

EAST COAST RAILWAY
KHURDA ROAD DIVISION

No. 37

STATION WORKING RULES OF GHANTIKAL NIDHIPUR STATION

B.G. Station:

Date of Issue: 20.01.2014

Date brought in force:21.01.2014

NOTE:

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

1.0 STATION WORKING RULE DIAGRAM:

The Station Working Rule diagram No. SI/WRD/21100 based on CSTE/East Coast Railway and Signal Interlocking Plan No. SI/21100 ALT-'D' 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 number and signals when reporting accidents.

2.0 DESCRIPTION OF STATION:**2.1. GENERAL LOCATION:**

GHANTIKAL NIDHIPUR (Code: GHNH) is a 'B' class three line station on the Bhubaneswar-Talcher branch line electrified (BG) section with Single line section towards Bhubaneswar and Double line section towards Talcher in Khurda Road Division of East Coast Railway. It is situated at Km. 432.460 from Howrah via RJGR. The station is provided with Standard-III (R) Interlocking and is equipped with Central Panel/VDU and Multiple Aspect Colour Light signals. The station is worked under Absolute Block System of GR & SRs.

[Refer GR. 8.01 (1) (a), (b), (c), 2 (b), 8.03 (1), (a), (b), (c) (ii), (2) (a),(b), (c)(ii), 8.05(2) (3), 8.06,8.09,8.10,8.12,8.13, 8.14, 8.15 & 8.16]

2.2.1. BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLYING SIDINGS:**2.2.2. BLOCK STATIONS ON EITHER SIDE AND THEIR DISTANCES:**

GHANTIKAL NIDHIPUR station is situated between RADHAKISHOREPUR (Code: RQP) at RJGR end situated at a distance of 6.255 Km. and NARAJMARTHAPUR (Code: NQR) at BBS end situated at a distance of 7.70 Km.

2.2.3. IBH/IBS/OUTLYING SIDING/DK STATION:

NIL

2.2.4. PASSENGER HALT:

Sarpeswar (Code: SPSR) PH is situated at Km. 436.7 F/HWH between GHNH-NQR.

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
RQP-GHNH UP Direction	UP Advanced Starter Signal No. 17 of RQP station.	Outermost facing point No. 21A of GHNH Station.

(P.K.DAS)
DSTE/PROJ/BBS(B.PANDA)
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GHNH-RQP DN Direction	DN Advanced Starter Signal No.18 of GHNH station	Outermost facing point No. 22A of RQP Station.
GHNH-NQR Single line section	UP Advanced Starter Signal No.19 of GHNH station	DN Advanced Starter Signal No.7 of NQR station .

(b) **STATION SECTION:**

Station Section	The Point from which the 'Station Section' Commences	The Point at which the 'Station Section' end
UP Line	Outermost facing point No. 21A.	UP Advanced Starter Signal No.19 of GHNH
DN Line	UP Advanced Starter Signal No.19 of GHNH	DN Advanced Starter Signal No.18 of GHNH

(c). **STATION LIMIT:**i. **UP LINE:**

UP Inner distant signal of GHNH to UP Advanced Starter Signal No. 19.

ii. **DN LINE:**

DN Inner distant signal of GHNH to DN Advanced Starter Signal No. 18.

2.4 GRADIENTS:a) **TOWARDS RAJATHGARH END: (UP AND DN LINES)**

From	To	Gradient
CSB	CH:46.0m	LEVEL
CH:46.0m	CH:669.0m	1 in 400 'R'
CH:669.0m	CH:851.0m	1 in 450 'R'
CH:851.0m	CH:1201.0m	LEVEL
CH:1201.0m	CH:1588.0m	1 in 150 'R'
CH:1588.0m	CH:1766.0m	LEVEL
CH:1766.0m	CH:3181.0m	1 in 150 'R'

b) **TOWARDS BBS END: (FOR DN LINE)**

From	To	Gradient
CSB	CH:106.00 M	Level
CH: 106.00 M	CH: 268.00M	1 in 400 'R'
CH:268.00 M	CH: 542.667 M	1 in 1150 'R'
CH: 542.667 M	CH: 692.0 M	Level
CH: 692.0 M	CH: 936.00 M	1 in 200 F
CH: 936.00 M	CH: 1424.00 M	1 in 200 R
CH: 1424.00 M	CH: 1533.00 M	Level
CH: 1533.00 M	CH: 1762.00 M	1 in 150 F
CH: 1762.00 M	CH: 2532.00 M	Level
CH: 2532.00 M	Towards Block Section	1 in 200 R

2.5 LAYOUT:

The station is provided with three running lines in the Main yard [namely Common Loop (Line No. 2), Main (Line No. 3) Common Loop (Line No. 4) and one Non-running line (Hot Axle siding). There is one private siding of M/s AARTI Steel siding takes off at RJGR end of the yard.

i. **HOT AXLE SIDING:**

The Hot Axle siding at RQP end of the yard is taken off from line No.4 (DN loop) with double side entries. The siding is isolated from Line No. 4 with provision of a DS at either end. The entrance point & corresponding derailing switch are coupled & operated by an arc lever at site. The entrance point is fitted with hand plunger locks. The hand plunger lock is unlocked by Hot Axle siding key 'A' & 'B' and released by pressing the button No. 31 & common group trans button provided on panel/VDU at SM's office. Reception signals (i.e. 2A, C2A in DN direction, 7B,C-7B in UP direction) & shunt signal No. 7C & Starter signal No. 8 &11 are electrically interlocked in such a way that these signals cannot be taken 'off' if the Hot Axle siding key is taken 'OUT' from the RKT provided at Hot Axle siding location box at site.

PLAT FORMS:

- | | | |
|----|--|------------|
| 1) | Line No. 2 (Common Loop) | :R.L.P.F. |
| 2) | Line No. 3 & 4 (UP main & Common Loop) | : H.L.P.F. |

2.5.1. **RUNNING LINES, DIRETION OF MOVEMENT & HOLDING CAPACITY IN CSL:**a. **DIRECTION OF TRAFFIC:**

The trains coming from RQP end are UP trains and the trains coming from NQR end are Down trains.

b. **HOLDING CAPACITIES:**

Line No.2	Common Loop	696	Meters	(Electrified).	From Starter to Starter
Line No.3	Main	796	Meters	(Electrified).	From Starter to SB.
Line No.4	Common Loop	894	Meters	(Electrified).	From Starter to SB.

2.5.2. **NON RUNNING LINES AND THEIR CAPACITIES IN CSL:**

Hot Axle Siding CSL-76.0m BJ to BJ

2.5.3.a) **ANY SPECIAL FEATURE IN THE LAYOUT:**

NIL

b) **SPECIAL RESTRICTIONS:**

- i). Shunting in the face of an approaching train is prohibited at both ends.
- ii). The overrun line shall not be utilized for the purpose of stabling of vehicles or harboring on engine with or without vehicles. The overrun line may however be utilized as a shunting neck. In case the over run line is obstructed through an accident, no UP/DN trains shall be admitted on the Line No. 2/4 on signals vide SR 3.40.01. Instructions is laid down for admission of trains past defective reception/signal shall be followed vide SR 3.69.03.
- iii). Fly/Loose/Hand shunting is prohibited at this station.

c) **SPECIAL INSTRUCTIONS:**

- i) Before dispatching a DN train from AARATI steel siding, Panel operator must exchange Private Number with SM/GHNH. DN starters of AARTI siding are controlled by S-16 of GHNH.
- ii) Main line (L-3), Common loop lines (L-2 & L-4) are track circuited. In case of failure of track circuit, the trains shall be admitted by taking 'off' Calling-on signal. Clearance of nominated lines has to be ensured physically before taking off Calling-on signal.
- iii) Analog Axle Counter is provided on the steel girder bridge (Br. No.17) portion on DN line. In case of failure of Axle Counter, the trains shall be piloted.

- iv) Whenever a non signal movement has to take place over a point operated by motor whether in facing or trailing direction, SM on duty shall operate the points to normal and reverse setting for the purpose of setting the point. After clamping and padlocking of both ends of points and indications are correctly available further movement may be permitted over the points.
- v) Movement of non-insulated push trolley is prohibited between GHNH-RQP and GHNH-NQR sections vide SR 15.25.04(c).
- vi) In case of failure of Digital Axle Counters provided for monitoring Block Section at both end, the resetting should only be initiated for normalizing the Block Instrument after ensuring complete arrival of the train by physical verification of Last Vehicle by SM on duty.
- vii) SM on duty must ensure the clearance of line from Starter Signal No. 15 to the end of the over run line when point no. 26 is 'NORMAL' before taking 'OFF' UP Home signal for line No. 2.

2.6 **LEVEL CROSSINGS:**

- i). There is a 'Special' class manned Interlocked Level Crossing Gate No. JB-6 situated at Km. 431/3-5 (UP) & 431/6-4 (DN) towards RQP end of the yard. Telephone communication is provided between Gate lodge and SM/GHNH.
- ii). There is a 'Special' class manned Interlocked Level Crossing Gate No. JB-7 situated at Km. 432/32-34 towards NQR end of the yard. Telephone communication is provided between Gate lodge and SM/GHNH.
- iii). There is a 'A' class mid-section manned non-interlocked Level Crossing Gate No. JB-8 situated at Km. 433/17-19 (UP) & 433/20-18 (DN) between GHNH-NQR. Telephone communication is provided between Gate lodge and SM/GHNH.
- iv). There is a 'A' class mid-section manned non-interlocked Level Crossing Gate No. JB-9 situated at Km. 434/22-24 between GHNH-NQR. Telephone communication is provided between Gate lodge and SM/GHNH.
- v). There is a 'A' class manned non-interlocked Level Crossing Gate No. JB-11 situated at Km. 436/30-28 between NQR-GHNH. Telephone communication is provided between the Gateman on duty and SM/NQR.
- vi). There is a 'Special' class manned non-interlocked Level Crossing Gate No. JB-12 situated at Km. 438/24-26 between NQR-GHNH. Telephone communication is provided between the Gateman on duty and SM/NQR.

3.0 **SYSTEM AND MEANS OF WORKING:**

Trains are worked under Absolute Block System by means of SGE type Double Line Lock and Block Instrument for RQP-GHNH & Single line Token Less Block Instrument for GHNH-NQR section. The Block Instruments shall be operated by Station Master on duty and keys of the Block Instruments shall remain under personal custody of SM on duty. The authority for the Loco Pilot to proceed is taking 'OFF' of the last stop signal. [Refer Chapter-XIV of GR & SRs, Chapter-V & VI of Block Working Manual and GR 14.08(a)]

4.0 **SYSTEM OF SIGNALLING AND INTERLOCKING:**

- 4.1 This Station is provided with Standard-III(R) 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 Office. Calling-on signals are provided below Home

signals (i.e. in both UP & DN directions) 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, siding key, 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).

(a) **CRANK HANDLE:**

When any point fails to operate normally by the route setting operation through panel it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per Operating Manual Para 20.06.

CRANK HANDLE CONTROL POINTS

CH-1	21A/B
CH-2	22A/B, 26A/B.
CH-3	23A/B, 25A/B, 27A/B.
CH-4	29A/B.

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

SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency Crank handle register shall be maintained by the SM on duty at the station as per Para 20.06 (d) of the Operating Manual. Correct setting clamping and padlocking of the points devolve on the SM on duty. (Details of use of Crank Handle will be as per Appendix-'B').

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

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

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

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit 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 switch C-1 or C-2 or C-7 or C-9 (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. C-1 cannot be taken 'OFF' unless slot 1 of Aarti siding is received. 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.

NOTE:

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

- (c) **SHUNT SIGNALS:**
Back shunt signals 4A/B/C & 5A/B are provided at BBS and RJGR end respectively for shunting purpose. Sh- 7A/B/C is provided below signal No. 7 for shunting purpose.
- (d) **EMERGENCY CROSS OVER:**
Emergency cross over provided at RQP end of the yard.
- (e) **L.C. GATE OPERATION:**
Details described in Appendix-'A'.
- (f) **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. A push button (Black with Red dot) for emergency point operation is provided on the top of the panel. If such operation is necessary, the SM on duty, after ensuring that SM's emergency point key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL' or 'REVERSE'. All such operations will be registered in the emergency point operation counter. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose.
- (g) **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.
- (h) **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 Yellow light will be lit indicating that the timer is working. After 120 seconds, the Yellow light along with the Yellow strip of light will disappear suggesting that the route has been released. In case the route illumination (white strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to 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 register 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.

(i) **TRACK CIRCUITS:**

Entire station section is track circuited. In addition short length track circuits in advance of Advanced Starter Signals in both the directions are also provided. For Calling-on signals (7 Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals is also track circuited (i.e. 19AT and 18AT) in UP and DN directions respectively). Normally the panel is blank except point and Block section indication. Indications for the above track circuits are available on panel at SM's office. When a signal is cleared, the route indication "WHITE" appears for the particular route set and Red light appears as the train occupies the track circuit.

(j) **AXLE COUNTER:**

- i) The Section containing steel girder bridge between trailing point No.22A and UP advanced starter signal No.19 is monitored by Analog Axle counter system.
- ii) Both UP & DN lines of the Section between GHNH-RQP and the section between GHNH-NQR is monitored by Digital Axle counter system. These Digital Axle Counters are provided for Last Vehicle check on Block Sections for respective lines between GHNH & RQP stations & between GHNH-NQR stations.
- iii) These Analog and Digital Axle counter systems counts the Axles 'IN' and counting axles 'OUT' in the monitored bridge section which indicate whether the concerned section monitored by analog axle counters are clear or occupied.

Fiberglass trolley wheels are to be provided for push trolleys in lieu of trolley suppression track circuits.

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

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of the train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and necessary action as per GR.14.13 is to be followed.

The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, Advanced Starter signal shall not come to OFF and the concerned instrument shall remain locked in last operated position.

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the Train has arrived complete with its Last Vehicle at the receiving station, by exchanging Private Number then resetting to be complied with.

(Details of resetting procedure given in APPENDIX-'B')

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

The relay room should be kept locked with two separate locks. The arrangement should be such that one key is kept with on duty SM and other key with Maintainer. Whenever required, the SM shall hand over the key to Maintainer with proper acknowledgement in basement/relay room register. The maintainer on receipt of key from SM may use the same and key in his custody to open the basement/relay room by inserting key one after another separately into earmarked locks. After completion of the work, the basement/relay room is to be locked using both the keys separately and designated key to be handed over to the SM. The details of the transactions are to be properly recorded in basement/relay room register maintained at the station and duly signed by the SM and Maintainer respectively.

4.3 **POWER SUPPLY:**

- a. An changeover panel is provided in the Station Master's Office with the three power supplies viz. UP AT, DN AT and Local for automatic changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the supply. In case of failure of auto mode the SM on duty shall turn the concerned switch in the auto changeover panel to the required position for manual operation. He shall immediately inform the electrical control for its rectification.
- b. In manual mode the change over switch will be kept towards UP AT or DN AT position. Whenever power block is to be given on the line, the on duty SM must ascertain that power is available on the other AT.
E.g.: If power block is to be given on the UP line, DN. AT must be available and vice-versa.
- c. In case of failure of one of the AT supply without any power block, the on duty SM. has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is down and when tripped it goes up). In case of failure of both AT supplies, the Local supply shall be utilized by operating the switch.
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.
- d. Whenever there is a failure of power supply in one AT the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply on both ATs and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

- e. 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.

In case of AT/GRIDCO Power failure the IPS takes care of the signaling system approximate for 6 to 8hrs. 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 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. Details indications and alarm have been described below:

SM INDICATION PANEL FOR IPS:

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.

Since both ATs are available, DG is not provided at this station.

5.0 TELECOMMUNICATIONS:

- a) The Station is connected to CTC-PRDP, BRAG-KIS (via NQR), BRAG-KIS (via CTC) Control Circuit by a telephone.
- b) Telephone attached to Block Instruments for GHNH-RQP & GHNH-NQR Section.
- c) Telephone communication is provided between the Gate Lodge at Km. 431/6-4, (DN), 431/3-5 (UP), 432/32-34, 433/17-19 (UP), 433/20-18 (DN) and 434/22-24 and SM/GHNH.
- d) Magneto Telephone is provided between the SM/GNHH and the Panel operator/Aarti siding.
- e) One mobile phone shall be kept at panel operator/Aarti siding for communication with SM/GHNH.
- f) BSNL telephone is provided at this station.
- g) The station is connected to BRAG-TLHR traction Control.
- h) VHF set is provided at this Station.
- i) Telephone communication is provided between SM/GHNH & UP & DN CH location boxes.
- j) Telephone communication is provided between Station Master & Hot Axle siding.

NOTE:

- a. For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.

- b. VHF & walkie-talkie sets should not be used for unnecessary discussion with Loco Pilot/Guards and any other staff.

6.0 **SYSTEM OF TRAIN WORKING:**

The movement of trains is controlled by section controller on duty whose orders shall be complied with provided they do not contravene any provisions of General Rules, Subsidiary Rules, Station Working Rules, Block working manual, Operating 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	1 (One)	In each day shift
SM/ASM	1 (One)	In each night shift
Traffic points man	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 Station Supdt's office and in Gate lodge for traffic gateman (Details of duties are given in Appendix-'D').

a) **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 the outermost facing point and advanced starter signal in each direction.

b) **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 Station Supdt. 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 Station Supdt. 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 Station Supdt. 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 Station Supdt.

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

6.2 **CONDITIONS FOR GRANTING LINE CLEAR:**

- Before granting a line clear to a train the SM shall ensure that:
- (a) For Double Line:-
 - (i) The whole of the last preceding train has arrived completely inside the outermost facing points,
 - (ii) All necessary signals have been put back to 'ON' behind the said train.
 - (iii) The line is clear up to edge of the L.C. Gate at Km. 431/3-5 (UP) & 431/6-4 (DN) for UP Trains.
 - (b) For Single Line:-
 - (i) The whole of the last preceding train has arrived completely inside the outermost facing points,
 - (ii) All necessary signals have been put back to 'ON' behind the said train.
 - (iii) The line is clear up to edge of the L.C. Gate at Km. 432/32-34 for DN Trains.

NOTE:

- i) If the light of the reception signal is found 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 a DN train, the SM on duty at GHNH shall ensure the closure of the L.C. Gates at Km. 433/20-18 & Km. 434/22-24 from the gatemen on duties under exchange of private numbers separately.

RECEPTION OF TRAINS:

Reception of trains into GHNH yard: Before admitting a train on any line, it must be ensured that the correct route set indication for the respective line shows 'Yellow' indication in the illuminated panel diagram. To receive a train for which line clear is given, the Station Master on duty shall nominate a clear line in consultation with the Section Controller on duty. He shall personally satisfy himself that the nominated line is clear and free from all obstructions by seeing the panel indication or by physical verification of the nominated route in case of failure of track circuit.

He shall suspend all non-isolated shunting and thereafter set the points of the nominated route by means of push button switch provided on the control panel. He shall then verify from the visual indication available in the panel that points are set to the desired route. The interlocked L.C. Gate is to be closed and the key is to be transmitted to panel through EKT.

Unless the panel indication for the concerned line is 'Clear' even with other conditions satisfied, the operation of panel control button by the Station Master on duty will not permit the concerned Home signal to be taken "OFF".

However, reception of trains will be possible in such case with "Calling-on signal" provided below Home signal. Unless the first track circuit in advance of home signal does not show Red indication, Calling-On signal of the concerned route cannot be taken off.

The Station Master on duty shall then operate the concerned push button on control panel for taking "OFF" the reception signal. He shall then verify on the panel that the correct reception signal is taken "OFF". Signal No. 1 A is interlocked with signal No. 9 A/B. Unless signal No. 9 A/B is taken off, signal No. 1 A cannot be taken off.

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

NIL

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

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

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

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

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

Whenever trains are to be admitted on an obstructed line 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.

6.2.1.3. **RECEPTION OF TRAIN ON NON-SIGNALLED LINE:**

Before receiving a train on non-signaled line, the SM shall ensure that

- a. The train is brought to a stand at the first stop signal.
- b. The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- c. All points over which the train has to pass are correctly set, the facing & trailing points are clamped and padlocked.
- d. The Loco Pilot is authorized to pass the approach stop signals at 'ON' through a written authority i.e. T/369 (3b). [Refer GR 5.10 & SR 5.10.01].

6.2.1.4. DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:

Whenever a train is to be dispatched from a non-signaled line, a starting order on form T-511 shall be given to the Loco Pilot to start from the non-signaled line. [Refer SR 5.11.01].

6.2.1.5. DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:
NIL**6.2.1.6 ANY OTHER SPECIAL CONDITIONS FOR RECEPTION OF TRAINS:**

- (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 trains shall be admitted by taking off Calling-on signal. The clearance of the nominated line has to be ensured physically before taking off Calling-on signal.

6.3 CONDITIONS FOR TAKING “OFF” APPROACH SIGNALS:

The SM on duty shall nominate a clear line not only up to the starter but also for an adequate distance beyond it for reception of trains. [Refer GR 3.36, 3.38, 3.40, 3.47, 4.17 and SR thereto and Block Working Manual].

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO “ON”:

If in an emergency a reception signal has to be put back to 'ON' position when a train is approaching it, the route over which the train would pass shall not be altered until the train has come to a stand except to avert an accident. In case of departure signal, before changing the points or allowing any other movements, the Loco Pilot of the train must be advised. [Refer SR 3.36.02 (a) & (b)]

6.4. SIMULTANEOUS RECEPTION/DESPACTH, CROSSING AND PRECEDENCE OF TRAINS:

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

1	Reception of an UP train on line No.2 (common loop).	Dispatch of an UP train from line No.3 or 4 OR reception/dispatch of a DN train on/from Line No.3 or 4 or ASS.
2	Reception of a DN train on line No.2 (common loop).	Dispatch of a DN train from line No.3 or 4 or ASS OR reception of an UP train on ASS.
3	Reception of a DN train on line No.3(Main Line).	Reception of an UP train on Line No.2.
4	Reception of a DN train on line No.4(Common Loop).	Dispatch of a DN train from Line No.2 or 3 or ASS OR Reception of an UP train on Line No.2 or on ASS.

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

FOR UP TRAINS:-		
Line Number	From	To
2. Common Loop	Common Loop Starter signal No.15	Up to the end of the over run line when point no.26 is normal.
3. Main	Last trailing point 22A	Up to UP Advanced Starter Signal No.19 (Keeping gate at Km.432/32-34 in closed condition).
4. Common Loop	Last trailing point 22A	Up to UP advanced starter signal No.19 (Keeping gate at Km.432/32-34 in closed condition).
FOR DOWN TRAINS		
2. Common Loop	Common Loop starter signal No.10	Up to the end of the over run line OR Up to UP advanced Starter signal no.18.
3. Main	Main line starter signal No.12	UP advanced Starter signal no.18.
4. Common Loop	Common loop starter Signal No.8	Up to the end of the over run line OR Up to UP advanced Starter signal no.18.

6.5 **COMPLETE ARRIVAL OF TRAINS:**

The entire block section between GHNH-RQP and GHNH-NQR is monitored by axle counter system and the position of the block section whether occupied or clear is indicated in panel board at SM office. As soon as train enters into that block 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 the station without confirming the Last Vehicle Indicator, the SM on duty shall advise the Station in advance to stop the train for last vehicle verification and he need to withhold closing of block section in rear for the concerned section. Then 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 train may be dispatched

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In case of failure of Axle counter at either end of block section, the traffic gate man on duty shall ensure that the train has arrived complete and 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 4.16.04 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. In case of double line section, train passing on adjacent line shall be stopped and Guard and Loco Pilot shall be issued with caution Order to proceed cautiously and stop short of any obstruction as per SR. 4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the SM on duty shall take action in terms of SR.15.25.03 (b) (vi).

6.6 **DESPATCH OF TRAINS:
FROM GHNH YARD:**

The Station Master on duty having obtained line clear to a 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 is worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed. The interlocked level crossing gate shall remain closed against road traffic for dispatch of UP train & reception of DN trains. [Refer SR 4.23.02 & 4.25.02].

NOTE:

- (i) Before dispatching of an UP train into GHNH-NQR block section, the SM on duty at GHNH shall ensure the closure of the L.C. Gate at Km. 433/17-19 and 434/22-24 from the gatemen on duties under exchange of private numbers separately.
- (ii) Before dispatching of an UP train into GHNH-NQR block section, the SM on duty at GHNH shall ensure the closure of the L.C. Gate at Km. 436/30-28 from SM/NQR under exchange of private number.
- (iii) The L.C. Gate at Km. 438/24-26 is having telephonic communication with SM/NQR. Before dispatching an UP train into GHNH-NQR block section, SM/GHNH shall advise SM/NQR the number description, direction and expected time of passage of the train at the gate under exchange of private number.
 - a) Such advice shall be given before obtaining line clear.
 - b) SM/NQR shall in turn convey the same advice to the gatemen, under exchange of private numbers separately.

- c) Gatemen shall close the gates and thereafter give their private numbers to the SM/NQR.
- d) Only then shall SM/NQR grant line clear to SM/GHNH. [Refer SR 16.03.03 (c), (b)]

6.7 **TRAINS RUNNING THROUGH:**

The procedure detailed in Para 6.4, 6.5 shall be observed. The Station Master is responsible to observe/watch the condition of the vehicles on a passing train and shall wave green hand signal horizontally until anything wrong is noticed on train. For this purpose the Station Master on duty shall stand in such a position that he sees a clear view of the passing train and that his hand signals can clearly be seen by the Loco Pilot and Guard of the train. He shall also depute the pointsman on duty to other side for passing the train. The SM on duty shall also depute his TPM with hand signals to the other side of the passing train to observe the passing train. He shall show green hand signal horizontally on the other side until anything wrong is noticed on the train. He shall show danger hand signal if he notices anything unsafe for the safe passage of the train. He shall report the same to the SM on duty for taking further suitable action in terms of SR 4.42.02(d).

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. [Refer GR 3.42, 4.17, 4.42 & 4.42.2 & SR thereto]

6.8 **WORKING IN CASE OF FAILURE:**

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

(a) **TRACK CIRCUIT:**

In the event of failure of track circuit in the yard, trains shall be admitted by taking off Calling-on signal. Before taking off Calling-on signal, the clearance of the track must be ensured by physical verification. In the event of failure of track circuits in the advance of Advanced Starter then Lock and Block working will be remained suspended with the concerned adjacent stations till its rectification and trains shall be piloted 'OUT'.

(b) **AXLE COUNTER:**

(i) In the event of failure of axle counter of concerned block section, initiation will be taken for resetting after ensuring the complete arrival of the train by either end SM on duty. After resetting the first train will be piloted 'OUT' to the concerned Block section for normalizing the system of working. Details of operations involved in resetting of axle counter are given in Appendix-'B'.

(ii) In the event of failure of Axle Counter of Girder Bridge Zone, clearance of the zone shall be verified physically by the Traffic pointsman on duty. After physical verification, initiation shall be taken by the SM on duty for resetting.

(c) **BLOCK INSTRUMENT(S):**

In the event of partial/total failure of block instrument, the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer GR 6.02.03,6.02.04 and SR 6.02.06].

During this period, the authority will be T/369(3b)/PLCT with identification number and Private Number issued from the station in advance written both in figures and words for double line/single line section respectively.

(d) **RECEPTION OF TRAIN ON OBSTRUCTED 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 45m from the point of obstruction to indicate to the Loco pilot as to whose the train shall be brought to a stand.

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

Before receiving a train on non-signaled line, the SM shall ensure that

- i). The train is brought to a stand at the first stop signal.
- ii). The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- iii). All points over which the train has to pass are correctly set & both, the facing and trailing end of the points are clamped and padlocked and
- iv). The Loco Pilot is authorized to pass the approach stop signals at 'ON' through a written authority i.e. T/369 (3b) [Refer GR 5.10].

(f). **DEFECTIVE SIGNALS:**

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the 'OFF' position is the final indication that the points are correctly set for the route for which it applies and if it is found impossible to take 'OFF' a signal, the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route. [Refer GR 3.68 to 3.71, 3.80 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 3.49 (4), 3.51 and 3.68 to 3.77]

(g). **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]

(h). **DEFECTIVE INTERLOCKING:**

When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping and padlocking of both facing and trailing points for admission of train. [Refer SR 3.69.03(c)].

(i). **DEFECTIVE/DAMAGED POINTS:**

When any point fails to operate normally by the route setting operation through panel/VDU it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle. For motor operated points shall be followed as per Operating Manual Para 20.06.

CRANK HANDLE CONTROL POINTS

CH-1	21A/B
CH-2	22A/B, 26A/B.
CH-3	23A/B, 25A/B, 27A/B.
CH-4	29A/B.

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

SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency Crank handle register shall be maintained by the SM on duty at the station as per Para 20.06 (d) of the Operating Manual. Correct setting clamping and padlocking of the points devolve on the SM on duty. (Details of use of Crank Handle are as per Appendix-'B').

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

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

Motor trolleys shall be worked as per GR 15.25 & SR 15.25.03 to 15.25.07, 15.25.08 thereto and BWM 5.28, 6.11(2), 6.12, 6.13 and 6.14(2). Material trolleys shall be worked as per GR 15.27 and SRs thereto.

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. A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained. The stable load or loose vehicles are to be secured to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01]

(a) **SECURING OF VEHICLES: -**

As far as practicable, loose vehicle shall not be allowed to stand on the running line. However under unavoidable circumstances, if it is necessary to detach vehicle from a train or to stable a train and leave them standing on the running line, the 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].

(b) **USE OF REMINDER BLOCK COLLARS:-**

Whenever any running line is blocked or when a train is stopped to cross another train or detained for any other reason, even for a short while or during shunting operations, the reminder collars shall be used by the SM on duty on the push button concerned. [Refer SR 3.36.03 (b)]

(c) **ALTERATING OF POINTS TO A CLEAR LINE WHENEVER A RUNNING LINE IS BLOCKED:**

- i). 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.
- ii). 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 facing the direction of approach of the incoming train rather than for a loop occupied by a train whose passenger coach will in case, of collision, receive the impact.

8.0 **SHUNTING:**

8.1 **GENERAL PRECAUTIONS:**

- i) While performing shunting the Loco Pilot shall be given an Authority for shunting in prescribed form T/806.
- ii) Whenever the Authority mentioned in Para (i) above is issued after Block back or forward, the Private Number received from the Station Master at the either end of Block station shall be recorded in the Shunting Authority (T/806) and TSR.
- iii) In case of any non-signaled movement physical verification of the clearance of the cross-over point shall be ensured by Station Master on duty/Shunting staff.
- iv) Points shall not be operated when the vehicle/wagon/engine etc are moving over the point /points during shunting operations.
- v) If the line is not isolated, after taking OFF signal for shunting, no other movement shall be allowed in that direction, on line likely to infringe with the Shunting Line.
- vii) Fouling mark /Track Circuit point area must be kept clear at the end of the shunting.
- viii) During shunting operation the following factors shall also be taken care of, such as gradients, curvature on line, visibility or any other local restrictions.
- ix) The section/sections shall be blocked forward or blocked back as the case may be as per rule, when shunting is to be performed beyond the Station section/into the Block section.
- x) All Shunt Movements shall be made by taking 'OFF' Shunt Signals where ever provided.
- xi) During the time of shunting necessary signals of the line shall be kept at 'ON' position.
- xii) As soon as the shunting is completed, the Shunting Authority (T/806) shall be withdrawn, cancelled and pasted, with the record foil.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

No shunting shall be permitted towards the Block section when Line Clear has been granted for a train unless the line on which such shunting is to be carried is isolated.

8.3 PROHIBITION OF SHUNTING /SPECIAL FEATURES IF ANY:

Hand shunting/Loose shunting and/or fly shunting is prohibited.

8.4 SHUNTING ON SINGLE LINE

The Rules laid down in GR 8. 12 and 8.13 shall be followed. A competent Railway servant shall supervise the shunting and Shunting Authority shall stipulate the limit up to which shunting is permitted.

8.5 SHUNTING ON DOUBLE LINE

On Double Line section, when a train is required to be shunted, an Authority to Shunt on form T-806 shall be issued to the Loco Pilot.

Shunting in Rear Block section.

Shunting may be permitted in the Block section in rear provided the section is clear and Blocked back [GR 8.06(2)].

Shunting in Advance Block section

Shunting may be permitted in the Block section in Advance provided the section is clear and Blocked forward [GR 8.06(3)].

Following a Train travelling away

When the Block section in advance is occupied by train travelling away from the Station, shunting or obstruction may be permitted behind the train. Immediately on arrival of the train at the Block Station in advance, the section shall be Blocked Forward if the shunting is not completed. Sufficient brake power shall be ensured and a competent Rly. Servant deputed to supervise shunting.

8.6.1 SHUNTING IN THE SIDING

While shunting in the siding it should be authorized by issuing T/806 clearly mentioning the limits upto which shunting is permitted as also the lines occupied in shunting. The relevant provisions of GR 5.14 and SRs there to shall be meticulously followed for shunting operations.

8.6.1.1. HOT AXLE SIDING

The hot Axle siding at RQP end of the yard is taken off from line No.4 (Common loop) with double side entry. The entrance point & corresponding derailing switch are coupled & operated by an arc lever at site. The entrance point is fitted with hand plunger locks. The hand plunger lock is unlocked by Hot Axle siding key 'A' & 'B' and released by pressing the button No.31 & common group trans button provided on panel/VDU at SM's office. Reception signals (i.e. 7B, C-7B in Up direction) & shunt signal No.7C & Starter signal No. 8 & 11 are electrically interlocked in such a way that these signals can not be taken 'off' if the Hot Axle siding key is taken 'OUT' from the RKT provided at Hot Axle siding location box at site.

9.0 a) ABNORMAL CONDITION:

The Rules to be observed in the event of abnormal conditions:

(i) **PARTIAL FAILURE:**

In the event of partial interruption/failure of electrical communication instruments, 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 exchanging ID number and supported by Private Number.
- b) Failure/Suspension of Block Instrument or Track Circuit or Axle Counters or telephone attached to the Block Instruments – ‘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 on Double/Single line territory is T/369(3b)/PLCT bearing identification Number and Private Number received from the station in advance written both in figure and words. [Refer SR 6.02.06 & Chapter–III, V & VI of BWM]

(ii) **THE AUTHORITY TO PROCEED IN TO AN 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.
- e) 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.
- f) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which shall include.
- g) Caution order: Existing speed restriction shall be indicated in the Caution Order portion. The speed restriction to 15Kmph during clear visibility and 10Kmph when visibility is obstructed shall be clearly indicated.

- h) An authority to pass the stop signals at 'ON' position.
- i) 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.

(iii) **TRAINS DELAYED IN BLOCK SECTIONS**

If a train carrying passenger does not arrive within 10 minutes or if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control this fact. There after SMs at either end of the Block section shall immediately stop all trains proceeding in to the block section on adjacent line in either direction and warn the Loco Pilots and Guards of such trains by issue of suitable Caution Orders. [Refer GR 6.04 & SRs thereto].

(d) **FAILURE / PASSING OF INTERMEDIATE BLOCK STOP SIGNAL AT "ON"**

NIL

(e) **FAILURE OF AXLE COUNTER /BLOCK PROVING (BPAC)/BERTHING LINE**

When the Block Proving Axle Counter fails to show 'GREEN' indication even after the train clears the Axle counter Zone completely, the Station Master at the receiving end shall inform the same to the Station Master at the dispatch end of the Block section and ensure that the Block section is clear of obstruction by physical verification of the last vehicle of the train through Intact Arrival Register or personally and then adopt the resetting procedure. The detailed procedure of resetting of Axle counters is given in Appendix 'B' which shall be followed without any deviation.

(f) **FAILURE OF 'MTRC'**

NIL

(g) **PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE.**

The detailed procedure for Emergency Crank Handle operation during failure of points is given below:-

- i) Crank Handle keys are normally locked in RKT at Location Boxes at either end and are electrically Interlocked with signals and points. The CH key is inserted in the electrical point machine and the Crank Handle is unlocked. This facilitates insertion of Crank Handle in the electrical point machine and operation of point machine. The Crank Handle is to be taken along with the CH key for manual operation of points. Before taking out the Crank Handle key, SM on duty must make an entry in the Crank Handle register detailing the purpose of use of Crank Handle. Before initiating the use of Crank Handle SM on duty shall physically check if there is any obstruction in the point. After ensuring that the failure of point is not due to any obstruction in the point zone and is clear, he shall use Crank Handle to set the point observing procedure as laid down in OM 20.06.
- ii) Further in case of point operation under Track Circuit failure condition or emergency cancellation of individual route, such an operation shall not be made unless the physical clearance of Point Zone Track Circuit is ensured by SM on duty that the concerned Track Circuit on the nominated route is not occupied by train vehicle or any obstruction and no signal initiated. Emergency Point release Operation Veeder Counter records the next higher number. (Details in Appendix-"B"). This will be recorded in Train Signal Register as well as the Emergency Route release register .

- iii) Until the Track Circuit are restored to normal working, SM on duty is personally responsible to check physically that the nominated reception line is clear and free from all obstructions before receiving a train on that line including point zones and fouling mark.
- iv) When the point becomes defective, SM shall comply with, GR 3.77 and SR 5.01.03. He must notify all concerned for speedy restoration.
- v) When Interlocking fails, the trains shall be worked in accordance with GR 3.68 and SR there to and facing and trailing point shall be clamped and padlocked.
- v) An emergency Crank Handle is kept in SM's Office in a glass front wooden box under lock and seal. Normally this should not be used. In urgency if it is used by breaking the seal it must be intimated to S & T official for immediate resealing. A clear remark shall be made in the diary, TSR, Signal failure register with reasons for its use.

(h) **CERTIFICATION OF CLEARANCE OF TRACK BEFORE CALLING ON SIGNAL OPERATION IS INITIATED**

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

(i) **REPORTING FAILURE OF POINTS, TRACK CIRCUIT / AXLE COUNTER AND INTERLOCKING**

- i) Whenever there is a failure of points, Track Circuit or any other Interlocking gear at the Station, the same shall be reported by SM on duty through a memo to S & T staff on duty for attending the failure and acknowledgement taken. The failure shall be recorded in the Signal Failure register as well as in the Station Diary with a message to the Section Controller.
- ii) S & T staff shall give a written memo after rectification of the fault with date and time. The cause of failure and other particulars should be filled up in the failure register. On receipt of the rectification memo from S & T staff the points shall be tested by operating the panel. Only when SM is satisfied of its proper function, he shall resume normal working (SR 3.51.04). Till the rectification, trains shall be worked as per GR 3.39, 3.51, 3.68 & 3.77 with relevant SRs. The points shall be clamped and padlocked (both facing and trailing) before allowing any movement over such points.

9.1. TOTAL FAILURE OF COMMUNICATION: -

a) **DOUBLE LINE SECTION: -**

- 1. In the event of total failure of communications between GHNH-RQP i.e. when line clear cannot be obtained by any one of the following means stated in order of preference viz. Block Instruments, Track Circuits or Axle counters.
Telephone attached to the Block Instruments.
Fixed telephones such as Railway auto phones & BSNL phones.
Control telephone.
VHF sets.
The following procedure to be adopted for train passing.
- 2. Each train before being allowed into the Block Section should be stopped and the Guard and Loco Pilot of the train apprised of the situation by on duty station master.
- 3. The SM shall give an authority (T/C 602) for working of trains during total interruption of communication on Double line section to the Loco Pilot of each train which shall include.-
 - a) An authority to proceed without 'Line Clear'.

- b) An authority to pass the Last Stop Signal at "ON" position,
 - c) A caution order restricting the speed to 25KMPH by day when view ahead is clear and 10KMPH when view ahead is not clear.
4. No train shall be allowed to enter the Block Section until there is a clear interval of 30 minutes between the train about to leave and the train, which has immediately proceeded.
 5. Fixed signals except the last stop signal may be taken "OFF" for the dispatch of the train and for the reception of the train at the next block station, reception signals may be taken off only after the train has been brought to a stand outside it.
 6. On arrival at the next block station the Loco Pilot shall hand over the authority to proceed without line clear to the SM on duty who will preserve the same for further inspection.

Before resuming normal working when any means of communication is established, SM of either end must satisfy that there is no train in the block section. [Refer SR 6.02.03].

b) **SINGLE LINE SECTION: -**

In the event of total failure of Communications between GHNH-NQR, 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 |

- (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 (T/B 602) 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 S.M. 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. (Refer SR 6.02.04)

9.2 **TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION**

During temporary single line working on one clear line when one line is obstructed between GHNH-RQP, trains shall be worked as per the procedure as detailed below. [Refer SR 6.02.01].

- i) Before introducing single line working the SM on duty must satisfy that the line on which single line will be introduced is clear and free from all obstructions.
- ii) The Lock and Block instrument will be suspended.
- iii) The SM proposing single line working must issue a message with the cause of introduction of single line working, Line on which the single line will be introduced, Source of information about the clearance of the line on which single line will be introduced, Place of obstruction, restriction of speed, If any, assurance about keeping the last stop signal at 'ON' position if the train runs on right lines and in case of wrong line all signals are to be kept at 'ON' position, the number and the timings of last train which arrived or left the Block station issuing the message
- iv) The SM of the other end block section will acknowledge the message and confirm the same by a Private Number.
- v) After obtaining line clear for the trains from the Advance station the SM shall give following documents.
 - (A) An authority(T/D 602) for TSL working on double line T/D 602 indicating there in..
 - (i) The line on which single line is introduced.
 - (ii) The kilo-meterages of obstruction.
 - (iii) Any other speed restriction existing, in the section.
 - (iv) Endorsement to inform all Gang man and Gateman about the single line working (for the first train only).
 - (v) The speed of the first train to be restricted to 25 KMPH subject to other speed restriction.

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DSTE/PROJ/BBS

(B.PANDA)
DOM/KUR

- (vi) An authority to pass the last stop signal at its 'ON' position. The approach stop signals at the station in advance may be taken "OFF". In case a train proceeding on wrong line, the train shall be piloted out and at the receiving station, the train shall be piloted 'IN', on the authority of T/369(3b).

On being ensured that the obstructed line is clear of all obstructions, SM will resume normal working after exchanging message with the SM of the other concerned and supported by private number in consultation with the SCR on duty.

A goods train or an engine may be allowed on wrong line by blocking back the section without introducing single line working. [Refer SR. 6.02.05(g)(i)]

Whenever total interruption of all communication occurs during single line working on double line, the procedure detailed in GR should be followed. [Refer SR 6.02.01]

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

Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provisions 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.
- (e) 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.
- (f) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which shall include.
- (g) Caution order: Existing speed restriction shall be indicated in the Caution Order portion. The speed restriction to 15Kmph during clear visibility and 10Kmph when visibility is obstructed shall be clearly indicated.
- (h) An authority to pass the stop signals at 'ON' position.
- (i) 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)].
- (j) 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.

10.0 **VISIBILITY TEST OBJECT:**

The Line No.2 (Common Loop) Starter signals on either direction during day and night are the visibility test objects for Up and Down lines vide GR.3.61 (2)(b)(iii).

11.0 ESSENTIAL EQUIPMENT AT THE STATION:

(Details are given in Appendix-'E')

12.0 FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG:**FOG SIGNALING:**

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

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

STATION DETONATOR REGISTER (OPT/124):

A Register regarding detonator is maintained at the station.

INSTRUCTIONS:

- a. This register contains the following parts:
 - Part. - I: Particulars of fog signal men posted at the station from time to time.
 - Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.
 - Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.
 - Part – IV: Particulars of issue and testing of fog signals at the station.
- b. As soon as a man is posted to or detailed for duty at a station as a Fog Signalman, the Station Master must satisfy himself that the man is fully acquainted with and understands the rules relating to the placing of detonating (fog) signals at stations during thick or foggy weather. As an assurance of this, the Station Master shall take the signature or thumb impression of such men in the appropriate column of Part - I of this register.
- c. 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.
- d. Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

13.0 WORKING INSTRUCTIONS BETWEEN GHNH AND AARTI STEEL SIDING:**1. DESCRIPTION OF IN-PLANT YARD:**

The details of the in-plant yard are furnished below:-

Line No.	Nomenclature	CSL	From-To
1	Reception line	705 Meters	Starter to Stop Signal.
2	Reception line	689 Meters	Starter to Stop Signal.
5	Steel loading line &	805 Meters	Starter to Stop Signal.

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	Manual loading line		
-	Sick line	60 Meters	FB to DE.
-	Shunting Neck	87 Meters	Point to DE.
-	Shunting Neck	298 Meters	SH to SB.

2. **DETAILS OF AARTI STEEL SIDING:**

- (a) Aarti siding takes 'off' from the point chainage 939.85m at RQP end of GHNH yard and terminated with a dead end.
- (b) One staff of M/s Aarti Steel Limited is deputed at siding panel room in each shift for operation of points & signals from the Panel Board/VDU and giving slot to SM/GHNH.
- (c) All the points in the in-plant yard towards RQP direction are motor operated points. In the event of failure of point No. 31 A/B, the point shall be correctly set, clamped and padlocked by the staff deputed by Aarti siding before allowing any movement over the point. Point No. 35 & Point No. 37 will be spiked permanently in reverse position. All the points in the in-plant yard towards Dead End are hand operated points. Hand point at CH: 141.63m & HPL Point at CH: 607.3m will be spiked permanently in normal condition. The hand point at CH: 240.44m shall be correctly set, clamped and padlocked before allowing any movement over the point.
- (d) The movement of inward and outward traffic of the siding shall be undertaken by Railway locomotives.
- (e) The movement of trains towards in-plant yard of Aarti siding is controlled by Panel Operator at Aarti siding. Dispatching of trains from Aarti siding is controlled by SM/GHNH.
- (f) The authority for movement of a train into Aarti siding is the "off" aspect of Home Signal No.1B. In case of failure of Home Signal, Calling-on-signal No.C1B is the authority for movement of train into Aarti siding. In the event of failure of both Home & Calling-on-signal, all train meant for Aarti siding will be piloted "IN" by SM/GHNH.
- (g) The authority for dispatch of train from Aarti siding is the "Off" aspect of starter signals of the concerned line. All the DN starter signals of ASS siding are interlocked with signal No.16 of GHNH. Unless S-16 is taken off, Starter Signal of concerned route cannot be taken off. Before dispatching a DN train the Panel Operator at Aarti Siding must exchange private number with SM/GHNH. In the event of failure of Starter signal No. 16, the trains shall be piloted "OUT" by SM/GHNH.
- (h) The Panel Operator at Aarti siding is responsible for proper setting of all the motor operated points for reception/dispatch of trains. In case of failure of motor points, the points pertaining to nominated line shall be correctly set, clamped & padlocked by the staff deputed by siding authority under the supervision of Panel Operator of Aarti siding.
- (i) The traffic pointsman deputed by the Aarti siding authority is responsible for correct setting, clamping and padlocking of hand operated points before allowing any movement over them.
- (j) Movement inside the siding shall be under the supervision of on duty Guard. Loco Pilot will observe the traffic signal given by the traffic pointsman deputed by the Aarti siding authority.
- (k) Line No. 1, 2 & 5 are provided with Axle Counters. In case of failure of (Axle counter), Panel Operator of Aarti siding shall ensure clearance of concerned line to SM/GHNH supported by Private Number.

3. COMMUNICATION:

- (i) Magneto Telephone is provided between the SM/GNHH and the Panel operator/Aarti siding.
- (ii) One mobile phone shall be kept at panel operator/Aarti siding for communication with SM/GHNH.

**4. RECORD MAINTENANCE:
WAGON TURN ROUND REGISTER:**

Two separate registers for inward & outward traffic are to be maintained by SM/GHNH with the following columns- Date, Train No., Load, Empty/Load rake arrival time, Placement time, Loading/release time, Placement to release/loading time, Power arrival time, EOT time, Pressure ready time, dispatch time, release to departure time, turn round of the rake & remark.

5. RECEPTION OF TRAINS MEANT FOR AARTI SIDING Ex-RQP:

- i) Before granting line clear to SM/RQP, SM/GHNH shall intimate SCR on duty and inform to the panel operator at Aarti siding giving him the train no. and description of train.
- ii) Panel operator at Aarti siding shall nominate a clear line and give slot to SM/GHNH under exchange of Private Number.
- iii) Thereafter, SM at GHNH shall grant line clear to SM/RQP for the UP train meant for Aarti siding.
- iv) Unless ASS-3 is taken off and slot-1 is received from Aarti siding, Home Signal No. 1B meant for Aarti siding cannot be taken off. Observing the "Off" aspect of Home Signal meant for Aarti siding the Loco Pilot of the train shall proceed towards the in-plant yard of the Aarti siding and stand on the nominated line near dummy starter signal clearing the starter signal.
- v) In case Home Signal cannot be taken "Off" then Calling-on-signal meant for Aarti siding shall be taken "Off". Observing the "Off" aspect of Calling-on-signal, the Loco Pilot of the train shall proceed into the in-plant yard and stop clearing fouling mark. Unless slot-1 is received from Aarti siding, Calling-on signal meant for Aarti siding cannot be taken off.
- vi) In case of failure of both Home & Calling-on-signals, all trains will be piloted "IN" into in-plant yard by SM/GHNH. Before piloting "IN" the train, SM/GHNH shall ensure the followings:-
 - (a) Private Number for reception of the train.
 - (b) Line No. - , on which train will be admitted.
 - (c) Whether the line is clear or not.
 - (d) Name of the Panel/VDU Operator.
 - (e) Name of the signal (s) to which the Loco Pilot shall pass at 'ON' position.
 - (f) Time - The message is given to SM/GHNH.
 - (g) Condition of the point (s) in favour of the incoming train -
 - (i) Point Nos. -
 - (ii) Whether correctly set, clamped & padlocked.

The above form will be kept at GHNH station for issuing piloting 'IN' memo in the event of failure of both Home & Calling-on signal. The form book shall be given by Aarti siding authority to GHNH station. The above details are to be obtained from siding Panel Operator by SM/GHNH through the means of communication available.

6. COMPLETE ARRIVAL OF TRAIN AT THE SIDING:

- i) On seeing the indication of Panel Board/VDU, the panel operator at Aarti siding shall ensure the complete arrival of the train at Aarti siding to SM/GHNH supported by a Private Number. Then the engine will be detached after pinning down of the hand brakes

by the traffic pointsman deputed by the siding authority. The movement of power inside the siding will be done under the direct supervision of Guard. The traffic pointsman deputed by the siding authority shall correctly set, clamp & padlock the hand operated points. The traffic pointsman deputed by siding authority will exhibit hand signal as per the instruction of Guard. The said power will clear load/empty from the siding as per programme, otherwise return light.

- ii) As soon as the Train is ready in all respect the panel operator at Aarti siding shall inform to SM/GHNH to receive the load/empty/light engine.

7. SECURING OF VEHICLES AT THE IN-PLANT YARD:

The vehicles shall be secured by the siding authority whenever required.

8. DESPATCH OF TRAINS FROM AARATI STEEL SIDING:

The Guard of the train shall ensure that the train has the prescribed air pressure vacuum and brake power and it is ready in all respect to start. Then he shall inform the above to the Panel Operator at Aarti siding. Thereafter, Panel Operator at Aarti siding shall inform SM/GHNH about readiness and dispatching of the train. On turn, SM at GHNH shall consult with SCR on duty to dispatch the train from Aarti siding and set the points correctly from the Panel Board/VDU and take "Off" the signals for the outgoing train. Observing the "Off" aspect of Starter Signal of concerned route and intermediate starter signal, the Loco Pilot shall proceed towards Advanced Starter Signal and thereby observing the "Off" aspect of Advanced Starter the train will proceed towards RQP. Unless the intermediate starter signal is taken 'off', starter signal of concerned line cannot be taken 'off'. Before dispatching a DN train Panel Operator at Aarti Siding must exchange private number with SM/GHNH.

In the event of failure of starter signal of line No. 1 or 2 or 5, the Panel Operator shall issue piloting 'OUT' memo to the Loco Pilot to proceed up to intermediate starter signal No. 16. In the event of failure of starter signal No. 16/advanced starter signal No. 18, SM/GHNH will pilot the train as per rules.

9. Berthing portion of line No. 1, 2 & 5 are provided with analog axle counters. Those are L1AXT, L2AXT & L5AXT. Similarly, the point zones of motor operated points are provided with analog axle counters. Those are 31AXT, 33AXT & 35/37AXT. In the event of failure of point zone axle counters or berthing track axle counters, resetting is to be done. Before resetting the same, the Panel Operator on duty has to physically ensure clearance of the concerned axle counter zones.

10. ANALOG AXLE COUNTER AND DESCRIPTION OF RESETTING EQUIPMENT AT AARTI SIDING:

Line No. 1, 2, 5 and point zones are provided with analog axle counters and are grouped as L1AXT, L2AXT & L5AXT and 31AXT, 33AXT & 35/37AXT.

Whenever a particular Axle counter zone is occupied or failed, a visual 'RED' indication appears on the panel/VDU at Aarti Siding. After physical verification if there is no obstruction on the point zones/line then initiations for the setting will be done. If there is no obstruction then 'YELLOW' indication will appear on the panel/VDU. Once the resetting is completed, then 'GREEN' indication will appear and the 'YELLOW' indication will extinguish on the panel/VDU. Veeder counter for each Axle counter zone, SM's reset key common along with one individual push button for loop lines/point zones for resetting is installed at the panel to indicate the occupation/clearance of Axle counters of the full yard.

11. PROCEDURE FOR RESETTING IN THE EVENT OF FAILURE OF AXLE COUNTERS AT AARTI SIDING:

When berthing portions of line No. 1, 2 & 5 point zones are failed 'RED' indication will appear in the SM's panel. The Panel Operator on duty shall physically verify the particular section. After physical verification if there is no obstruction over the line he shall advise to the on duty siding pointsman to open the line/zone Verification box located by the side of the track and press the button. One 'YELLOW' indication will appear in the panel. He shall then press line nominated button. The 'RED' and 'YELLOW' indications will disappear from the panel and 'GREEN' indication will appear.

The Veeder Counter provided on the panel will record next higher number indicating the number of such operations for the particular axle counter section. If 'GREEN' indication does not appear on the reset panel and 'RED' indication continues to appear, the S&T staff deputed by Aarti siding shall be advised for rectification.

One register shall be maintained in the in-plant yard to record every operation of resetting and the number in the veeder counter. In addition, this should be recorded in TSR. While taking over/handing over duties the Panel Operator shall record in the TSR the number displayed in the veeder counter and shall acknowledge the same.

- 12.** In the event of failure of shunt signal provided below starter signal, the authority (T/806) shall be issued by the Panel Operator at the siding.

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 WORKING OF TRAINS IN ELECTRIFIED SECTIONS

APPENDIX 'A' TO STATION WORKING RULES OF GHANTIKAL NIDHIPUR STATION**1.0 WORKING OF 'SPECIAL' CLASS INTERLOCKED LEVEL CROSSING GATE NO. JB-6 SITUATED AT KM. 431/3-5(UP) AND KM. 431/6-4 (DN) TOWARDS RQP END OF GHNH YARD:****1.1 BRIEF DESCRIPTION:**

1	No. of Level Crossing Gate	JB-6
2	Engineering or Traffic gate	Traffic
3	Under control of Station Master or Permanent Way Inspector.	SM/GHNH
4	Location at Km.	Km. 431/3-5 (UP) & 431/6-4 (DN)
5	At station	GHNH
6	In between station	---
7	BG/MG/NG	BG
8	Single line/double line/multiple line	Double line
9	Normal position	Open to road Traffic
10	Interlocked/Non-Interlocked	Interlocked
11	Means of Interlocking	EKT
12	Provision of gate signal at Km.	---
13	Signaling arrangement	Station Stop Signal
14	Means of communication Telephone.	Telephone with SM/GHNH
15	Width of the level crossing gate	9.0m
16	Type of road	--
17	Name of road	GHNH-Khuntuni Road
18	Metalled /Non-Metalled	Metaled
19	Approach road	Metalled
20	Width of the road	9.0m
21	Angle of road crossing (in case of the SKEW gates)	45 ⁰
22	Road gradients (if any)	[a] North/ East Side : 1 : 40 [b] South /West Side : Level
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	12.0m
27	Road surface in between level crossing gates.	Hexagon CC Block surface.
28	Length of rumble strip/ speed breakers.	11.0m
29	Road signs	Provided
30	Speed breakers indication board	Provided
31	TVU	120408, August - 2012
32	Census next due on	August - 2015
33	Demarcation for placement of detonators.	Provided
34	No. of gateman working	03 (Three)
35	Nearest Railway Medical Assistance	Cuttack
36	Nearest Private Medical Assistance available (if any)	Khuntuni.
37	List of equipment available (Yes/No)	Yes.

1.2.A. EQUIPEMENTS TO BE AVAILABLE AT THE GATE:

1.	LED tri-color hand signal lamp	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 pad lock	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.

**1.3. MODE OF OPERATION:
INTERLOCKING & 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 four-lever ground frame is provided at the gate lodge. The key of the L.C.Gate remains in the winch when the gate is in open condition. 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 'X' is to be extracted from the winch, which will be inserted in the 2-GF. When reversed, locks the booms of the gates and releases Key 'Y' and 1-GF. This key 'Y' will be inserted in the EKT and then and 1-GF will be reversed for taking "OFF" UP Home/Calling-on Signals (C-1A/B) & DN Advanced Starter Signal. Station Master on duty will press level crossing control button No. 33 (Chocolate) and group button (release), L.C. Gate closed yellow 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.33 and common group button (Trans) and keep it pressed till such time the Gateman extracts the gate control key 'Y' from the EKT instrument. After getting the Key 'X' 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.33. 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 33 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.

1GF is provided at the gate lodge to put back the concerned signal to danger in case of emergency.

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.

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:

- 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.

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- (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 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.

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- (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 DN 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 para (a) above.

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- 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.
- iv) During failure of LVCD between RQP-GHNH, the traffic gateman on duty shall ensure complete arrival of the train to SM on duty supported by a private number.

1.5 **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 Traffic Points Man 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.
In addition Station Master shall also issue a caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously.
- iv. The train Loco Pilot shall be instructed to pass the gate cautiously, on being hand 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).
- v. In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- vi. The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vii. He should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- viii. Normal working will be resumed only after S&T staff rectify the telephone 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.

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

- (i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates, should be adopted.
- (iii) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- (iv) 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.
- (v) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest.
- (vi) 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.

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1.7 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.

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, LED tri-color 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 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 vehicle 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.

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 'SPECIAL' CLASS INTERLOCKED LEVEL CROSSING GATE NO. JB-7 SITUATED AT KM. 432/32-34 TOWARDS NQR END OF GHNH YARD:

2.1 BRIEF DESCRIPTION:

1.	Number of level crossing gate	:	JB-7
2.	Traffic gate or Engineering	:	Traffic
3.	Under control of	:	SM/GHNH.
4.	Location at	:	Km. 432/32-34
5.	At station	:	GHNH
6.	In between station	:	-
7.	BG/MG/NG	:	Broad Gauge.
8.	Single line /Double line	:	Single Line
9.	Normal position	:	Opened to road traffic.
10.	Interlocked/Non-interlocked	:	Interlocked
11.	Means of interlocking	:	EKT
12.	Provision of gate Signal	:	-
13.	Signaling arrangement	:	Station Stop Signal
14.	Means of communication	:	SM/GHNH
15.	Width of Level crossing gate	:	9.0m
16.	Type of Road	:	---
17.	Name of Road	:	Cuttack-Athagarh
18.	Metal led/Non metal led	:	Metalled
19.	Approach Road	:	Metalled
20.	Width of the Road	:	9.0m
21.	Angle of Road crossing.	:	Square
22.	Road gradient	:	North/East side : 1:50 South/West side : 1:50
23.	Road alignment (Straight / Curve)	:	North/East side : Straight South/West side : Straight
24.	Provision of height gauge	:	Provided
25.	Type of Barrier	:	Lifting
26.	Length of check Rail	:	11.0m
27.	Road surface in between L-Xing gates	:	Hexagonal C.C. Block
28.	Length of Rumbled strip/speed breaker	:	9.0m
29.	Road signs	:	Provided
30.	Speed breakers indication boards	:	Provided
31.	TVU	:	94308, August – 2012
32.	Census next due on	:	August - 2015
33.	Demarcation for placement of destination	:	Provided
34.	No. of gateman working	:	03 (Three)
35.	Nearest Railway Medical Assistance	:	Cuttack
36.	Nearest Private medical Assistance	:	Kakhadi
37.	List of equipment available Yes/No	:	Yes.

2. 2A EQUIPMENTS TO BE AVAILABLE AT THE GATE:

Sl. No.	Items	
01	LED tri-color hand signal lamp	3
02	Hand signal flag Green	1 mounted on stick
03	Hand signal flag Red	3 mounted on sticks
04	Banner flag Red	3
05	Posts for exhibiting Red banner flag	2
06	Spare chains with padlocks	2
07	Detonators	10
08	Gate lamps	2
09	Tommy bar	1
10	Mortar pan	1
11	Spade/Fowrah	1
12	Pick axe	1
13	Tin case for flag	1
14	Can 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 pad lock	2

B 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.

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

This gate is interlocked with all UP dispatch signals and DN reception signals. The interlocking is achieved by means of Electrical key transmission system. The normal position of the gate is open. A four-lever ground frame is provided at the gate lodge. The key of the L.C.Gate remains in the winch when the gate is in open condition. 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.

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INTIMATION TO GATEMAN:

- Before taking off reception/departure/shunt signals, station master shall inform the gateman, the number, description and direction of the train.
- The gateman shall close the gate and transfer the key to the station master. (the detail procedure is described below)
- The reception/departure/shunt 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 'M' is to be extracted from the winch, which will be inserted in the lever No. 2GF. When lever No. 2GF reversed, locks the booms of the gates and releases Key 'N' and lever No. 1GF. This key 'N' will be inserted in the EKT and turned and lever No. 1GF will be reversed for taking "OFF" DN Home/Calling-on Signals (C2-A/B/C), UP Starter Signal No.11,13,15, and Shunt Signal No.4A/B/C. Station Master on duty will press level crossing control button No. 28 (Chocolate) and group button (release), L.C. Gate closed yellow 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. 28 and common group button (Trans) and keep it pressed till such time the Gateman extracts the gate control key 'N' from the EKT instrument. After getting the Key 'M' the Gateman will open the L.C.Gate by normalizing the levers.

Lever No. 1GF is provided at the gate lodge to put back the concerned signal to danger in case of emergency.

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.

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:

- 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, 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 tri-color 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 tri-color 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 para (a) 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.
- iv) During failure of LVCD between NQR-GHNH, the traffic gateman on duty shall ensure complete arrival of the train to SM on duty supported by a private number.

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 Traffic Points Man 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.
In addition Station Master shall also issue a caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously.
 - iv. The train Loco Pilot shall be instructed to pass the gate cautiously, on being hand 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).
 - v. In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
 - vi. The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
 - vii. He should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
 - viii. Normal working will be resumed only after S & T staff rectify the telephone 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.

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

- i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- iii) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- iv) 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.
- v) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest.
- vi) 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.

2.7 **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.

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- 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.

2.8 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, LED tri-color 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 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 vehicle 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.

2.9 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. 2.8 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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3.2.A EQUIPMENTS TO BE AVAILABLE AT THE GATE:

Sl. No.	Items	
01	LED tri-color hand signal lamp	3
02	Hand signal flag Green	1 mounted on stick
03	Hand signal flag Red	3 mounted on sticks
04	Banner flag Red	3
05	Posts for exhibiting Red banner flag	2
06	Spare chains with padlocks	2
07	Detonators	10
08	Gate lamps	2
09	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	Can 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 pad lock	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.

3.3. MODE OF OPERATION:**NORMAL WORKING OF THE LEVEL CROSSING GATE (NON-INTERLOCKED):**

The level crossing gate is normally kept closed against road traffic and it will be opened for passage of road traffic only when it is necessary and safe to do so. The Gateman on duty before opening the gate shall ensure that he has not exchanged any Private Number with the station or if he has exchanged Private Number with the station, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged Private Number with him for

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any movement immediately in the rear of that train or on the adjacent line (s). Before opening the gate, he shall display a banner flag across the track.

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.

(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, 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) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (x) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xi) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xiv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- (xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- (xvi) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xvii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

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(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 tri-color 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.

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(viii) Thereafter, he shall light up the LED tri-color 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 Para (a) 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 the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

3.5 **EXCHANGE OF PRIVATE NUMBER:**

- (i) The normal position of the level crossing gate is "Closed to Road Traffic".
- (ii) The Station Master before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master in assurance of gate being closed & locked against road traffic.
- (iii) The Station Master shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.
- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
- (v) He has not exchanged any private number with the station as per 3.5 (ii) above, or
- (vi) If he has exchanged private number with the Station Master, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged private number with him for any other movement immediately in rear of that train or on the adjacent line (s).
- (vii) Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag/red hand signal lamp ready by his hand to stop approaching train if any.
- (viii) In case the Gateman is not responding on the telephone or incase the telephone becomes defective or private number is not received from the Gateman, the Station Master shall adhere to the procedure prescribed in SR 16.03.04.
- (ix) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag/red hand signal lamp ready in his hand to stop approaching train if any.

3.6 **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.

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- (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 prepare 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.
- (vi) The station master shall advise the gateman through gangman/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.

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

3.8 **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, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate vide GR 16.07.
- (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 ensured 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 Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but 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 staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

3.9 **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. 3.8 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.

4.0 **WORKING OF 'A' CLASS MID-SECTION MANNED NON-INTERLOCKED LEVEL CROSSING GATE NO. JB-9 SITUATED AT KM. 434/22-24 BETWEEN GHNH-NQR:**

4.1 **DESCRIPTION:**

1	No of Level Crossing Gate	JB-9
2	Engineering or Traffic Gate	Engineering
3	Under control of Station Master or Permanent Way Inspector	SSE(P. Way)/BRAG
4	Location at KM	Km. 434/22-24
5	At Station	-
6	In between Station	GHNH-NQR
7	BG/MG/NG	BG
8	Single Line/ Double Line/Multiple Line	Single Line
9	Normal position	Closed to Road Traffic.
10	Interlocked/ Non-Interlocked	Non-Interlocked
11	Means of Interlocking	-
12	Provision of Gate signal at KMs	NIL
13	Signaling arrangements	--
14	Means of Communications Telephone/bell etc.	Telephone to SM/GHNH
15	Width of the Level Crossing Gate	7.5m
16	Type of Road	Village Road
17	Name of Road	----
18	Metaled/ Un-metaled	Non-Metalled
19	Approach Road	Non-Metalled
20	Width of the Road	5.50m
21	Angle of Road Crossing (in case of the SKEW Gates)	Square
22	Road Gradient a. North/East side (if any) b. South/West side	1 : 40 1 : 40
23	Road alignment (Straight/curve) (i) North/East side (ii) South/West side	Straight. Straight.
24	Provision of height gauges	Provided
25	Type of Barriers	Lifting
26	Length of Check rails	9.5m
27	Road surface in between Level crossing gates:	Hexagonal CC block
28	Length of Rumble strip/speed breakers	10.0m
29	Road signs	Provided
30	Speed breaker indication board	Provided
31	TVU : -	39614, August - 2012
32	Census next due on	August - 2015
33	Demarcation for placement of detonators	Provided
34	No. of Gatemen working	Two.
35	Nearest Rly. Medical Assistance	Cuttack
36	Nearest Private Medical Assistance available (if any)	Ghantikal Nidhipur
37	List of equipment available Yes/ No	Yes.

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4.2.A **EQUIPMENTS TO BE AVAILABLE AT THE GATE:**

Sl. No.	Items	
01	LED tri-color hand signal lamp	3
02	Hand signal flag Green	1 mounted on stick
03	Hand signal flag Red	3 mounted on sticks
04	Banner flag Red	3
05	Posts for exhibiting Red banner flag	2
06	Spare chains with padlocks	2
07	Detonators	10
08	Gate lamps	2
09	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	Can 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 pad lock	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.

4.3. **MODE OF OPERATION:****NORMAL WORKING OF THE LEVEL CROSSING GATE (NON-INTERLOCKED):**

The level crossing gate is normally kept closed against road traffic and it will be opened for passage of road traffic only when it is necessary and safe to do so. The Gateman on duty before opening the gate shall ensure that he has not exchanged any Private Number with the station or if he has exchanged Private Number with the station, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged Private Number with him for any movement immediately in the rear of that train or on the adjacent line (s). Before opening the gate, he shall display a banner flag across the track.

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4.4 **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, 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) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (x) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xi) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xiv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- (xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- (xvi) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xvii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

(4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN :**

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- 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 tri-color 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 tri-color 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.

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(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 Para (a) 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 the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

4.5 EXCHANGE OF PRIVATE NUMBER:

- (i) The normal position of the level crossing gate is "Closed to Road Traffic".
- (ii) The Station Master before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master in assurance of gate being closed & locked against road traffic.
- (iii) The Station Master shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.
- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
- (v) He has not exchanged any private number with the station as per 4.5 (ii) above, or
- (vi) If he has exchanged private number with the Station Master, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged private number with him for any other movement immediately in rear of that train or on the adjacent line (s).
- (vii) Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag/red hand signal lamp ready by his hand to stop approaching train if any.
- (viii) In case the Gateman is not responding on the telephone or incase the telephone becomes defective or private number is not received from the Gateman, the Station Master shall adhere to the procedure prescribed in SR 16.03.04.
- (ix) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag/red hand signal lamp ready in his hand to stop approaching train if any.

4.6 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 prepare 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

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the absence of the assistant Loco Pilot, the Loco Pilot may take the assistance of assistant Guard/Guard.

- (iv) In case of an approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The station master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) The station master shall advise the gateman through gangman/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.

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

4.8 **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, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate vide GR 16.07.
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/ 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.

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- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but 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 staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

4.9 **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. 4.8 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.

APPENDIX 'B' TO STATION WORKING RULES OF GHANTIKAL NIDHIPUR STATION

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

This is a 'B' class station provided with Standard –III(R) Interlocking with isolations and is provided with Electronic interlocking system. The points and Signals etc. are power operated from composite miniature central panel or VDU installed in the Station Master's Office. The Station is equipped with Multiple Aspect Colour Light Signaling.

1.1 DESCRIPTION OF PANEL:

The yard layout is depicted on the panel and the panel is fixed parallel to the track so that when the Station Master faces the panel, the yard drawing of the panel corresponds to the actual layout. A Visual Display Unit (Computer) is provided in the SM's office as a stand by option (the description and function of Visual Display Unit is given in Appendix-B1).

1.2 POINT PUSH BUTTON:

Points are normally operated automatically during 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 locked in Normal position, a 'YELLOW' strip light on straight-line indication appears suggesting that the point is in NORMAL position.
- 1.2.2 When a point is set and locked in REVERSE position, a 'YELLOW' strip light in reverse indication appears suggesting that the point is in REVERSE position.
- 1.2.3 When the points of any route have been correctly set and relevant signal is taken 'OFF', 'RED' indication appears near the points indicating that the concerned points are locked either in NORMAL or REVERSE.
- 1.2.4 When the points are neither set nor locked either in NORMAL or in REVERSE correctly, the normal and reverse indication will not be there but the indication will start flashing till such time the point is housed and locked properly in one of the positions. In such case points are to be set both ways by crank handle and clamped and padlocked. This indication will flash during point operation also.
- 1.2.5 All points over running lines are operated by electric point machines.
- 1.2.6 The cause for non-setting of the point in the desired position shall be checked up by the Station Master on duty according to GR and SR.3.68.01(C). If there is a defect other than an obstruction, this point shall be considered defective and action shall be taken for clamping and padlocking of these points in the desired position by the Station Master on duty himself for all trains which pass over the points As per 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) **RJGR END POINTS:**

SL.No.	Button No.	Colour	Description
1.	21 WN	BLACK	Crossover point between Up and Down main line.
2.	23 WN	BLACK	Crossover point between Down main line and AARATI Steel Siding.
3.	25 WN	BLACK	Crossover point between Common Loop(L-4) and DN Main Line.
4.	27 WN	BLACK	Crossover point between Common Loop(L-2) and Down Main Line.
5.	29 WN	BLACK	Crossover point between Common Loop(L-2) and UP Main Line.
6.	CONTROL 31	BLACK	Control on Hot Axle siding

b) **BBS END POINTS**

SL.No	Button No.	Colour	Description
1.	22 WN	BLACK	Crossover point between Main line and Common Loop line(L-4).
2.	26 WN	BLACK	Crossover point between Common Loop(L-2) and Main Line.

1.2.8 **DESCRIPTION OF POINT GROUP BUTTON:**

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

1.3 **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.

DESCRIPTION OF SIGNAL BUTTONS:

SL No	Button No.	Colour	Description
1.	C1 A/B/C	RED WITH WHITE DOT	Up Calling-on signal up to routing signal C-9, C-7 A/B and C- ASS-3.
2.	1 A/B/C	RED	Up Home signal up to routing signal No. 9, 7 A/B and ASS-3.
3.	2 A/B/C	RED	Down Home Signal for Main line and Common Loop lines.
4.	C2 A/B/C	RED WITH WHITE DOT	Down Calling-on signal for Main line and Common Loop lines.
5.	7 A/B	RED	UP Route Signal for Main and Common Loop line (L-4).
6.	C7 A/B	RED WITH WHITE DOT	UP Route Calling-on signal for Main and Common Loop line (L-4).
7.	9	RED	UP Route Signal for Common Loop line(L-2).
8.	C9	RED WITH WHITE DOT	UP Route Calling-on signal for Common Loop line(L-2).
9.	SH4 A/B/C	YELLOW	Shunt signal for Main, Common Loop lines,

10.	SH5 A/B	YELLOW	Shunt signal for Main Line and AARATI Steel Siding,
11.	SH7 A/B/C	YELLOW	Shunt signal for Main Line and Common Loop lines,
12.	8	RED	Common Loop Line Starter (L-4).
13.	10	RED	Common Loop Line Starter (L-2).
14.	11	RED	Common Loop Line Starter (L-4).
15.	12	RED	DN Main Line Starter.
16.	13	RED	UP Main Line Starter.
17.	14	RED	Down Main Line Intermediate Starter.
18.	15	RED	Common Loop Line Starter (L-2).
19.	16	RED	Down starter signal of AARATI Steel Siding
20.	18	RED	DN Advanced starter.
21.	19	Red	UP Advanced starter

SIGNAL INDICATIONS:

The aspects of the signals as displayed 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. Common route buttons are also provided for taking off starters. An individual route button is provided for taking off Advanced Starter for clearing the signal. It is necessary to operate the signal buttons and the concerned route button simultaneously for taking "OFF" concerned signal.

1.4.2 DESCRIPTION OF ROUTE BUTTONS:

SL. No	Button No.	Colour	Description
1.	L2-UN	WHITE	Route button for UP/Down Home Signal for Common Loop Line (L-2).
2.	L2-UN1	WHITE with BLACK DOT	Route button for Up/Down Home signal, overlap set to over run line, Up/Down Calling –on/Shunt signal for Common loop line.
3.	L3-UN	WHITE	Route button for DN/UP Home/Calling-On/ Shunt Signal No 4 for main Line.
4.	L4-UN	WHITE	Route button for UP/DN Home Signal for Common Loop Line (L-4) set to Main Line.
5.	L4-UN1	WHITE WITH BLACK DOT	Route button for Down Home signal set to over run line, UP/DN Calling –on /Shunt signal Nos.4 for DN loop line (L-4).
6.	19- UN	WHITE	Route button for Up advanced starter signal No.19
7.	19AT-UN	WHITE	Common route button for Signal No.11, 13 & 15.
8.	18 UN	WHITE	Route button for DN advanced starter signal No.18.
9.	18AT-UN	WHITE	Common route button for Starter Signal No.14 & 16.
10.	14 AT-UN	WHITE	Common route button for Starter Signal No.8,10 & 12.
11.	1T4UN	WHITE	Route button for signal 1A/C-1A.
12.	ASS1-UN	WHITE	Route button for AARATI Steel Siding.

1.2.9 **MANUAL OPERATION OF POINTS (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. This operation is only possible when concerned route is not set and crank handle lock indication is not lit . For manual operation of points , relevant crank handle key has to be extracted from the RKT location. Station Master on duty shall personally ensure clamping and padlocking all facing and trailing points enroute.

Crank handles are interlocked with signals and interlocking system. The CH push button (Blue) and group button (white with black dot) is provided at the top of the panel board. This button has two indications, viz., WHITE and RED. The WHITE indication suggests that the crank handle key is in its interlocked position of the panel. This is called 'Crank Handle Key' 'IN' indication. The Red indication suggests that the crank handle key is locked and not free for extract from RKT. This is called 'Crank handle key locked' indication. The Crank Handle is normally kept in a locked box fitted in panel room and the key is with SM on duty. This crank handle is Common to all points and is to be taken along with CH key for manual operation of point. For extracting CH key from RKT SM has to press relevant CH button and group trans button simultaneously. The white light besides the CH button starts flashing. After extraction of CH key from RKT by deputing an operating staff at concerned crank handle Location box flashing white light disappears. On extraction of CH key from RKT, the points in that particular group can not be operated from the panel.

After completion of point operation the CH key will be retransmitted to the station electrically by inserting the CH key in RKT at Location box and turned, the white flashing indication appears on the panel board. The flashing will be stopped and steady indication appears on pressing concerned CH button and group release button (white with black dot). Points for manual operation are grouped into four crank handle zones.

1.2.10 **CRANK HANDLE PUSH BUTTON**

1.	CH-1	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 21 along with "GROUP TRANS" Push Button
2.	CH-2	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 22 and 26 along with "GROUP TRANS" Push button.
3.	CH-3	BLUE	To be pressed to extract crank handle key for operation of point No. 23, 25, 27 along with "GROUP TRANS" push button.
4.	CH-4	BLUE	To be pressed to extract crank handle key for operation of point No. 29 along with "GROUP TRANS" push button.

1.2.11 **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 when the concerned point is free. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit shall insert the emergency point operation key and press the emergency point operation button (Black with Red dot) 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.

1.3 **ROUTE SETTING AND INDICATION:**

Route buttons are provided separately on each running line on the panel for initiation of route. Route buttons are also provided for taking off starters. An individual route button is provided for taking off

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Advanced Starter for clearing the signals. it is necessary to operate the signal buttons and the concerned route button simultaneously for taking "OFF" concerned signal. This will set the points of intended route including overlap. When the route is correctly set and signal is taken off "WHITE" strip of light indication appear on track circuits over the route set. These track indications will turn to red as and when the train occupies the track circuit.

1.3.1. **SIGNAL CLEARANCE AND INDICATION:**

Signal clears automatically as per operation stated vide 1.3 as per route setting. For clearing the calling on signal, calling on signal button along with the nominated route button to be pressed.

The aspects of the signals as obtained at any time are shown on the panel on the signal indication along side of the track. The On aspect indications of stop signals are RED and off aspect indications are GREEN on panel. The ON Aspect of distant signal is yellow and OFF Aspect is Green on the panel.

1.3.2. **MISCELLANEOUS PUSH BUTTONS AND KEYS**

1.	SM'S EMERGENCY POINT OPERATION KEY		This Key is to be inserted and operated in the event of Emergency Point operation.
2.	SM'S PANEL KEY.		To lock the control panel to prevent unauthorized operation.
3.	GROUP TRANS BUTTON	WHITE WITH BLACK DOT.	To be pressed to initiate Slot/Crank Handle Or L.C. Gate operation along with concerned Slot / Crank Handle / L.C. Gate Button.
4	GROUP RELEASE PUSH BUTTON	WHITE WITH BLACK DOT.	To be pressed to withdraw / Normalise the control of slot / Crank Handle/ L.C Gate operation along with concerned Slot/ Crank Handle/L.C Gate push Button.
5	POINT GROUP NORMAL PUSH BUTTON	BLACK WITH RED DOT.	To be pressed to initiate "NORMAL" setting of point along with concerned point push button.
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 Adv. Starter and calling on routes after passage of train.
9	SIGNAL LAMP FAILURE / POINT FAILURE ACKNOWLEDGEMENT	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp failure/ point failure Buzzer one for signal & another for point.
10	EMERGENCY POINT OPERATION BUTTON	BLACK WITH RED DOT	To be pressed to operate the point when concerned point zone track circuit/ axle counter fails.
11	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.
12	EMERGENCY GATE RELEASE BUTTON	CHOCOLATE WITH	To be pressed for emergency Gate Release at KM 431/3-5(UP) & 431/6-4(DN)

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	FOR L.C. GATE AT KM 431/3-5(UP) & 431/6-4(DN)	RED DOT.	
13	L.C. GATE CONTROL 33 PUSH BUTTON	CHOCO LATE	To be pressed for extending Control to open L.C. Gate at KM 431/3-5(UP) & 431/6-4(DN)
14	EMERGENCY GATE RELEASE BUTTON FOR L.C. GATE AT KM 432/32-34	CHOCOLATE WITH RED DOT.	To be pressed for emergency Gate Release at KM 432/32-34
15	L.C. GATE CONTROL 28 PUSH BUTTON	CHOCO LATE	To be pressed for extending Control to open L.C. Gate at KM 432/32-34
16	H/A SIDING CONTROL POINT NO.31 PUSH BUTTON.	BLACK	To be pressed along with TRANS button for extracting key from RKT to operate the H/A siding point.
17	Panel/PC switch		Required for selection of operation from PC or Panel.
18	System failure acknowledgement Button.	GREEN WITH RED DOT	To stop the system failure buzzer.
19	SM's A/C RESET KEY		Common Key to be turned for resetting the Analog axle counters the section containing Steel Girder bridge.
20	2AXT_AZVBN Reset Button	BLUE	Button to be pressed for resetting the axle counters for the section containing steel girder bridge.
21	UP BLOCK RELEASE PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block Instrument for section GHNH-RQP.
22	DN train Arrival Ackn.Button.	Chocolate with white dot	To be pressed for acknowledging the complete arrival of a DN train.

1.4 **WESTRACE INDICATION**

A Westrace Indication is provided on the top of the panel for indicating which system of Westrace is working. This EI unit consists of two Westrace systems called system 'A' and system 'B'. These two systems status (ON/OFF) will be indicated separately on the panel. If the Westrace unit is ON, 'GREEN' indication will appear and if OFF 'RED' indication appears. If any one of the "ON" line system fails automatically "OFF" line system will change to 'ON' line with a gap of 120 seconds. A system failure buzzer is provided on the panel board. To stop the Westrace unit buzzer, SM on duty has to press the system failure acknowledgement button provided on the top of the panel and intimate the same to ESM/JE/SE in charge for rectification of failure. Whenever the system changes from A to B or B to A, SM on duty has to release all crank handles LC Gate and siding controls.

1.5 **POINT FAILURE INDICATION (RED) /POINT FAILURE BUZZER/POINT FAILURE ACKNOWLEDGEMENT BUTTON (RED WITH WHITE DOT):**

Whenever there is failure of point due to non-setting, point failure indication flashing light appears near the point button along with point failure Buzzer. The buzzer stops when the point failure acknowledgement button is pressed, but the flashing light above the ACK button shall continue to glow. The flashing light at the concerned point zone can identify the defective point. After the failure is rectified, the flashing light above the ACK button will disappear.

1.6 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.

1.7 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' 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 flashing white light above the emergency route release button will lit indicating that the timer has started. After 120 seconds, the white light along with the Yellow 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.

1.8 SEQUENTIAL (AUTOMATIC) ROUTE RELEASE :-

The Signal routes are automatically released by the passage of train over the route. All the routes will be released on occupation of the berthing track circuit and clearance of the track circuit behind except Calling-on signal and advanced starter signals for which concerned signal button & Signal cancellation button are to be pressed in addition.

1.9 EMERGENCY GATE RELEASE OPERATION (CHOCOLATE WITH RED DOT):

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. 28/33. 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 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.

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 point, route or signal 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 of either point, route or signal will continue to glow until the pressed button is normalised. SM on duty shall try to find out the pressed button for normalisation or otherwise inform the maintenance staff to rectify.

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:

Entire station section is track circuited. In addition short length track circuits in advance of Advance starter Signals and Home signals in both the directions are also provided. For Calling-on signals (91M Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals is also track circuited (i.e. 19AT & 2AXT and 18AT in Up and Down directions respectively). Normally the panel is blank except point and Block section indication Indications for the above track circuits are available on panel at SM's office. When a signal is cleared, the route indication "WHITE" appears for the particular route set and Red light appears as the train occupies the track circuit..

1.13. AXLE COUNTER:

- i) The Section containing steel girder bridge between trailing point No.22A and UP advanced starter signal No.19 is monitored by Analog Axle counter system.
- ii) Both UP & DN lines of the Section between RQP-GHNH and UP/DN line between GHNH-NQR are monitored by Digital Axle counter system. These Digital Axle Counters are provided for Last Vehicle check on Block Sections for respective lines between GHNH & RQP stations & between GHNH-NQR stations.
- iii) These Analog and Digital Axle counter systems counts the Axles 'IN' and counting axles 'OUT' in the monitored bridge section which indicate whether the concerned section monitored by analog axle counters are clear or occupied.

Fiberglass trolley wheels are to be provided for push trolleys in lieu of trolley suppression track circuits.

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

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

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the Train has arrived complete with its Last Vehicle at the receiving station, by exchanging Private Number then resetting to be complied with.

2.1. STATION MASTER's PANEL CONTROL KEY:

The panel is fitted with Station Master's lock up key to prevent any unauthorized operation of the panel.

The Station master on duty is the only authorized person to operate the panel and the panel key must always remain in his 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 SM's key also. However, the provisions, of SR.3.36.02 shall be followed while replacing the signals to 'ON'.

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 one 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 "WHITE" 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 advanced starter signal button shall be pressed along with the advanced starter route button for two to three seconds and released. This will clear the advanced 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 in terms of GR 3.13 (6)(b). A Calling-on signal shows no light in the 'ON' position and Yellow light when taken "OFF". A calling-on signal will be taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line.

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit in rear of the 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 switch C-1 or C-2 or C-7 or C-9 (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. C-1 cannot be taken 'OFF' unless slot 1 of Aarti siding is received. 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.

NOTE:

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

2.5 **RELEASE 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 Down Calling-on signals and Up and Down Advanced starters are to be manually cancelled after the passage of the train to release the route.

2.6. REPLACEMENT OF SIGNALS TO 'ON':

Signals are replaced to 'ON' automatically after passage of a train . 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 by the relevant Home signal and starters.

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

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. 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.

2.8 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(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 nominated route correctly with the help of crank handle during failure of points. He shall clamp and padlock both facing and trailing end points in both cases under the supervision of SM on duty at station.

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 to the 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 of points for admission of the train.
- (2) The keys of padlocks used for 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 gate under exchange of private number from the Gateman on duty.

2.9 PILOTING OF TRAINS - OUT OF STATION YARD :

When the starter signal has become defective, the Station Master shall set the points correctly from the panel or advise the TPM to set the concerned points correctly for the outgoing train with help of crank handle. The TPM on duty shall clamp and padlock both the facing and trailing end points under the supervision of SM on duty in both 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 Advance starter signal becomes defective such signal shall be passed on the written authority on the form T/369(3b)/Paper Line clear Ticket for double line and single line section

respectively. Proceed hand signal shall not be displayed vide SR 3.70.02. The TPM shall hand over the pilot memo in form T/369(3b)/Paper Line Clear Ticket to the Loco Pilot after the train stopped.

NOTE:

1. The SM on duty shall personally supervise the correct setting clamping and padlocking of the facing and trailing end points and ensure the clearance of any obstruction including level crossing gates on the concerned route for dispatch of a train.
2. The keys of the padlock 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 gate under exchange of private number from the Gateman on duty.

3.0. **SHUNTING:**

For shunting back shunt signals and caution aspect of starter signals shall be used. 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 Yellow strip of lights will appear on the route and the concerned shunt signal shall display 'OFF' aspect.

3.1. **SHUNTING IN THE SIDING:**

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

(a) **HOT AXLE SIDING:**

The hot Axle siding at RQP end of the yard is taken off from line No. 4 (Common loop) with double side entry. The entrance point & corresponding derailing switch are coupled & operated by an arc lever at site. The entrance point is fitted with hand plunger locks. The hand plunger lock is unlocked by Hot Axle siding key 'A' & 'B' and released by pressing the button No. 31 & Common group trans button provided on panel/VDU at SM's office. Reception signals (i.e. 7B, C-7B in UP direction) & shunt signal No. 7C & Starter signal No. 8 & 11 are electrically interlocked in such a way that these signals cannot be taken 'off' if the Hot Axle siding key is taken 'OUT' from the RKT provided at Hot Axle siding location box at site.

4.0 **LEVEL CROSSINGS:**

- i). There is a 'Special' class manned Interlocked Level Crossing Gate No. JB-6 situated at Km. 431/3-5 (UP) & 431/6-4 (DN) towards RQP end of the yard. Telephone communication is provided between Gate lodge and SM/GHNH.
- ii). There is a 'Special' class manned Interlocked Level Crossing Gate No. JB-7 situated at Km. 432/32-34 towards NQR end of the yard. Telephone communication is provided between Gate lodge and SM/GHNH.
- iii). There is a 'A' class mid-section manned non-interlocked Level Crossing Gate No. JB-8 situated at Km. 433/17-19 (UP) & 433/20-18 (DN) between GHNH-NQR. Telephone communication is provided between Gate lodge and SM/GHNH.
- iv). There is a 'A' class mid-section manned non-interlocked Level Crossing Gate No. JB-9 situated at Km. 434/22-24 between GHNH-NQR. Telephone communication is provided between Gate lodge and SM/GHNH.
- v). There is a 'A' class manned non-interlocked Level Crossing Gate No. JB-11 situated at Km. 436/30-28 between NQR-GHNH. Telephone communication is provided between the Gateman on duty and SM/NQR.
- vi). There is a 'Special' class manned non-interlocked Level Crossing Gate No. JB-12 situated at Km. 438/24-26 between NQR-GHNH. Telephone communication is provided between the Gateman on duty and SM/NQR.

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

In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be clear of any obstruction for the passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the 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.

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

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:**

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.

8.1 **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.

8.2. **RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:**

After receipt of this information, the sectional Maintainer shall attend to the failure after giving a Disconnection Memo. After rectification of the fault, the Sectional Maintainer shall give 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 department should preplan these works. Field staff and the Inspector of the

section should give to the Station master in writing 'Advance Intimation' about this work in terms of G and SR.15.08.01.

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.

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

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.

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

Before giving the Emergency Crank Handle either for attending failures or for maintenance work by Signal maintenance officials, the Station Master on duty will ensure that the reception and departure signals are put back to 'ON' position. The points for the affected lines 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.

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' position for whatever reason, the concerned last stop signal controlled by the Block Instruments 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 letting. 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 GR.3.61 to 3.72 and relevant SRs vide GR.3.49(4).

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

- i). Axle Counters shall be provided on both Up and Down lines between RQP-GHNH for last Vehicle checking. Similarly Axle counter are also provided for GHNH-NQR block section.

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- ii). The occupation and clearance of the axle counter section are indicated on the panel by 'RED' and 'GREEN' light.
- iii). 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 in either Section.
- iv). Even after completion of reset operation, LVCD Digital Axle Counter will show clear only after the passage of next train. The next train is to be piloted out.
- v). 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.
- vi). A resetting arrangement for the resumption of the track circuit by means of Axle counter under failure condition through co-operative feature of both the SMs on duty at either end Station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the receiving station and is certified in this respect by the ASM at the receiving station through exchange of Private Number.
- vii). Reset arrangements are provided in the operation cum indication panel in the SM's office for sections RQP-GHNH with DLBI and GHNH-NQR with TLBI. The Up & Dn resetting key along with reset push button for either sections are provided on the resetting Panel for resetting the axle counter in case of its failure. Every such operation of the resetting button 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.

14.0. **PROCEDURE FOR RESETTING IN THE EVENT OF FAILURE OF AXLE COUNTER (WITH IN STATION YARD):**

When the steel containing girder bridge analog Axle Counter(2AXT) fails, 'RED' indication will appear in the SM's panel. The SM on duty shall then physically verify the particular section. After physical verification if there is no obstructions over the line he shall advise the on duty TPM to open the line Verification box located by the side of the track and press the button. One 'YELLOW' indication appears in the panel. SM on duty shall then press line nominated button (2AXT-AZVBN) inserting the common resetting key. The 'RED' and 'YELLOW' indications will disappear from the panel and 'GREEN' indication will appear.

The Veeder Counter provided on the panel will record next higher number indicating the number of such operations for the particular axle counter section. If 'GREEN' indication does not appear on the reset panel and 'RED' indication continues to appear, the sectional ESM/JE(S)/SE(s), may be advised that the concerned Axle Counter has failed and to attend for rectification.

The SM on duty Shall pilot the trains if any, till the rectification.

Separate register shall be maintained in the Station to record every operation of resetting and the number in the veeder counter in addition this should be recorded in TSR. While taking over/handing over duties the SM shall record in the TSR the number displayed in the veeder counter and shall acknowledge the same.

15.0. **RESETTING OF DIGITAL AXLE COUNTER WHEN FAILED (FOR SECTION GHNH-RQP & GHNH-NQR)**

After complete arrival of the train, if the Axle counter of the section does not clear or Axle counter section free indication (G) does not appear on the panel the receiving station SM shall appraise the sending station SM through telephone for resetting giving details of last train that has arrived complete at his station and the Block section is clear.

The receiving station shall inform the sending station as to whether the last train that has entered in to the section arrived complete or not. And if arrived fully shall so intimate authenticated by exchanging by Private Number with the sending station.

As Digital Axle counters are provided as LVCD in Block section, resetting is to be done by both of sending and receiving end individually (no cooperation or permission is required from the other station)

The status of the section LVCD i.e. Clear (Green), occupied (Red), Preparatory reset (Yellow) are provided in the reset box. The procedure to be followed for re-setting by both of sending end and receiving end individually is as follows.

- i.) Insert SM's LV reset key turn right
 - ii.) Press LV reset button provided on the panel
 - iii.) Release SM's LV reset key and reset button
 - iv.) Turn left the SM's LV reset key and remove it.
 - v.) The Axle counting system obtains preparatory reset state and preparatory reset indication (Green) glows on the panel.
 - vi.) The counter reading increases by one count after a gap of 5 seconds approximately.
 - vii.) The counter reading should be recorded
 - viii.) One train is to be piloted in the section to make the system normal.
- The SM on duty shall record it in train signal register the resetting operation giving details of train number, time, Private Number exchanged with SM of sending station giving reasons for the resetting operation.

If the Axle counters functioning properly now, then the Block section Clear (Green) indication will appear on the panel and the concerned Block working will be normalized. If the Axle counter section indication does not appear 'Green' and continues to show 'RED' indication, the concerned Block section shall be suspended and failure intimation to be given to sectional signal maintainer/JE/SE(Signal) for early rectification.

NOTE

The piloting out of 1st train in case of preparatory reset not to be recorded in Signal Failure Register.

16.0. **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 glowing properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the Section Controller on duty.

17.0. **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 GR and SR.4.01.01 and 4.01.02.

18.0. **TELECOMMUNICATIONS:**

- a) The Station is connected to CTC-PRDP, BRAG-KIS (via NQR), BRAG-KIS (via CTC) Control Circuit by a telephone.
- b) Telephone attached to Block Instruments for GHNH-RQP & GHNH-NQR Section.
- c) Telephone communication is provided between the Gate Lodge at Km. 431/6-4, (DN), 431/3-5 (UP), 432/32-34, 433/17-19 (UP), 433/20-18 (DN) and 434/22-24 and SM/GHNH.
- d) Magneto Telephone is provided between the SM/GNHH and the Panel operator/Aarti siding.
- e) One mobile phone shall be kept at panel operator/Aarti siding for communication with SM/GHNH.
- f) BSNL telephone is provided at this station.
- g) The station is connected to BRAG-TLHR traction Control.
- h) VHF set is provided at this Station.
- i) Telephone communication is provided between SM/GHNH & UP & DN CH location boxes.
- j) Telephone communication is provided between Station Master & Hot Axle siding.

NOTE:

1. For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
2. VHF & walkie-talkie sets should not be used for unnecessary discussion with Loco Pilot/Guards and any other staff.

**APPENDIX 'B1' TO STATION WORKING RULES OF GHANTIKA NIDHIPUR STATION
VISUAL DISPLAY UNIT (VDU)**

NOTE:

The stand by system (VDU) is also provided with the Conventional panel for the operation of Signals, Points, L.C Gates, Crank Handles, Siding Controls and Resetting of all type of Axle counters.

1.0 SYSTEM OVERVIEW:

In addition to the panel, an operator console (VDU) consists of a Pentium-4 CPU with a high resolution 21" colour monitor, keyboard and pointing device (mouse) are provided. Both the serial ports (Com1 and Com2) in the CPU are connected to the WESTRACE CPU board for exchange of control and indication messages. The Software is installed to display the Station Yard Mimic Panel diagram on the VDU and that it allows access to all functions through pop-up menus. When a particular function is selected, an appropriate Menu will appear on the screen by selecting a required operation clicking by the Left button of the pointing device (mouse) a function (Signal clear and cancellation, Route release, Point operation, Gate release etc.,) can be executed.

The Computer (VDU) or panel any one may be used for controlling and monitoring the station, however indications on the Station yard mimic diagram of VDU and panel will be dynamically updated.

1.1 SELECTION OF CONTROL:

This VDU (Computer) is provided as a stand by of conventional panel for the operation of signals, points, L.C. gates, crank handles, siding controls From the Mimic panel diagram. A Mimic panel diagram will be displayed on the VDU, which is an exact replica of operation cum indication panel and suits the yard plan as per SI plan 21100 ALT-'D'.

One two-position switch (Red colored) is provided on the conventional panel along with the SM's Key used for selection of Panel or VDU called PANEL/ PC Change over switch.

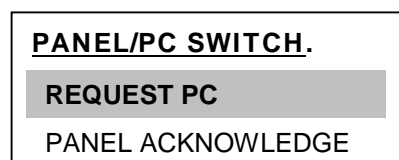
SM of the station can select any of the controls, for the selection of one control to another there are certain procedures to be followed for the control transfer. The procedure to be followed as mentioned below.

1.2 SPECIFICATION TEST INSTRUCTIONS ON GSIM.

VDU PANEL OPERATIONS.

CHANGE OVER FRO PANEL WORKING TO PC.

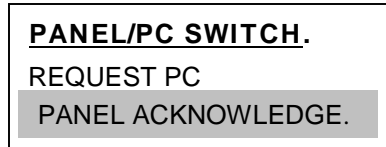
The Control cum indication panel is provided with a key named as PANEL/PC KEY. Now in the VDU monitor click near panel /PC key and the menu will be displayed as below.



Click the "request PC " menu then PC indication will start flashing now in the panel we have to first turn this key fro panel (left position) to PC (right position). PC indication becomes steady now. The mode of working is now changed to PC.

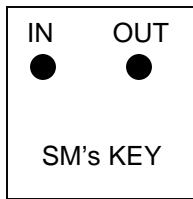
CHANGE OVER FROM PC WORKING TO PANEL.

Now in the control panel please turn the key to panel mode and panel indication will start flashing. Now in the VDU monitor click on panel/PC key and menu will be displayed as below.

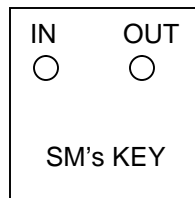


Click the “panel acknowledge” menu then panel indication.

SM KEY IN: To enable signal clearing and point operation etc, we have to activate the SM key in the panel. When the key is IN panel VDU will show the indication as shown below:

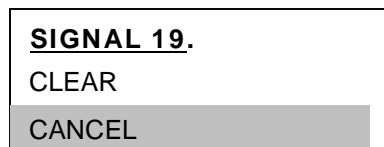
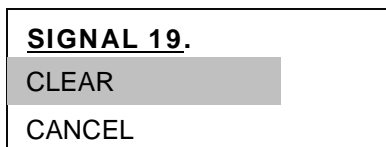


When the key is out in panel VDU will show the indication as shown below.



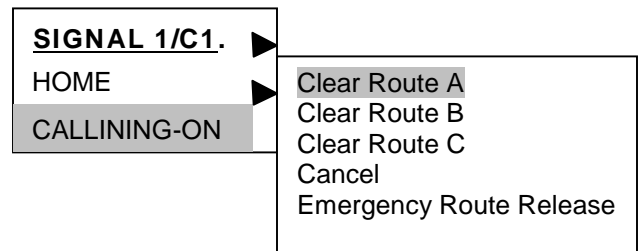
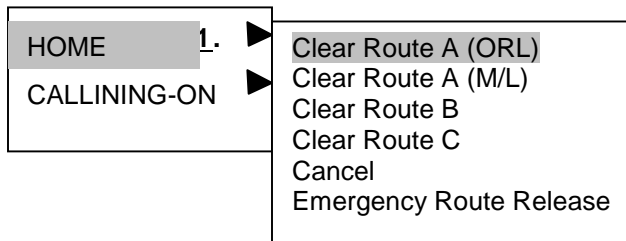
TO CLEAR AND CANCEL AN ADVANCED STARTER SIGNAL.

When we click near the signal a pop-up menu will appear as below.



Once line clear is obtained and to clear the signal click “clear signal “ then the “JKE” indication in yellow colour will appear and signal indication will go to “GREEN”. If we want to cancel the signal select “Cancel signal” in the pop-up menu.

TO CLEAR, CANCEL AND ROUTE RELEASE FOR HOME SIGNAL AND CALLING-ON SIGNAL.



Click on the S1 signal and all the possible routes for main signal 1A (ORL) and Calling-on C1A will be displayed as shown above.

MAIN SIGNAL

- (i). When we click on the “HOME” a sub menu will be displayed. On the sub menu if you click “Clear Route A (ORL) the Main line is selected and hence the concerned route will be set in yellow colour. Signal indication will go to yellow colour depicting the yard status. If yellow lamp will failed at field only in VDU panel and control cum indication panel the yellow indication will flash and NOT in the field.

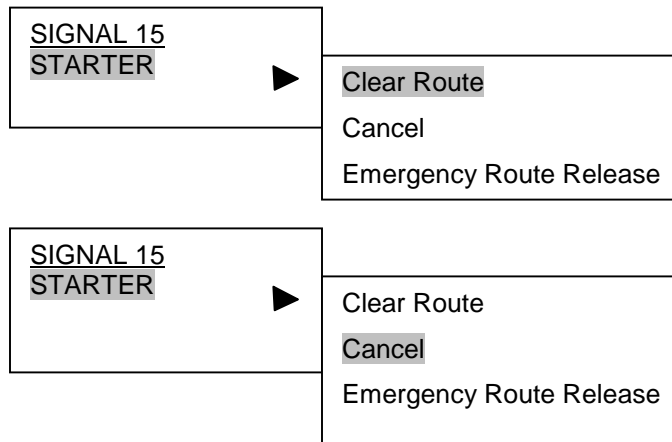
CALLING-ON

- (ii). Calling-on signal will be cleared only when track circuit failure (or) overlap point (or) both track and point failed (or) Main signal lamp failed.
- (iii). To clear a calling-on the train to occupy the rear track 1AT. C1A signal indication is yellow and main signal is in red.

Calling-on yellow indication will be steady after its C1HR picked up and its lamp is lit at field (C1HECR is up).

- (iv). To cancel the signal select “Cancel”
- (v). To release the route select “emergency route release.”
- (vi). As individual button is used in control cum indication panel, here also we provided individual cancellation and emergency route release in each main & calling-on sub-menu’s.

TO CLEAR AND CANCEL STARTER SIGNAL.



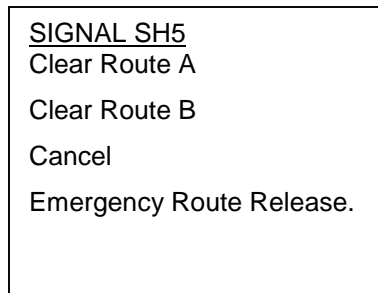
When starter signal with post shunt is there the pop-up menu will appear as shown above. The signal clear is similar to main signal. When route release is applied (either Main or shunt route) the JKE will flash for 120seconds.

Emergency route release is similar to that of main signal.

When we set main signal the overlap point will be locked and will be released after 120 seconds of occupying the berthing track. However emergency release is applied in the following conditions:

- (i). When we apply route release for Home signal when the train not approached the route will be released after 120 seconds till such tie overlap is also help.

TO CLEAR AND CANCEL GROUND SHUNT SIGNAL



The ground shunt SH3 is taken here for example all the menus similar to that of main signals and operations are same. When signal is cleared the vertical lit will go to 45 degrees and in white colour.

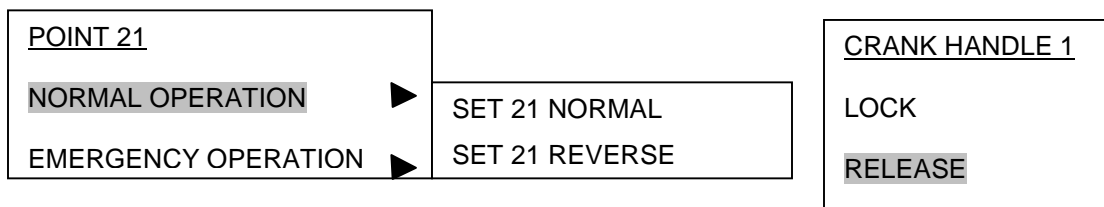
When route release is applied the JKE will flash for 120seconds. After 120seconds route will release.

TO OPERATE A POINT AND CRANK HANDLE.

The typical point operations menu is shown here as common buttons are used in panel (WN + WVN) for normal & (WN+WRR) for operations. In VDU also the menu is indicated as below. The point in normal will go to reverse when click set normal menu and reverse to normal. When we click set reverse menu will appear as shown in figure.

When emergency set normal or set reverse is selected a dialog box will pop up to reconfirm the operation as shown in figure. As common buttons are used (WN+EWN) in panel for emergency point operation.

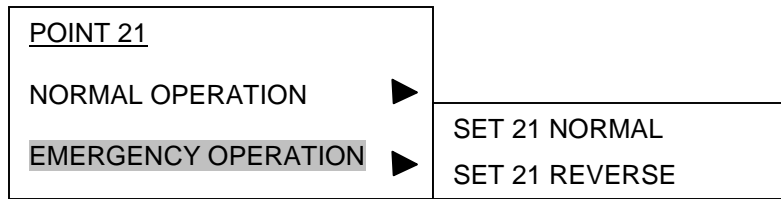
In conventional panel which transmit the key by pressing concerned CHN+ZN T (group button) and restores the key back by pressing by concerned CHN + ZN R (group button) we also have provided the "TRANSMIT" & RESTORE" menus as below.



When crank handle key is IN then the locked indication will appear as shown in figure. When we apply "TRANSMIT" to take out the key the IN indication will flash until the key is taken out. And indication disappears when the key is taken out.

When the key is put back in the field IN indication will flash until we click "RESTORE" menu.

When the route is set and locked both the IN & LOCKED indication will appear.

**NOTE**

- 1) Before doing emergency route release or emergency point operation the ASM on duty personally check the clearance of point zone/route.
- 2) Although the cancellation of route or point operation is being done from VDU, the respective counter provided on panel will set up as in case of cancellation from panel.
- 3) When the ASM on duty will clear any signal the first route lamp in advance of the signal will start flashing for a predefined time and then become steady. If there is any failure then the signal will not come off. But if every thing is OK then this signal will show off.

TO TRANSMIT AND RESTORE THE L-XING GATE.

As common button are used (LXN + ZN_T or ZN_R) in panel for transmitting or restoring the gate control key (this key is required for opening and closing of gate by unlocking of gate control/lock lever) in VDU also the menu is indicated.

Normally blank indication will appear on the panel & VDU, when gate control is transmitted. When SM requests gateman to closes the LC gate and then he closes the gate and gates a key from gate lock lever and insert in the EKT lock provided in the gate lodge.

Then we get LC key IN input from field and closed indication flashes. SM has to lock it by clicking LX class menu on the VDU. Now steady operation will appear.

Once train passed and the gateman wants to open the gate SM has to click LX class special "TRANSMIT" menu. Now closed indication will flash till the gateman has taken the key out.

TO TRANSMIT AND RESTORE THE SIDING KEY.

It is similar to crank handle operation.

To transmit the siding key SM has to click "TRANSMIT" menu. Now IN indication will flash till the key is taken out. When the key is taken out blank indication will appear.

When we get siding key IN input fro field the IN indication flashes. SM has to lock it by clicking: "RESTORE" menu on the VDU. Now steady indication will appear.

When the route is set and locked both the IN & locked indication will appear.

APPENDIX 'C' TO STATION WORKING RULES OF GHANTIKAL NIDHIPUR STATION

ANTI COLISION DVICE (RAKSHA KAVACH)

=== NIL ===

(P.K.DAS)
DSTE/PROJ/BBS

(B.PANDA)
DOM/KUR

APPENDIX 'D' TO STATION WORKING RULES OF GHANTIKAL NIDHIPUR STATION

(Operating and Commercial duty amalgamated)

1. STATION SUPERINTENDENT:

He is in-charge of the Station. He performs day shift duty for train passing duties in turn with his assistants. 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 SR14.07.01 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's special attention is drawn to the GR 5.01 to 5.23 where details are indicated.

1.1.1 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 Station Supdt. 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 Station Supdt. 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 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's Incharge.

(B.PANDA)
DOM/KUR

The declaration is to be renewed in the following cases:

- i) Whenever there is a change in the Station Working Rules,
- ii) For any staff who have not worked at the station or were away from the station for a period of 15 days 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 Station Supdt., 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 SM on duty accordance with the instructions laid down in the Accident Manual. Whenever the Station Supdt. 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.

2. SM/ASM:

He shall work in train passing duties and booking of traffic, coaching returns and other statements shall be prepared and submitted by him in time. The Station Master on duty shall record in the diary the condition of all the running lines, siding, the caution orders in force at the time of handing over charge. These entries shall be countersigned by the Station Master coming on duty and taking over charge. This will not however relieve the Station Master of his responsibility to ensure by physical check, that the respective line is clear of obstruction before admission of any train on it. 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 all irregularities and accidents in course of his shift duties. During the absence of SS, the duty of SS will devolve on him. His special attention is drawn to Chapter-II of General Rules, 1976 (Revised- 2010) and GR 5.01 to 5.08 with relevant SRs as an assistant to SS, given to him by the Stn Supdt.

3. 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:

- (a) Correct setting and locking and crank handling of points for reception/dispatch and shunting operation.
- (b) Coupling and un-coupling of vehicles.
- (c) Protection of line in an emergency
- (d) Piloting and hand signaling of trains of trains when necessary and handing over caution orders/or any other line clear authorities to the Loco Pilot and guards of the trains.
- (e) Attending off side to observe safe running of run through trains at stations and correct display of hand signals and ringing the station bell.
- (f) Securing of vehicles, as directed, protection of vehicles of a train.
- (g) Being conversant with the layout of the yard and compliance of rules relating to shunting operation.

- (h) Observing General Rules 5.13 to 5.21 and relevant subsidiary Rules during shunting.
- (i) Cleaning and lighting of hand signal lamps, if required
- (j) Loading and un-loading of parcels and luggage's, packages goods and guards boxes to and from the trains and watching the packages and other materials by properly stocking in the station premises.
- (k) Cleaning and Dusting of SM's office room furniture and equipments Office.
- (l) Carrying messages cell books etc where a separate call boy messengers are not posted.
- (m) Working as fog signal man as and when required.
- (n) Filling up the fire buckets with sand/water.
- (o) Getting train interact arrival register (T/1410) signed by the Guard as and when required.
- (p) Any other duties entrusted to him by the SS/SM on duty from time to time.

GENERAL

1. A set of flags and LED tri-color 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).
2. 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 GHANTIKAL NIDHIPUR 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.	LED tri-color hand signal lamps	6
3.	Hand signal Flags	6 sets
4.	Safety chain with Padlocks.	6+6
5.	Clamps with padlocks	12 (4 at station and 4 in each goomty)
6.	Skids	6
7.	Fire and Sand Buckets.	5
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	2
14.	Power Block Collar	6

(P.K.DAS)
DSTE/PROJ/BBS

(B.PANDA)
DOM/KUR

APPENDIX 'F' TO STATION WORKING RULES OF GHANTIKAL NIDHIPUR 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 **PASSENGER HALT:**
Sarpeswar (Code: SPSR) PH is situated at Km. 436.7 F/HWH between GHNH-NQR.

(P.K.DAS)
DSTE/PROJ/BBS

(B.PANDA)
DOM/KUR