedure laid under GR 3.73.
 - iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
 - v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
 - vi) Station master will also advise the gateman through gang man/patrolman/Loco Pilot of the first train that the telephone has become defective.
 - vii) Station master should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
 - viii) Normal working will be resumed only after S & T staff rectify the telephone and issue reconnection/ fit memo for the same.

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

NOTE:

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

5.8 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 leaves or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic. (In this gate the emergency key is not available)
- iii) The record of date and time of breaking the sealed cover of emergency key box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates, should be adopted.

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- 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 a train in the block section from his end.
- vii) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest.
- viii) Normal working will be resumed only after S & T staff repairs the winch/gate leaves/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.

5.9 **FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:**

- i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) Station Master on duty shall issue 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 a train in the block section from his end.
- vi) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest
- vii) Normal working will resumed only after S & T staff repair the winch/gate leaves/key transmitter and issues 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.

5.10 **DEFECTIVE GATE SIGNALS:**

- i) The gateman shall treat the gate signal as defective and must not lower them under following circumstances:
- ii) If gate signals can be taken "OFF" without closing the gate, or
- iii) The key can be extracted from the operating winch when the gate is in open condition, or
- iv) If the Gate or the Gate Signal or Distant Signal becomes defective in "OFF" position, the gateman will make all efforts to put it at "ON" position even by cutting signal wires, if necessary.
- v) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- vi) 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.
- vii) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- viii) Station Master on duty will issue caution order to the Loco Pilot of a departing train.
- ix) He shall also advise the Station Master at the dispatching end, under exchange of private number; to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- x) Station Master shall advise S & T staff responsible for maintaining the gate signal to repair the same at the earliest
- xi) Normal working will be resumed after S & T staff rectifies the defective gate signal and issue reconnection/ fit memo for the same.

5.11 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 gate, for this purpose.
- ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions 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, LED tri-colour hand signal lamp, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate as per Para 5.5 (5) above.
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been 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 obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- x) Station Master shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure signal at "ON" position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

5.12 OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 5.11 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

APPENDIX 'B'

APPENDIX 'B' TO STATION WORKING RULES OF ANGUL STATION

SYSTEM OF SIGNALLING, INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.

This is a 'B' class station Standard-III Interlocking with isolations. The points and Signals etc. are power operated from composite miniature central panel installed in the Station Master's Office. The Station is equipped with Multiple Aspect Colour Light Signaling.

1. DESCRIPTION OF PANEL:

The yard layout is depicted on the panel. All the points and Signals of station are operated from the Control Panel located at the station. The Control panel consists of an inclined console on which there is a clear geographical representation of the entire track layout with signals and points. The track layout is subdivided according to the track circuits configuration with distinctive colours for each track circuit on the track line adjacent to each signal. There exists an entrance Push Button at the center of the berthing of each route. The entrance Push Button (Signal Button) is coloured with 'RED' for running signals with the number of relevant signal printed just by the side of the button. The entrance Route Push Buttons are coloured with "WHITE". The signal buttons are to be operated in conjunction with Route buttons. All the various Push buttons on the panel are spring loaded and required Push buttons are pressed for operation. Common Route buttons for taking 'OFF' starters and individual Route buttons for taking of Advanced Starters are provided.

1.2 POINT PUSH BUTTON:

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

- 1.2.1 When a point is set and mechanically locked in Normal position, a steady 'Yellow' strip light on straight line indication appears on panel suggesting that the point is in NORMAL position.
- 1.2.2 When a point is set and locked in REVERSE position, a steady 'Yellow' strip light in shunting reverse indication appears on panel suggesting that the point is in REVERSE position.
- 1.2.3 When the points of any route have been correctly set and relevant signal is taken 'OFF', 'RED' indication appears near the points indicating that the concerned points are locked either in NORMAL or REVERSE by setting of route.
- 1.2.4. When the points are neither set nor locked either in NORMAL or in REVERSE correctly, the normal or reverse indication will not be there but the indication will start flashing till such time the point is housed and locked properly in one of the positions. In such case points are to be set both ways by crank handle and clamped and padlocked. This indication will flash during point operation also.
- 1.2.5 All points over running lines are operated by electric point machines.

- 1.2.6 The cause for non setting of the point in the desired position shall be checked up by the Station Master on duty according to GR and SR.3.68.01©. If there is a defect other than an obstruction, this point shall be considered defective and action shall be taken for clamping and padlocking of these points in the desired position by the SS/Station Master on duty himself for all trains according to SR.3.69.03(c). In such case both ends of the point shall be clamped and padlocked.

1.2.7 **DESCRIPTION OF POINT PUSH BUTTON**

a) **SBP END POINTS:**

Sl. No.	Button No.	Colour	Description
1.	8WN	BLACK	Crossover point between Main Line and 2nd Loop for line Nos. 3, 4 & 5 with overrun line at KPJG end.
2.	9WN	BLACK	Crossover point between Main Line and 1 st Loop.
3.	19WN	BLACK	Point between line connecting Line No. 3, 4 & 5.
4.	20WN	BLACK	Crossover point between Connecting line No. 4 and 3 rd loop connecting line Nos. 3, 4 & 5.
5.	33 WN	BLACK	Derailing switch for line No. 5.

b) **TLHR END POINTS**

Sl. No.	Button No.	Colour	Description
1.	6 WN	BLACK	Crossover point on Main Line and loop line.
2.	7 WN	BLACK	Crossover point between Main Line and Line No. 1.
3.	21 WN	BLACK	Crossover point between Line No. 4 and Line No. 5 with DS at one end.
4.	22 WN	BLACK	Crossover point on Line No. 3 line connecting line No. 4 & 5 end with DS.
5.	24 WN	BLACK	Crossover point between Main Line and ELS siding with DS at end.
6.	32 WN	BLACK	DS between line No. 3, 4 & 5 and main line.
7.	34 WN	BLACK	DS for line No. 4.
8.	30	BLACK	Hot Axle cum Engineering Siding Control siding button.

1.2.8 **DESCRIPTION OF POINT GROUP BUTTON:**

These are two buttons at the top of panel one for reverse to Normal and other for normal to Reverse operation of point. These are coloured black with red dot. The button is operated in conjunction with point button to operate the concerned point to the required setting.

MAIN SIGNAL PUSH BUTTON:

These are RED coloured push button on the panel near the stop signals on the panel. These are operated in conjunction with Route button (white coloured) to take 'OFF' the signals.

SHUNT SIGNAL PUSH BUTTON:

These are Yellow coloured buttons situated near shunt signals.

CALLING-ON SIGNAL PUSH BUTTON:

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Red with White dot coloured buttons situated near Calling-on signal.

DESCRIPTION OF SIGNAL BUTTONS:

Sl. No.	Button No.	Colour	Description
1.	C1	RED with WHITE Dot	DN Calling-on signal for Line No. 1, Line No. 2, Line No. 3, Line No. 4 & Line No. 5.
2.	S-1	RED	DN Home signal for Line No. 1, Line No. 2, Line No. 3, Line No. 4, Line No. 5 and ELS.
3.	S-2	RED	DN Starter for Line No. 1.
4.	S-3	RED	DN Starter for Line No. 3.
5.	S-4	RED	DN Starter for Line No. 2.
6.	S-5	RED	DN Advanced Starter.
7.	C-10	RED with WHITE dot.	DN Calling-on signal for No. 1, Line No. 2, Line No. 3, Line No. 4, Line No. 5.
8.	S-10	RED	Routing Home for No. 1, Line No. 2, Line No. 3, Line No. 4, Line No. 5
9.	SH-10	YELLOW	Shunt signal at TLHR end.
10.	S-14	RED	UP Advanced Starter.
11.	S-15	RED	UP Starter for Line No. 3.
12.	S-16	RED	UP Starter for Line No. 1.
13.	S-17	RED	UP Starter for Line No. 2.
14.	S-18	RED	UP Home signal for Line No. 1, Line No. 2, Line No. 3, Line No. 4, Line No. 5 and ELS.
15.	C-18	RED with WHITE dot	UP Calling on signal for Line No. 1, Line No. 2, Line No. 3, Line No. 4 & Line No. 5.
16.	S-25	RED	UP Starter for Line No. 4.
17.	S-26	RED	UP Starter for Line No. 5.
18.	S-27	RED	DN Starter for Line No. 4
19.	S-28	RED	DN Starter for Line No. 5
20.	SH-29	YELLOW	Shunt signal at ELS end.
21.	SH-35	YELLOW	Shunt signal at SBP end.

1.3.2 **SIGNAL INDICATIONS:**

The aspects of the signals as obtained from site at any time are shown on the panel on the signal indication along side of the track.

1.4 **ROUTE BUTTONS:**

1.4.1 Route buttons are provided separately on each running line on the panel for initiation of route for Home signals. Common route buttons on either side are provided for taking off starters. Individual route button is provided for taking off Advanced Starter signals, it is necessary to operate the signal buttons and the concerned route button simultaneously for taking "OFF" concerned signal. In panel the route and set automatically by operation of entry and exit button.

1.4.2 **DESCRIPTION OF ROUTE BUTTONS:**

Sl. No.	Button No.	Colour	Description
1.	MNUN	WHITE	UP & DN common route for Home/Calling-on for main line.
2.	LL1UN	WHITE	UP & DN common route button for home for loop line No.1 setting route towards advanced starter in particular direction.

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3.	LL1UN1	WHITE	UP & DN common route button for Home/Calling -on for loop line No. 1 setting route up to the end of over run line in particular direction (for Home).
4.	LL2UN	WHITE	UP & DN common route button for home for loop line No. 2 setting route towards Advanced Starter in particular direction
5.	LL2UN1	WHITE	UP & DN common route button for Home/Calling -on for loop line No. 2 setting route up to the end of over run line in particular direction (for home)
6.	LL3 UN	WHITE	UP & DN common route button for home for loop line No. 4 setting route towards advanced starter in particular direction
7.	LL3UN1	WHITE	UP & DN common route button for home/Calling-on for loop line No. 3 setting route up to the end of over run line in particular direction (for home)
8.	LL4UN	WHITE	UP & DN common route button for home for loop line No. 4 setting route towards Advanced Starter in particular direction
9.	LL4UN1	WHITE	UP & DN common route button for Home/Calling-on for loop line No. 4 setting route up to the end of over run line in particular direction (for home)
10.	1T1UN	WHITE	Common route button for UP Starter No. 15, 16, 17, 25 & 26.
11.	18T1UN	WHITE	Common route button for DN Starter No. 2, 4, 3, 27 & 28.
12.	14UN	WHITE	Route button for UP Advanced Starter No.14
13.	5UN	WHITE	Route button for DN Advanced Starter No.5
14.	ELS UN	WHITE	Route button for ELS siding.

CRANK HANDLE PUSH BUTTON

1.	CH-1 by 13	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 7, 6 & 24 along with "GROUP TRANS" Push Button
2.	CH-2 by 23	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 8 & 9 along with "GROUP TRANS" Push Button.
2.	CH-3 by 31	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 19, 20, 21, 22, 33 & 34 along with "GROUP TRANS" Push Button.
2.	CH-4 by 39	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 32 along with "GROUP TRANS" Push Button.

MISCELLANEOUS PUSH BUTTONS

1.	SM'S EMERGENCY POINT 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.	GROUP TRANS BUTTON	WHITE WITH BLACK DOT.	To be pressed to transmit control for siding Crank Handle or L.C. Gate operation along with concerned siding/Crank Handle/L.C.Gate Button.
4	GROUP RELEASE PUSH BUTTON	WHITE WITH BLACK DOT.	To be pressed to withdraw/Normalise the control of siding/Crank Handle/L.C.Gate operation along with concerned siding/ Crank Handle/L.C. Gate push Button.
5	POINT GROUP NORMAL PUSH	BLACK WITH RED	To be pressed to initiate "NORMAL" setting of point along with concerned point push button.

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	BUTTON	DOT.	
6	POINT GROUP REVERSE PUSH BUTTON	BLACK WITH RED DOT.	To be pressed to initiate "REVERSE" setting of point along with concerned point push button.
7	EMERGENCY ROUTE RELEASE PUSH BUTTON	WHITE WITH RED DOT.	To be pressed for emergency Route Release.
8	SIGNAL CANCELLATION PUSH BUTTON	RED	To be pressed for canceling a signal which is already taken "OFF" or to release a Route after passage of train.
9	SIGNAL LAMP FAILURE/POINT FAILURE CK	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp failure/ point failure Buzzer.
10	EMERGENCY POINT OPERATION KEY	BLACK WITH RED DOT	To be pressed to operate the point when concerned point zone axle counters or track circuit failed.
12	BUTTON HELD ACKNOWLEDGEMENT PUSH BUTTON	WHITE WITH RED DOT.	To be pressed for silencing button Held Buzzer in case of any push button remains pressed after the button is released.
14	CH1 CONTROL PUSH BUTTON.	BLUE	To be pressed along with Group Trans Button for extracting keys from RKT to operate the respective points.
15	CH2 CONTROL PUSH BUTTON.	BLUE	To be pressed along with Group Trans Button for extracting keys from RKT to operate the respective points.
14	CH3 CONTROL PUSH BUTTON.	BLUE	To be pressed along with Group Trans Button for extracting keys from RKT to operate the respective points.
15	CH4 CONTROL PUSH BUTTON.	BLUE	To be pressed along with Group Trans Button for extracting keys from RKT to operate the respective points.
16	Emergency Gate Release button for L.C. Gate at KM 155/12-13	Chocolate with red dot	To be pressed along with Gate control button no.12 and wait for 120 seconds and then press button no.12 along with Group Trans Button to extract the key.
17	Emergency Gate Release button for L.C. Gate at KM 157/2-3	Chocolate with red dot	To be pressed along with Gate control button no.11 and wait for 120 seconds and then press button no.11 along with Group Trans Button to extract the key.
18	L.C.Gate Control-11 Push button.	Chocolate	To be pressed along with Group Trans Button for extracting key from RKT to operate the Gate.
19	L.C.Gate Control-12 Push button.	Chocolate	To be pressed along with Group Trans Button for extracting key from RKT to operate the Gate.
20	Hot Axle cum Engineering Siding Control point-30	Blue	To be pressed along with Group Trans Button for extracting key from RKT to operate the Hot Axle cum Engg. Siding.
21	Power failure Acknowledgeme	Red	To be pressed for silencing the power failure buzzer during the time of power failure.

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	nt Button.		
22	Up train Arrival Acknowledgement Button.	Chocolate with white dot	To be pressed for acknowledging the complete arrival of an UP train.
23	DN train Arrival Ackn.Button.	Chocolate with white dot	To be pressed for acknowledging the complete arrival of a DN train.

1.5.0 **TRAIN ARRIVAL INDICATION THROUGH AXLE COUNTER**

The system provides for automatic check for last vehicle arrival through provision of axle counter. Axle counters are provided in KPJG-ANGL and ANGL-TLHR Road Junction sections to check the complete arrival trains. The system is interlocked with the Block Instrument. When the axle counter section indication provided on the top side of the panel individually for either section indicates (R) i.e. occupied even after the complete arrival of trains. The block instrument of the respective section can only be normalized after ensuring complete arrival of the trains by physical verification of Last Vehicle Indicator for stopping or through train (Refer reset procedure).

1.5.1 **POINT FAILURE INDICATION (RED) /POINT FAILURE BUZZER/POINT FAILURE MUTING BUTTON (RED WITH WHITE DOT):**

Whenever there is failure of point due to non-setting, point failure indication flashing RED appears near the point name plate and a RED light panel besides audible Buzzer. The buzzer stops when the point failure-muting button is pressed, but the flashing RED concerned point name plate and RED light above the muting button shall continue to glow. The defective can be identified by the flashing RED light at the concerned name plate. After the failure is rectified the flashing RED and the RED light above the muting button will disappear.

1.6 **FAILURE OF LED SIGNAL AND MUTING BUTTON:**

LED signals have been used at this station. Failure of signals will be indicated by the flashing indication of the concerned signal and appearance of 'RED' light on indication panel along with audible buzzer, which can be stopped by pressing the acknowledgement button. But, the RED light will glow until the LED signal is replaced. For rectification of failure, SM on duty should inform the ESM/JE/SE about the failure.

1.7 **EMERGENCY ROUTE RELEASE COUNTER:**

This counter is provided to register the number of operations made for emergency cancellation of route. The Station Master must record the last number registered on the counter while taking over/handing over duty.

1.8 **EMERGENCY ROUTE RELEASE INDICATION (WHITE)/EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):**

The panel interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken 'OFF' the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and the concerned signal button. After this first the emergency route release button (white with red dot) positioned in the top of panel to be pressed and subsequently the concerned signal button is to be pressed without releasing the emergency route release button. A white light will lit indicating that the timer is working.

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After 120 seconds, the white light along with the white strip of light will disappear suggesting the route has been released. [Refer SR 3.36.02(a)]

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

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

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

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit shall press the emergency point operation button along with relevant point button simultaneously. Then retaining 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'. All such operations will be registered in the emergency point operation counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

EMERGENCY GATE RELEASE OPERATION

Emergency gate release operation facility is provided in the panel when the route gets locked out of some failure. For emergency release of gate, the SM on duty shall press emergency gate release button and gate button No. 12. After a lapse of 120 seconds a RED light will glow over the emergency gate release operation button indicating that the operation is matured. The SM on duty shall then operate push button for gate and group Trans button to release the key from RKT in gate Goomty. All such operation will be registered in the emergency gate operation counter. All such emergency operation shall be recorded in the station diary and in the register meant for it.

1.10 **BUTTON HELD ACKNOWLEDGE (WHITE WITH RED DOT):**

All push button are self-restoring type. A button held acknowledgement push button along with a white light is positioned at the top of the panel. When any button gets stuck in pressed condition, a buzzer will sound along with flashing white light indication. The Station master shall stop the buzzer by pressing the button held acknowledgement button (white with Red dot). The buzzer will stop but the flashing white light will continue to glow until the pressed button is normalized. SM on duty shall try to find out the pressed button for normalization or otherwise inform the maintenance staff to rectify.

1.11 **OVERLAP TIME RELEASE (WHITE LIGHT):**

Separate indications (White Light) for each overlap is provided near the starter signal to indicate the free or locked condition of overlap. This indication light will glow when overlap is locked by any Home Signal route and there will be no light when overlap is free. The locked indication starts flashing when the approaching train clears the rear end point zone track and occupies the berthing track. After a time release of 120 seconds the white flashing light will disappear indicating concerned overlap is free.

1.12 **TRACK CIRCUITS:**

The station yard is fully track circuited from Home signal to Home signal. And for 5 rail length in near of the Home signals on either side. Track circuits 1AT and 18AT are
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calling on track circuits. 7AT, 7BT, 6AT, 8BT, 8AT, 9AT and 9BT are point track circuits. L1T1, L2T1, L3T1, L1T2, L2T2, AND L3T2 are berthing track circuits. Other track circuits namely 1T, 1T1, 18T AND 18T1 are for signal replacement route holding and trolley suspension. Indication for all tracks circuits are indicated on the panel. Normally these are not lit when the track circuits are clear. RED light appears when the track circuits is occupied/failed. White lights other tracks indications appear when the relevant route is set. In case of failure of any track circuits the controlled signals or points are to be treated as non interlocked and trains shall be worked as per relevant rules.

2.0 **STATION MASTER'S PANEL CONTROL KEY:**

The panel is fitted with Station Master's lock up key to prevent any simultaneous operation of the panel. The Station master on duty is the only authorised person to operate the panel and the panel key must always remain in his personal custody vide SR.3.36.03 and GR.5.08. The key locks the panel board and no operations are possible. In case of emergency, signals can be put back to danger by operating concerned signal button and signal cancel button without releasing the panels lock also. However, the provisions, of SR 3.36.02 shall be followed while replacing the signals to 'ON'.

2.1 **CRANK HANDLES:**

When any point fails to operate normally by the route setting operation or through the concerned point button through panel, it is inevitable to operate the points with crank handle. Station Master on duty shall personally ensure clamping and pad locking of all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The CH push button Nos 13,23,31,39 and group button (White with Black Dot) are provided at the top of the panel board. Each button has three indications, viz WHITE, GREEN AND RED. The Green indication suggests that the crank handle key is in its interlocked position of the panel. This is called crank handle key IN indication. The WHITE indication suggests that the crank handle key is in out position. This is called Crank handle Key 'OUT' indication'. The Red indication suggests that the crank handles key is locked and not free for its extraction from RKT. This is called 'Crank Handle Key Locked Indication'. The White indication when glows suggest that the 'CRANK HANDLE' key is extracted from RKT. This is called 'KEY OUT' indication. The key out White indication of the crank handle locks all reception and departure signals in their normal position. The crank handles are attached to the key in RKT at the Station Master's room and in the end locations and can be released from either of the RKT. The Station Master has to press CH1/CH2/CH3/CH4 buttons and Trans button. This will enable Station Master to extract key from RKT, which in turn can be transmitted from the adjacent RKT to end location for release from RKT and crank handle there. After completion of point work, the crank handles to be inserted in the end location RKT and transmitted to station. The Station Master on getting information will press economizer button and will extract key from RKT and insert in original RKT and turn to lock in and key IN indication will appear on panel on pressing release button in the group. The TPM after extracting the crank handle (attached to the RKT key) will operate the required points to the desired position. After the work is over, the TPM shall transmit the key back to Station Master on duty through RKT.

The Station Master on duty shall take back the key and put it in original RKT and turn to key 'IN' position. On pressing the release button on the group along with CH1/CH2/CH3/CH4 steady GREEN light glows indicating key 'IN'. The cases of failure of motor operated points should be promptly reported to the concerned Signal Maintainer/Signal Inspector for immediate rectification. Station Master as per

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Operating Manual 20.06 (d) shall maintain an Emergency Crank Handle Register. The procedure for use of crank handle for motor operated points shall be followed in terms of Operating Manual 20.06.

After any non-signaled movement has taken place over a point/points operated by an electric point machine, whether in the facing or trailing direction, the SM on duty shall operate point/points to "NORMAL" or "REVERSE" settings for the purpose of testing the points and after ensuring correct indications of "NORMAL" or "REVERSE" setting of points, further movement shall be permitted over the points.

2.2. **SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS:**

For setting a route all the concerned points must be set by operation of relevant point button and group button once at a time in the desired position or by operating signal button and route Button. As soon as the required points are set to the required position, the concerned signal for the route will clear and a yellow strip of light will appear on the entire route confirming that the Route is set and locked. The signal 'off' indication will appear on the panel.

2.3. **SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS:**

For setting a particular route for departure of a train, all the concerned points must be set by operation of point button and group button one at a time in the desired position or by operating signal button and route button.

To take off advanced starter, line clear must be obtained from the concerned block station in advance. Then the concerned advance starter signal button shall be pressed along with the advanced starter route button for two to three seconds and released. This will clear the advance starter signal and a yellow strip of light will appear on the panel.

To take off the starter signal the concerned signal button to be pressed and at the same time common Route button to be pressed for two to three seconds and released. This will clear starter signal and a yellow strip of light will appear on the route from the concerned starter to the advanced starter.

2.4. **TAKING OFF CALLING-ON SIGNAL:**

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

To take off Calling-on signal the train must come to a stop at the foot of the home signal/Routing Signal, occupying the track circuit (1AT, 18AT as the case may be) in rear of the Home signal. When a train occupies the track circuit, a RED light strip will appear on the panel. The particular route on which train is intended to be received shall be set by operating the point push button and group button individually or by signal and route button pressing or by crank handling in the event of failure of operation of points through panel. After the route is set, the Calling-on signal button 'C1'/'C18 (Red with white dot) (as the case may be), shall be pressed simultaneously along with the concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the Calling-on signal clears i.e., a yellow light glows at the concerned Calling-on signal on the panel. For loop lines route button UN1 shall be used irrespective of the setting of the over lap points.

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No trains can Pass Through while receiving on Calling-on signal.

2.5 **RELEASE/CANCELLATION OF ROUTE:**

Normally when a train is received on any route and dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released.

NOTE:

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

2.6. **REPLACEMENT OF SIGNALS TO 'ON':**

Signals are replaced to 'ON' automatically by the passage of a train pass the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the respective signal button and the signal cancellation button (RED) to be pressed simultaneously.

2.7 **INTERLOCKING OF SIGNALS/POINTS:**

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

2.7.1. Advanced Starter is interlocked with respective Block Instrument in Line Clear Position.

1. The Block Instrument cannot be made normal unless the respective Home signal is put back to 'ON' aspect and the respective block section monitored by axle counter is clear of trains..
2. Signals once taken 'OFF' can be put back to danger in case of emergency by pressing concerned signal button and signal cancellation button even when the panel is locked up with Station Master's key.

2.10. **PILOTING OF TRAINS IN TO STATION YARD.**

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. When both Home and Calling-on signal failed, trains can be piloted 'IN' in terms of SR 3.69.3(a) & (c). The SM on duty shall nominate a clear line and shall set the nominated route correctly from the panel or shall advise the TPM on duty to set the nominate route correctly with the help of crank handle during failure of points. He shall clamp and padlock both the facing and trailing end points in both cases under the supervision of SM on duty.

Then the SM on duty shall then hand over the written authority (T/369(3b)) to the TPM for "Piloting IN" the train. While going towards Home signal the TPM will satisfy him self that the points have been correctly set, clamped and padlocked. After the train has brought to a dead stop at the Home signal the TPM shall hand over the pilot memo to the Loco Pilot, board the engine and display proceed hand signal to pass the defective Home signal.

NOTE:

- (1) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of both end points for admission of trains.
- (2) The keys of the padlock used for clamps on the points shall be kept in the personal custody of the SM on duty till such movement is either completed or alternatively cancelled.
- (3) The SM on duty shall ensure the closure of the interlocked L.C. Gate at Km. 155/12-13 and 157/2-3 from the Gate Man duty supported by a private number.

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PILOTING OF TRAINS - OUT OF STATION YARD :

When starter signal has become defective the SM on duty shall set the points correctly from the panel or advise the TPM to set the concerned points correctly for the out going train with the help of crank handle. The TPM on duty shall clamp and padlock both facing and trailing end points under the supervision of SM on duty in both the cases. He shall also advise the gateman to close the level crossing gate/gates on the route for dispatch of a train. The SM on duty shall then authorize the TPM on duty to hand over the pilot memo T/369(3b) along with other authorities if any to the Loco Pilot of the train. There after he shall display proceed hand signal at the foot of the starter signal vide SR 3.70.01.

In case of advanced starter signal becomes defective, paper line clear ticket will be given to the Loco Pilot of the train. Proceed Hand signal shall not be displayed vide SR 3.70.02. The TPM shall hand over the Paper line clear ticket to the Loco Pilot after the Train is stopped.

NOTE:

1. The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of the facing points and ensure the clearance of any obstruction including level crossing gate on the concerned route for dispatch of a train.
2. The keys of padlocks used for clamps on the points shall be kept in the personally custody of the SM on duty till such movement is either completed or alternatively cancelled.
3. The SM on duty shall ensure the closure of the interlocked L.C. Gate at Km. 155/12-13 and 157/2-3

SHUNTING:

For shunting, caution aspect of starter signals shall be used. For back shunting individual shunt signal No.35 & 29 are provided at West and East side of the yard respectively for shunting back to the station yard in desired direction. Shunt-10 is provided below the routing signal for controlling the entry of the train towards ELS siding. The particular route on which it is intended to do shunting is to be set by operating the desired points individual from the point or by pressing the shunt signal button and the required route button simultaneously for 2-3 seconds. When the route is set and locked correctly White strip of lights will appear on the route and the concerned shunt signal shall display 'OFF' aspect.

**SHUNTING IN THE SIDING
HOT AXLE CUM ENGG SIDING.**

While shunting in the Hot Axle cum Engg. siding, it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted as long the lines occupied in shunting. The relevant provision of GR 5.14 and SRs thereto shall be meticulously followed for shunting operations in Axle cum Engg. siding.

The Hot Axle cum Engg Siding at TLHR end of the yard with one side entries is taking off from 1st Loop Line [Line No.1]. The entrance point and corresponding derailing switch are coupled and operated by an arc lever at site. The entrance points are fitted with hand plunger locks. These hand plunger locks are unlocked the siding keys released by pressing the siding control button No. 30 provided on panel at SM's office. Reception signals (i.e. 18A, C18A in UP direction and 10A, C10A. in Down direction, shunt signal Nos. SH10A and SH35A and starter signal No. 2 &16 are electrically interlocked in such a way that these signals cannot be taken 'OFF' if the Hot Axle cum Engg Siding key is taken 'OUT' from the RKT provided at Hot Axle cum Engg Siding location at site.

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LEVEL CROSSINGS:

- a) There is a mid-section manned non-interlocked 'C' Class level crossing gate situated at Km. 154/3-4 between ANGL-KPJJG Stations, Telephone communication is provided between SM/ANGL & the gate lodge.
- b) There is a 'C' class interlocked level crossing gate situated at Km. 155/12-13 between UP Home signal & DN advanced starter signal at SBP end of the Station, Telephone communication is provided between SM/ANGL and the Gate lodge.
- c) There is a 'C' class interlocked level crossing gate situated at Km. 157/2-3 between DN Home signal & UP advanced starter signal at TLHR end of the Station, Telephone communication is provided between SM/ANGL and the Gate lodge.
- d) There is a mid-section manned non-interlocked 'A' Class level crossing gate situated at Km. 159/6-7 between ANGL-TLHD Stations. Telephone communication is provided between SM/ANGL and the gate lodge.
- e) There is a mid-section manned non-interlocked L.C. Gate situated at Km. 163/6-7 between ANGL-TLHD. Telephone communication is provided between SM/TLHD and the gate lodge,
- f) There is a mid-section manned non-interlocked L.C. Gate situated at Km. 164/4-5 between ANGL-TLHD. Telephone communication is provided between SM/TLHD and the gate lodge,

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

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

4.1. CRANK HANDLING EMERGENCY OPERATION OF POINTS:

Crank handle operation is interlocked with the Signaling and interlocking system at this station. Key for Crank handles are normally locked inside the RKT instrument at SM's office & at the Location box at site and can be taken out only when all the signals leading are in the 'normal' position and the route is not blocked for whatever reasons. Crank handle can be released by operating common 'TRANS' push button and 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 engine or tower wagon, indicating the occupancy of track, it is necessary that the Station Master on duty satisfies himself that the said vehicle has cleared the point zone track circuits by observing the track indications of the track on either side of the crossovers by positively checking the 'entrance' and 'exit' track circuits/Axle Counter are showing occupancy and clearance in accordance with the train movement.

INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:

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

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track circuits on which the train was earlier stabled, the signals leading on the line shall be suspended and the S & T maintenance staff be informed for attending to this.

5.0. **EMERGENCY OPERATIONS:**

The following are the instructions for emergency operations.

5.1. **CANCELLATION BUTTON AND VEEDER COUNTER:**

For the purpose of emergency operations there is an emergency 'Route cancellation'. There is a 'Veeder counter' for counting emergency operations involving operation of the emergency route cancellation button (provided at the top of the panel). The Station Master on duty must press the emergency route cancellation button and the signal button in accordance with 1.9 confirming to the section for which emergency route release is desired.

An indication will appear indicating that the timer has started operating and after a lapse of 120 seconds, the desired route will be release, provided all other conditions are favorable for route release.

The veeder counter registers the number of such emergency cancellation operations. Station Master on duty should specify the cause for its usage giving the particulars of causes and the time of operation as related to a particular train etc., in the train signal register as well as in a separate register meant for this purpose. The detailed operational instructions are as follows:

EMERGENCY OPERATIONS – CANCELLATION OF THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHATEVER REASON:

If the locking of the route does not get released for one reason or the other after passage of the train, it is necessary to take recourse to the following emergency operations. Firstly, it must be ensured that the signal is in the normal position. Operation as detailed in Para 1.9 to be followed.

6.0 **LOCKING OF RELAY ROOM:**

The relay room should be kept locked with a double lock, which can be opened only after both the keys are used. One key of the lock shall be kept with the Station Master on duty in his custody and the other with maintainer. Whenever required, the key in the custody of Station Master shall be given to the maintainer, after completion of work, the maintainer will return the key to Station Master. The details of the transaction should be properly recorded in the relevant register at the Station duly signed by Station Master on duty and the maintainer concerned.

7.0 **MAINTENANCE OF S & T INSTALLATION and ADHERENCE TO MAINTENANCE SCHEDULES:**

Regular maintenance of the S&T installations, adherence to schedules of maintenance testing of points, track circuits, level crossing gates, associated interlocking apparatus cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.

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

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

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

INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

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

RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

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

9.0. PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:

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

10.0 EMERGENCIES:

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

11.1 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF CRANK HANDLE:

11.2 When the crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody rests with the Station Master on duty, till it is replaced back in RKT.

11.3 The cases of failure of motor operated points should be promptly reported to the concerned Signal maintainer/Signal Inspector for rectification.

11.4 Whenever an Emergency Crank Handle is required to be used by a signal official for maintenance work or 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 the acknowledgement of the signal official in the Emergency Crank Handle Register and then hand over to him the Emergency Crank Handle. The points will be treated as defective until the Emergency Crank Handle is returned back to the Station Master on duty.

11.5 Before parting with the Emergency Crank Handle either for attending failures or for maintenance work by Signal maintenance officials, the Station Master on duty will

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ensure that the reception and departure signals are put back to 'ON' position. The points for the affected lines should be treated as non-interlocked. The Station Master on duty is responsible for introduction of non-interlocked working and the trains will be piloted 'IN and 'OUT' duly clamping and padlocking both facing and tailing points over which the train is to pass, as per GR 3.69 and 3.70 with relevant SRs. The Station Master on duty will be personally responsible for setting and locking of points for reception and dispatch of all trains.

- 11.6 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the Station Master on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.

12.0 **SUSPENSION OF LAST STOP SIGNALS:**

When the Block Instrument is suspended with its handle in "TRAIN GOING TO" for whatever reason, the concerned Last Stop Signal Controlled by the Block Instrument must be treated as suspended and trains shall be piloted "OUT".

The Station Master on duty shall not grant "LINE CLEAR" unless he has ensured that the lamps of fixed signals, which apply, to the train are burning. If the signal lights can not be kept burning the Station Master on duty before giving "LINE CLEAR" shall initiate action in accordance with the procedure prescribed in General Rules 3.61 to 3.72 and relevant Subsidiary Rules vide General Rule 3.49 (4).

The Station Master on duty shall not grant or ask "LINE CLEAR" if the axle counter section indicates section occupied and will treat the Block Instrument as suspended.

13.0 **SIGNAL LIGHTS:**

The Station Master on duty at 00.00 hours (2nd night shift) must also ensure from panel board that all the signal lights are burning properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the Section Controller on duty.

14.0 **CORRECTING TIME IN STATION CLOCK:**

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

15. **TELECOMMUNICATIONS:**

- a) The Station is connected to SBP-ANGL and ANGL-TLHR Control Circuit by a telephone.
- b) Telephone attached with TLBIs at either end of the Block Section.
- c) Railway Auto Telephone is provided at this station.
- d) Telephone communication is provided between Station Master on duty and both end Locations.
- e) Telephone communication is provided between Station Master on duty with L.C. Gates at Km. 154/3-4, 155/12-13, 157/2-3, 159/7-8 & 163/6-7.
- f) VHF set is provided at this station.
- g) This Station is connected with TLHR-ANGL Traction Control Circuit.
- h) BSNL Phone is provided at the station.

NOTE:

- i). For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
- ii). VHF & Walkie-talkie sets should not be used for un-necessary discussion with Loco Pilot/Guards and any other staff.

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16.0 AXLE COUNTER AS LAST VEHICLE CHECKING DEVICE (LVCD):-

The system provides for automatic check for last vehicle arrival through provision of axle counter. Axle counters are provided in ANGUL-KEREJANGA and ANGL-TLHD sections to check the complete arrival of trains. The system is interlocked with the Block Instrument. When the Axle counter section indication provided on the panel individually for either section indicates (R) i.e. occupied even after the complete arrival of trains, the Block instrument of the respective section is to be suspended and the trains will be worked as per the procedure followed during the failure of the Block instrument and Communication.

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

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

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

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

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

APPENDIX 'C' TO STATION WORKING RULES OF ANGUL STATION

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APPENDIX 'D' TO STATION WORKING RULES OF ANGUL STATION

STATION SUPERINTENDENT (SUPERVISORY):

He is the overall In-charge of the Station. He is responsible for the efficient discharge of duties devolving upon all the staff employed at the station according to rules, safe working instructions and Station Working Rules. He shall see that all signals, points, L.C. Gates and whole machinery at the station are in proper working order. He shall report all defects to the concerned officials. He shall satisfy himself that the staff employed under him at this station are thoroughly conversant with Station Working Rules and perform their duties correctly. It is his personal responsibility to maintain the Station Working Rules, other rule books and the Assurance Registers up to date. He shall see that all records of the station are properly maintained and due statements returns and other corresponding documents are up to date. He shall see that the staff are civil courteous and help full to all users of railway. He shall see that all station premises are kept clear and tidy. He is responsible for booking off all Group 'C' and Group 'D' staff for PME and refresher course/safety camp in their due time.

His special attention is drawn to Chapter-II of GR and SR and GR 5.01 to 5.08 with relevant SRs, Chapter-XXII of Operating Manual. He shall follow the instructions laid down in SR 3.68.01(c) & (d) and SR 14.07.01, Para 2.09 (e) of Block Working Manual. He shall supervise the works of staff and conduct night inspections. Safety meetings and fire drills and report lapses of staff working under him. He shall also ensure that the safety equipments in the station and gate lodge as mentioned in the station working rules are supplied in full and they are good working order with necessary relief stock.

The SS (Supervisor)'s special attention is drawn to the GR 5.01 to 5.23 where details are indicated.

ASSURANCE REGISTER:

All staff before taking up independent charge of their duties at this station shall make a written declaration in the Assurance Register that they have read and thoroughly understood the system in force and must sign such declaration.

No Railway servant shall be entrusted with any duty involving the safety of the public unless the SS (Supervisor) is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS (Supervisor) is responsible to see that all the staff are well conversant with the Station Working Rules of the Station and their signature obtained in the Assurance Register after he is satisfied that they have thoroughly understood the working Rules of the Station. In case of Class-IV staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibility.

The SS (Supervisor) is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Class-III staff and other for Class-IV staff. A duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SS (Supervisor)'s In-Charge.

The declaration is to be renewed in the following cases:

- (i) Whenever there is a change in the Station Working Rules.

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- (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days and over.

1.2 **USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:**

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

1.3 **ACCIDENTS:**

Accidents shall be reported and immediate action shall be taken by the SS (Supervisor) in accordance with the instructions laid down in the Accident Manual. Whenever the SS (In-charge)/SM/ASM receives report of an accident, he shall take all necessary precautionary measures to protect the traffic and shall arrange earliest possible assistance as required at the site of accident. He shall frame the accident message and reports and follow up all safety principles without delay.

1.4 **SS (In-Charge):**

He shall work train passing duties. He shall test the working of the reception signals daily during the day when there is no train due to arrive/leave the station. He shall also test the working of points, crossings etc. and record the result in the SM's diary. He shall record in the diary the condition of all the running lines, sidings and caution orders in force at the time of handing over charge. These entries shall be countersigned by the SS/SM/ASM coming on duty and taking over charge that the Station Master on duty who makes an entry in the train signal register shall continue till all the entries pertaining to the trains are completed vide SR 14.07.01. He shall promptly bring to the notice of SS (Supervisor)'s all irregularities and accidents in course of his shift duty. During the absence of SS (In-Charge), the duty of SS (In-Charge) will devolve on him. His special attention is drawn to Chapter-II of GR - 1976 (Revised-2010) with relevant SRs and GR 5.01 to 5.08 with relevant SRs.

1.5 **ASST. STATION MASTER/STATION MASTER:**

He shall work in train passing duties. The ASM/Station Master on duty shall record in the diary the condition of all the running lines, siding and caution orders in force at the time of handing over charge. These entries shall be countersigned by the ASM/SM coming on duty and taking over charge that the Station Master on duty who makes an entry in the train signal register shall continue till all the entries pertaining to the trains are completed vide SR 14.07.01. He shall promptly bring to the notice of SS (In-Charge) all irregularities and accidents in course of his shift duty. During the absence of SS (In-Charge), the duty of SS (In-Charge) will devolve on him. His special attention is drawn to Chapter-II of GR - 1976 (Revised-2010) with relevant SRs and GR 5.01 to 5.08 with relevant SRs.

1.6 **TRAFFIC POINTSMAN/TOKEN PORTER:**

He shall work under the instructions of SM on duty and follow the GR 02.05 to 2.11 and other relevant rules laid down in GR and SR.

He shall remain responsible for:

- i) Correct setting and locking and crank handling of points for reception/dispatch and shunting operation.
- ii) Coupling and un-coupling of vehicles.
- iii) Protection of line in an emergency.

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- iv) Piloting and hand signaling of trains when necessary and handing over caution orders/or any other line clear authorities to the Loco Pilot and guards of the trains.
- v) Attending off side to observe safe running of run through trains at stations and correct display of hand signals and ringing the station bell.
- vi) Securing of vehicles, as directed, protection of vehicles of a train.
- vii) Being conversant with the layout of the yard and compliance of rules relating to shunting operation.
- viii) Observing General Rules 5.13 to 5.21 and relevant Subsidiary Rules during shunting.
- ix) Cleaning and lighting of hand signal lamps if required.
- x) Loading and un-loading of guard box, if required.
- xi) Cleaning of SM's office, room furniture and equipments in the Office.
- xii) Carrying messages, call books etc. where a separate call boy messengers are not posted.
- xiii) Working as fog signal man as and when required.
- xiv) Filling up the fire buckets with sand/water.
- xv) Getting train interact arrival register (T/1410) signed by the Guard as and when required.
- xvi) Any other duties entrusted to him by the SM on duty from time to time.

GENERAL

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

APPENDIX 'E' TO STATION WORKING RULES OF ANGUL STATION

A list of Essential Safety Equipment's which should be kept readily available in good working order with necessary relief stock.

Sl. No.	Description	Station
1.	Detonator Signals	20
2.	Battery operated LED based flashing lamp	6
3.	Hand signal Flags	6 set (6 Red & 6 Green)
4.	Safety chain with Padlocks.	6
5.	Clamps with padlocks	12 (4 at station and 4 in each goomty)
6.	Skids (i) Iron Skid -3 (ii) Wooden Skid-3	6
7.	Fire and Sand Buckets.	7
8.	Reminder Collar	8
9.	Motor Trolley on line label.	2
10.	Fire extinguisher	2 (DCPT).
11.	First Aid Box	1
12.	Stretcher	1
13.	Block Suspension Board	3
14.	Power Block Collar	5

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APPENDIX 'F' TO STATION WORKING RULES OF ANGUL STATION

RULES FOR WORKING OF DK STATIONS HALTS, IBH, IBS, AND OUTLYING SIDINGS

- 1.1 **MID-SECTION OUTLAYING SIDING:**
There is no mid-section siding on either end of block section
- 1.2 **IBH, IBS/DK STATION:**
There is no IBH or IBS or DK station on either end of block section
- 1.3 **HALT STATION:**
There is no halt station on either end of block section

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