

EAST COAST RAILWAY
WALTAIR DIVISION
STATION WORKING RULES OF SIMHACHALAM NORTH STATION
(BROAD GAUGE)

No : WTF/5/SWR/SCMN-RRI

Date of Issue: _____

Date brought into force: _____

Ref Letter No. : 2000/SafetyA&R)/19/36 of Railway Board. Dt:27.10.2005

NOTE:-

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

(1) STATION WORKING RULE DIAGRAM**1.1**

- i) Station working diagram No.SI/WRD/23090 ALT-H
- ii) CSTE/E.Co.Rly/DRG No.SI- 23090 ALT-H
- iii) Date upto which corrected :

(2) DESCRIPTION OF THE STATION:

Simhachalam North(Code :SCMN)is a 'SPL' class junction station of the VSKP-HWH double line electrified BG section of East Coast Railway on 'B' Route. It is situated of KM. 869.602 from HWH and provided with RRI Cabin.

2.1

	GENERAL (LOCATION)	
i	Name of the Station :	SIMHACHALAM NORTH(SCMN)
ii	Class of Station :	'SPL'
iii	Section:	HOWRAH-MADRAS
iv	Double / Single line	Multiple line between KTV-SCMN Double line SCMN-GPT (Main & Bypass lines) Single line (SCMN-Concor), SCMN-'A' Cabin and SCMN-Block hut.
v	Electrified /Non-electrified	Electrified
vi	Gauge BG/MG/NG	BG
vii	Railway	East Coast Railway
viii	Route	'B'.
ix	Situated at KM	869.602KM
x	From	HOWRAH
xi	Operations	Centralized operating panel
xii	Standard of Interlocking	Standard-II(R)

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

a)	Adjacent Block Station	Distance	Direction
	PENDURTI	7.755 km	HWH END
	GOPALAPATNAM	2.221 km	VSKP END
i)	'A' Cabin on E.Co.Rly reception &Dispatch line of WMY	3.5 km	WAT MYD END
ii)	ELS Block hut of WMY on	4.26 km	WAT MYD END

	E.Co. Dispatch Reception line & KK single line.		
iii)	Gopalapatnam on by pass Line	2.22 km DN line 2.356 Km UP line	GPT END
iv)	Concor siding cabin	3.400 km	VSKP STEEL PLANT END
v)	DK Station & Out line sidings	NIL	
vi)	Passenger Halt	NIL	
vii)	Provision of IBS	NIL	
viii)	Provision of Auto Signals	GPT-SCMN Main line	UP at KM SA-63, SA17. DN at KM SA-32, S62.
		GPT-SCMN Bypass line	UP at KM SA-71, S22. DN at KM SA-21, S82.

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

	Between Stations	The Point from which the “Block Section” Commences	The Point at which “Block Section” Ends
1	SCMN-PDT Double line DN line	The advance block section commences at Down last stop signal No 204 at North end.	And terminates at BSLB of PDT south end on down line.
	Up Line	The rear block section commences at Up last stop signal No 33 of PDT South end.	And terminates at SCMN Up facing point No. 101B on Up line at PDT end.
	SCMN-PDT Single Line (KK Line)	i) The block section commences at Up last stop signal No. 206 of SCMN in Up direction.	And terminates at Down last stop signal of PDT.
2	SCMN-PDT (Middle line)	The block section commences from DN last stop signal 20 of SCMN north.	Terminates at Up last stop signal of PDT.
3	SCMN-GPT Up line (Auto)	i) The advance block section commences at Up last stop signal No. SA-63 of SCMN.	And terminates at BSLB on Up line at GPT North end.
	DN Line (Auto)	ii) The rear block section commences at Down last stop signal No. SA-32 of GPT.	And terminates at down line facing point No. 151 B of SCMN.
4	SCMN-A/Cabin of WMY – Reception yard (Unidirectional Up line)	The advance block section commences at Up last stop signal No.61 of SCMN.	And terminates at Dn facing point No. 14 of RYD A/Cabin.
5	SCMN-ELS block hut of WMY Unidirectional Down line)	The rear block section commences at Down last stop signal No. 6 of ELS block hut.	And terminates at BSLB on Down E.Co.Rly dispatch line.
6	SCMN-ELS block hut of WMY on KK single line.	ii The Block section commences DN last stop signal No. 69 of KK single line of SCMN.	And terminates at Up last stop signal No. 8 of ELS block hut on KK single line.

7	SCMN-GPT By pass single line Auto (UP LINE)	i) The section commence at the Last stop signal No. SA-71 on by pass line of SCMN.	And terminates at BSLB on Up line at GPT By pass line.
	Auto DN LINE	ii) The rear block section commences Down last stop signal No. SA-21 of GPT on By pass line.	And terminates at BSLB of SCMN.
8	SCMN-Concor cabin Twin Single Line (Line No.1)	i) The block section commences at Last stop signal No. 73 on VSP line No.1 of SCMN end.	And terminates at Down last stop signal No. 16 of Concor siding cabin.
9	SCMN-Concor siding cabin Twin Single Line (Line No.2)	i) The block section commences at Last stop signal No. 75 on VSP line No.2 of SCMN end.	And terminates at Down last stop signal No. 14 of Concor siding cabin.

2.4 GRADIENTS:

	Line	From	To	Inter Distance	Gradient
SCMN-PDT	UP MAIN LINE & Middle line	000.000 M 570.000 M 915.000 M 1464.000 M 4092.000 M 7502.000 M 7858.000 M	570.000 M 915.000 M 1464.000 M 4092.000 M 7502.000 M 7858.000 M In to section	570.000 M 345.000 M 549.000 M 2628.000 M 1410.000 M 356.000 M ----	1 in 2635 falling 1 in 1250 Raising 1 in 300 Raising. Level 1 in 500 Falling. 1 in 500 Falling. Level.
	DOWN MAIN LINE	000.000 M 507.500 M 915.000 M 1464.000 M 2291.000 M 3791.000 M 4690.000 M	507.500 M 915.000 M 1464.000 M 2291.000 M 3791.000 M 4690.000 M In to section.	507.500 M 407.500 M 549.000M 827.000 M 1500.000 M 899.000 M --	1 in 2635 falling 1 in 1250 Raising 1 in 300 Raising. Level. 1 in 1370 Raising. 1 in 1860 Falling. 1 in 550 Raising
	KK LINE	000.000 M 490.000 M 1391.000 M 2267.000 M 3791.000 M 4690.000 M	490.000 M 1391.000 M 2291.000 M 3791.000 M 4690.000 M Into Section	490.000 M 901.000 M 900.000 M 1500.000 M 899.000 M ---	Level 1in 540 Raising Level 1 in 1370 Raising 1 in 1860 Falling. 1 in 550 Raising.
	VSP LINE	000.000 M 660.000 M 940.000 M	660.000 M 940.000 M Into section	660.000 M 280.000 M ---	Level 1 in 700 Raising 1 in 300 Raising
	SCMN- GPT 'A' CABIN & CONCOR CABIN				
SCMN- Goods Reception line	Goods Reception line	000.000 M 995.000 M	995.000 M Into Section	995.000 M ---	1 in 450 Raising 1 in 150 Raising
SCMN- Concor	VSP LINE	000.000 M 22.500 M 1230.000 M 2300.00 M	22.500 M 1230.000 M 2300.00 M Into Section.	22.500 M 1207.500 M 1370.36 M ---	Level. 1 In 450 Raising. Level. 1 in 150 Falling

SCMN-Block hut	KK LINE ELS BLOCK HUT	000.000 M 213.360 M 896.430 M	213.360 M 896.430 M Into Section.	213.360 M 683.070 M ---	1 in 2635 Raising. 1 in 450 Raising. 1 in 350 Raising.
	ON MAIN LINE ELS BLOCK HUT (WAT – MYD)	000.000 M 213.360 M 929.640 M 1350.000 M	213.360 M 929.640 M 1350.000 M Into Section.	21 3.360 M 71 6.280 M 420.360 M ---	1 In 2635 Raising. 1 In 450 Raising. 1 In 400 Raising. 1 in 850 Falling.
GPT-SCMN MAIN LINE	UP & DN LINES	000.000 M 213.360M 929.640M 1350.000M 1750.000 M 2050.000 M 2300.000 M	213.360M 929.640M13 50.000M 1750.000M 2050.000M 2300.00 M Into Section.	22.500 M 1207.500 M 1370.36 M 400.000 M 300.000 M 250.000 M ---	1 in 2635 Raising. 1 in 450 Raising. 1 in 400 Raising. 1 in 850 Falling. 1 In 150 Falling. 1 in 280 Falling Level.
GPT-SCMN BY PASS LINE	DN LINE	000.000 M 1058.000 M 2700.00 M	1058.000 M 2700.00 M Into Section.	1058.000M 1642.000 M ---	1 In 450 Falling. 1 In 150 Falling. Level.
	UP LINE	000.000M 1109.000M 2120.000M	1109.000M 2120.000M Into section	1109.000M 1011.000M ---	1 in 450 Raising 1 in150 Falling 1 in 260 Raising.

2.5. (A) LAYOUT:

Sl no	Name of the Line	Electrified/Non Electrified	Platforms with Length
1.	Line no-1 (Up 2 nd Loop)	Electrified	--
2.	Line no-2 (Up 1 st Loop)	Electrified	Rail Level (350.5M x 10.67M)
3.	Line no-3 (Up Main line)	Electrified	
4.	Line No.4(Down Main Line)	Electrified	Medium Level (256M x 10.67M)
5.	Line No.5(Down Loop)	Electrified	
6.	Line No.6(KK Line Loop – 1)	Electrified	--
7.	Line No.7(KK Main Line)	Electrified	--
8.	Line No.8(KK Line Loop-2)	Electrified	Rail Level (243.8M x 10.57M)
9.	Line No.10(VSP loop)	Electrified	--
10.	Line No.11(VSP line)	Electrified	--
11.	Line No.12(VSP line)	Electrified	--
12.	Line No.13(VSP loop)	Electrified	--

(B) SIDINGS:-

Sl no	Name of the Siding	Electrified/Non Electrified	Platforms with Length	Isolation from Running line
1.	Line No of 9 Goods stabling line	Electrified	Goods Plat form (243.8M x 10.57M)	Isolated from Line No.8 by DS with HPL on both ends
2.	Hot Axle siding connected line 9	Non - Electrified	---	Isolated from Line No.9 by DS on both ends
3.	Hot Axle siding connected to line	Non - Electrified	---	Isolated from Line No.1 by DS with HPL

	1 at GPT end.			on one end.
4.	Substation siding taking off from up Hot axle siding on Line-1.	Non - Electrified	---	Isolated from hot axle siding taken off from Line No.1 by DS on one end.
5.	Tower wagon siding at ELS end	Non - Electrified	---	Isolated from KK line towards Block hut side by DS on one end.
6.	SCM goods siding takes OFF at ELS end with 2 spurs.	Non - Electrified	---	Isolated from E.Co.Rly reception and dispatch line towards Block hut side by DS on one end.
7.	ANCC siding takes off at PDT end from UP line with a shunting neck.	Non - Electrified	---	Isolated from UP main line towards Howrah end by crossover on one end.

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

S.No.	Running lines	Name of the Line	Holding Capacity in CSL	Direction of movements
1.	Line No.1	Up 2 nd Loop line	676M(STR TO SS)	a) Trains coming from PDT and proceeding towards GPT are UP trains for UP, Middle & DN lines.
2.	Line No.2	Up 1 st Loop line	676M(STR TO SS)	
3.	Line No.3	Up Main Line	790M(STR TO SS)	
4.	Line No.4	DN Main Line	674M(STR TO SS)	
5.	Line No.5	DN Loop	754M (STR TO SS)	b) Trains coming from GPT and proceeding towards PDT are DN trains for UP, Middle & DN lines.
6.	Line No.6	Goods Loop	674M(STR TO STR)	
7.	Line No.7	KK Main Line	691M(STR TO STR)	c) Trains coming from PDT and proceeding towards GPT are DN trains for KK line.
8.	Line No.8	KK Loop	679M (STR TO STR)	
9.	Line No.10	VSP loop	789M (STR TO STR)	
10.	Line No.11	VSP line	803M (STR TO STR)	d) Trains coming from GPT and proceeding towards PDT are UP trains for KK line.
11.	Line No.12	VSP line	721M (STR TO STR)	
12.	Line No.13	VSP loop	709M (STR TO STR)	

2.5.2(A)NON RUNNING LINES AND THEIR CAPACITY IN CSL:-

S.No	Name of the Line	Holding Capacity in CSL	Whether Electrified / Non-Electrified
1	Line No of 9 Goods stabling line	520 M	Electrified
2	Hot Axle siding connected line 9	60 M (DS to DS)	Non -Electrified
3	Hot Axle siding connected to line 1 at GPT end.	60 M (DS to DS)	Non -Electrified
4	Substation siding taking off from up Hot axle siding on Line-1.	50 M	Non -Electrified
5	Tower wagon siding at ELS end	115 M	Non -Electrified
6	SCM goods siding takes OFF at ELS end with 2 spurs.	886.75 M Main Spur 275M(DS TO DE) loop	Non -Electrified

		spur.	
7	ANCC siding takes off at PDT end from Up line with a shunting neck.	Spur length 2250 feet.	Non -Electrified

(B) Platform :

- (i) A rail level island passenger platform of 350.5M X 10.67M is provided between line no.2&3.
- (ii) A medium level passenger platform of 256M x 10.67M is provided between Line no.4 & 5.
- (iii) A rail level platform of 243.1M 10.57M is provided between Line no.8 & goods stabling line .

(C) SIDINGS :-**i) SCMN Goods Siding:**

A Goods Stabling siding of CSL-520 M takes off from Route No.8 with both end entries. It is isolated by means of derailing switches at either end. The entrance points and the corresponding derailing switches are coupled by Roding and are operated locally by an Arc lever. Hand plunger locks fitted at the entrance points are unlocked by the key extracted from RKT controlled by PB 128 (on VSKP end) and 117 (on PDT end) in the reversed position. When the keys are extracted from the RKT UP and Down reception and UP & Down starter signals, shunt signals will remain locked in their normal position.

ii) SCMN goods siding taken off from down dispatch line at ELS end of the yard, and the other side terminates into a dead end. The siding is having 2 spurs 1 main spur having 905.6 M CSL and loop spur with 275 M DS to DE. The siding is isolated by crossover no 149 A&B. The Up & Down movements are authorised by shunt signal provided at the site. When it is intended to place or draw wagons in / out to/from siding the station master on duty at the RRI cabin shall ensure that down despatch line No 5 is clear of all obstruction. No line clear has been granted to ELS block hut on the unidirectional down despatch line and the reception signals to line No 5 are kept at on. If placement is to be done from KK grid line 6 to 8 he shall also ensure that no line clear has been granted to ELS on KK single line train. The shunting authority shall be issued in prescribe form to Loco pilot & Guard through a competent Railway servant by SS/SM on duty. He shall also take off the shunt signal where provided. When the pilot return after the work is completed in the siding he shall ensure that no line clear is granted on down despatch line and / or KK line for a train. After setting the correct route for admission the shunt signal will be taken off for shunting train in to the yard. The complete arrival of the train with last vehicle from the siding and the train standing clear of fouling mark with adjacent lines, the guard will ensure and in form the complete arrival to the SS/SM at RRI over VHF set. If it is not available or not in working condition the guard shall inform SS/SM/ RRI in person.

The guard and TP/TPM who ever placed the wagons in SCMN siding shall secure the wagons as per rules and confirm this on the back of the shunting order memo in writing while returning the copy to the cabin SS/SM.

iii.) HOT AXLE SIDING :

A Hot Axle Siding takes off from goods stabling siding having both sides entry. It is isolated by means of D/S at either end. The entrance points of DS are hand operated by the Arc levers provided at site. The points are locked by means of clamping and padlock during shunting operations.

iv) HOT AXLE CUM SUB-STATION SIDING :

A Hot Axle cum sub-station siding takes off from Line No.1 at VSKP end of the yard with one Side entry. It is isolated by means of derailing switch. The entrance points and derailing switch isolating the siding from the running line are coupled by rodding and are operated by a local arc lever released by the control key NO 131 extracted from RKT in its reversed position. When the key is taken out from the RKT UP reception signal of Line No.1 and UP starters No.25 (A.B) of Line No.1 will remain locked in their normal position. A sub-station siding is an extension to Hot Axle Siding which is isolated by means of derailing switch at VSKP end and terminates into dead end at Howrah end of

the yard. The derailing switch point is hand operated by the ground lever provided at site.

v) TOWER WAGON SIDING:

The Tower Wagon Siding takes off from KK Line inside the UP Home Signal at VSKP end of the yard. It is isolated by means of derailing switch. The entrance points and the derailing switch are operated by Point No.,150. The siding, terminates into a dead end inside the tower wagon shed. The movements "from" and "to" tower wagon siding and the KK line grid are authorised by shunt signals.

vi) ANCC SIDING:

Takes 'OFF' from Up line at PDT end. Details given at Appendix- B

2.6 LEVEL CROSSINGS:

Detailed working of Level crossing gates are mentioned in Appendix-A portion of SWR.

(3) SYSTEM AND MEANS OF WORKING:-

System of working in force	:	SCMN-PDT	Absolute Block System of working
	:	SCMN-'A' Cabin	
	:	SCMN- Block hut	
	:	SCMN-CONCOR siding	
Double Line/Single Line	:	SCMN BY PASS-GPT	Automatic Block System of working.
	:	SCMN-GPT Main line	
	:	SCMN-PDT(UP & DN lines)	
	:	GPT-SCMN	
Block Instruments	:	GPT-BY PASS	Double Line
	:	SCMN-PDT(KK & Middle line)	
	:	SCMN-Concorsiding (VSP-1 &2)	
	:	SCMN- MYD 'A' cabin	
Block Instruments	:	SCMN-MYD 'Blockhut' cabin	Single Line
	:	SCMN-PDT(UP & DN lines)	
	:	SCMN-PDT(KK & Middle line)	
	:	SCMN-Concor siding (VSP-1 &2)	
Block Instruments	:	SCMN- MYD 'A' cabin	SGE type Double line lock and Block Instruments for unidirectional movement.
	:	SCMN-MYD 'Blockhut' cabin	
	:	SCMN-PDT(KK & Middle line)	
	:	SCMN-Concor siding (VSP-1 &2)	
Block Instruments	:	SCMN- MYD 'A' cabin	Daido type Single line block Instrument
	:	SCMN-MYD 'Blockhut' cabin	
	:	SCMN-PDT(KK & Middle line)	
	:	SCMN-Concor siding (VSP-1 &2)	

Co-operative/Non co-operative		SCMN-PDT(UP & DN lines)	Non Co-operative
	:	SCMN-PDT(KK & Middle line)	Co-operative
		SCMN-Concor siding (VSP-1 &2)	
		SCMN- MYD ‘A’ cabin.	
		SCMN-MYD ‘Block hut’ cabin	
Block Telephones	:	Attached with Block Instruments	
Staff responsible For Block Instrument operation and custody of Key	:	SM on duty.	

(4) SYSTEM OF SIGNALLING AND INTERLOCKING:**4.1**

1	Standard of Interlocking	Standard – II(R)
2	Type of Signaling	MACLS
3	Mode of Operating the signals	Route Relay Interlocking (RRI)
4	Provision of Calling – On signals	"Calling on" signals In accordance with General Rule No. 3.13 (1) (b), 3.13(2), (3), (4), (6)(b) are provided below the stop signal for receiving/Despatching a train past stop signals in the "ON" position. 5RL track circuit is provided for calling on signal, for clearing a calling on signal time delay of 60seconds is adopted.
5	Provision of Shunt signals	Shunt signals are also provided for controlling shunting movement in Simhachalam North yard in accordance with GR 3.14.
6	Emergency cross over	Emergency crossover No.105, 110, 152 are available in SCMN yard.
7	Track circuits	As per para No.52 of Appendix 'B' of this SWR.
8	Axle counters	As per para No.53 of Appendix 'B' of this SWR.
9	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 SS/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 chapter-2, para-2.18 & 2.19.

		<table> <tr> <th><u>CRANK HANDLE</u></th><th></th><th><u>CONTROL POINTS</u></th></tr> <tr><td>CH-1</td><td>----</td><td>161</td></tr> <tr><td>CH-2</td><td>----</td><td>160,162</td></tr> <tr><td>CH-3</td><td>----</td><td>158,159</td></tr> <tr><td>CH-4</td><td>----</td><td>147,148,150</td></tr> <tr><td>CH-5</td><td>----</td><td>153</td></tr> <tr><td>CH-6</td><td>----</td><td>152</td></tr> <tr><td>CH-7</td><td>----</td><td>149</td></tr> <tr><td>CH-8</td><td>----</td><td>138,139,140</td></tr> <tr><td>CH-9</td><td>----</td><td>143,145,146</td></tr> <tr><td>CH-10</td><td>----</td><td>132,133</td></tr> <tr><td>CH-11</td><td>----</td><td>144</td></tr> <tr><td>CH12</td><td>----</td><td>SPARE</td></tr> <tr><td>CH 13</td><td>----</td><td>130</td></tr> <tr><td>CH14</td><td>----</td><td>129</td></tr> <tr><td>CH15</td><td>----</td><td>123</td></tr> <tr><td>CH16</td><td>----</td><td>121,122,125</td></tr> <tr><td>CH17</td><td>----</td><td>110,111,112,113</td></tr> <tr><td>CH18</td><td>----</td><td>114</td></tr> <tr><td>CH19</td><td>----</td><td>115,116</td></tr> <tr><td>CH20</td><td>----</td><td>109</td></tr> <tr><td>CH21</td><td>----</td><td>127</td></tr> <tr><td>CH22</td><td>----</td><td>107</td></tr> <tr><td>CH23</td><td>----</td><td>105,106</td></tr> <tr><td>CH24</td><td>----</td><td>103</td></tr> <tr><td>CH25</td><td>----</td><td>102</td></tr> <tr><td>CH26</td><td>----</td><td>101</td></tr> </table> <p>Procedure for operation of points by means of crank handle, in the event of failure of operation of points through VDU, it is inevitable to operate manually by means of crank handle as per the procedure mentioned in Appendix-B, para no. 2.4.</p>	<u>CRANK HANDLE</u>		<u>CONTROL POINTS</u>	CH-1	----	161	CH-2	----	160,162	CH-3	----	158,159	CH-4	----	147,148,150	CH-5	----	153	CH-6	----	152	CH-7	----	149	CH-8	----	138,139,140	CH-9	----	143,145,146	CH-10	----	132,133	CH-11	----	144	CH12	----	SPARE	CH 13	----	130	CH14	----	129	CH15	----	123	CH16	----	121,122,125	CH17	----	110,111,112,113	CH18	----	114	CH19	----	115,116	CH20	----	109	CH21	----	127	CH22	----	107	CH23	----	105,106	CH24	----	103	CH25	----	102	CH26	----	101
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10	Emergency Point operation:	<p>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 SS/ SM on duty, after ensuring that SS/SM's 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</p>																																																																																	

		group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL or REVERSE.. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose.
11	Emergency Gate release.	<p>L.C. Gate control can be released and the gate can be opened by this operation when LC gate control remains in locked condition due to setting of any of the signal routes over it or otherwise. For releasing the gate by the Emergency operation the SS/SM on duty has to cancel the signal by signal cancellation control of the relevant signal. Then he has to click the Emergency Gate release control in the Gate pop-up menu.</p> <p>Now the 'LOCKED' (Red) indication will flash for 120 seconds & after the time has elapsed the 'LOCKED' (Red) indication will vanish. Now the SS/SM on duty shall transmit the 'GATE CONTROL' in this condition and 'KEY IN' indication starts flashing. Now the KEY can be extracted from the RKT at Gate Lodge and gate can be opened. This action will be recorded in a counter provided in Panel. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/S.M manually in a register. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/S.M on duty who shall record the details of the Emergency Gate Operation along with the latest counter no. in a register.</p>

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

Custody of Relay room key and procedure for its handover and taking over between SM and S&T staff has to follow the procedure as per JPO issued by COM and CSTE vide No. JPO/02/2012 dated 29.08.2012. Relay room is provided with two independent locks. The key of one lock shall be in the personnel custody of Station Master on duty and the key of other lock shall be in the custody of S&T Maintainer. In the event of necessity such as for attending failure, or regular maintenance, on being requisitioned by S&T maintainer, SM shall hand over the key to the Maintainer. On completion of the work, maintainer shall lock the relay room and shall return the key to SM. The particulars of such transactions shall be entered by the SM in the relay room key register vide OM 2015 para No.13.16.

4.3 **POWER SUPPLY**

- (i) A changeover switch is provided in the Station Master's Office with the three

power Supplies viz., Up AT, Down. AT and Local, for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the Supply.

- (ii) Normally the switch will be kept towards Up AT or Dn AT position. Whenever power block is to be given on the line, the on duty SM must ascertain that power is available on the other AT. If power block is to be given on the Up line, Down AT must be available and vice-versa.
- (iii) In case of failure of one of the AT supply without any power block, the on duty SM. has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is down and when tripped it goes up.) In case of failure of both AT supplies, the Local supply shall be utilized by operating the switch.

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

- (iv) For IPS system that provides to EI is also from manual change over switch.
- (v) There is a remote monitoring SM box provided at the station to monitor the health of IPS.

REMOTE MONITORING ASM BOX:

- (a) Remote monitoring ASM Box gives alarm to the ASM for the following fault conditions:-
- (b) 50% depth of discharge (DOD) of battery. In this condition audio/visual alarm comes, which can be acknowledged with audio cut-off.
- (c) 60% DOD, which warns for emergency. The alarm for this condition is same as for condition
- (d) 70% DOD, which signals system, shut-down. In this condition signal feed is cut-off and all DC-DC converters continue working. Audio alarm continues till power supply is restored.
- (e) Any of the module fails, which calls for 'call S&T'.
- (f) Whenever there is a failure of power supply in one AT the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply on both ATs and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

5.0 TELECOMMUNICATIONS :

The following telecommunication facilities provided at the RRI cabin to deal with the train movement.

- (a) The Block telephone attached to block instruments of double line SGE type lock & block instruments and handle type single line token less block instruments connecting adjacent block cabin/stations, of the respective sections.
- (b) Magneto phone connecting the block cabins /stations.
- (c) Section control phone of the section VSKP – DVD – KTV VSKP complex board
- (d) Section Control phone of section OEC-KRPU for the single line section
- (e) Magneto phone connecting level crossing gates connected to RRI cabin viz SP1,SS1 & ML490.
- (f) Traction power control of section VSKP-PSA. Section including VSKP complex board stations
- (g) Traction power control of section OEC- KORPUT section
- (h) Section control of S.C.Rly VSKP-RJY.
- (i) Auto telephone connecting Divisional HQ & stations between VSKP – DVD – PSA including yard cabins
- (j) VHF set connecting adjacent block cabins / stations.
- (k) Announcement speaker to talk to yard staff to talk to RRI-SS/SM and get instructions
- (l) Magneto phone connecting goods clerk ANCC siding and clerk incharge of SCM station
- (m) Auto phone to running room.
- (n) Desk type magneto phone to TNC.
- (o) Desk type magneto telephone to seven(7) crank handle goomties.
- (p) Auto telephone is provided between SCMN & GPT stations.

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

The duties for working of train passing staff and this station is detailed in Appendix'D' of this SWR.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:
STAFF IN EACH SHIFT :

SMR (In charge)	01
Station Superintendent/SM	03
PM in each shift	03

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.(Details duties are given in APPENDIX-'D').

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

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

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 SMR under lock key by maintaining register for this purpose.

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

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

6.2 **CONDITIONS FOR GRANTING LINE CLEAR:**

Before granting line clear for a train the SM on duty shall ensure that:

- (i) The whole of the last preceding train has arrived completely.
- (ii) All necessary signals have been put back to 'ON' behind the said train.
- (iii) All signal lights pertaining to the train are burning properly.
(Ref GR.8.01 (1) (a) (b) and 8.01(2) (b) and 8.03 (1) (a) (b) & c (ii) SR 3.42.05 & SR 3.68.05) and GR 9.01.
- (iv) Adequate distance to be kept clear for granting LINE CLEAR.
- (v) All the intervening LC gates should be closed.

(b) **DOUBLE LINE SECTION GPT-SCMN MAIN AND BY PASS LINES UNDER AUTOMATIC BLOCK SYSTEM:**

Under Automatic Block system for section GPT-SCMN main and by pass line Trains shall work in accordance with GR 9.01(1) (a) (b)(c), i, ii, 9.01(2), 9.02(1) (2) (3)(4)(5) and SRs there to 9.09, 9.10(1)(2), 9.11(1)(2) and SRs there to 9.12 and SRs there to 9.14 and SRs there to and 9.15 and Block Working Manual Chapter No VI.

(c) **ADEQUATE DISTANCE TO BE KEPT CLEAR FOR GRANTING LINE CLEAR**

LINE NO.	CLEARANCE OF ADEQUATE DISTANCE			
	FOR UP TRAINS		FOR DOWN TRAINS	
	FROM	TO	FROM	TO
Line No.1 (UP 2nd Loop)	STR SIG No. 25 A/B	F.M OF PT.No.133B OR ADV.STR SIG No 63	----	----
Line No.2.(UP 1 ST LOOP)	STR SIG No.27 A/B	FM OF PT No.133B OR ADV STR SIG No.63	----	----
Line No. 3 (UP MAIN LINE)	STR SIG No. 29 A/B.	ADV STR SIG No.61 OR ADV STR SIG No.63.	----	----
Line No.4. (DN MAINLINE)	----	----	STR SIG No.28	UPTO INTER STR SIG No. 12A/B.
Line No. 5 (DN LOOP)	----	----	STR SIG No.30.	THE END OF SAND HUMP OR UPTO INTER. STR SIG

				No.12A/B.
Line No. 6 (GOODS LOOP)	STR. SIG. No. 32A/B	INTER STR SIGNAL No. 214 A/B/C (OR) UPTO INT STR SIG No.12A/B.	STR SIG No. 37	UP TO END OF 139AT VSKP END WHEN PT. No.139A NORMAL (OR) END OF SAND HUMP.
Line No.7 (KK line).	STR. SIG. No. 34A/B.	INTER STR SIG No. 214A/B/C (OR) UPTO INT STR SIG No.12A/B.	STR SIG No. 39	UP TO END OF 139AT VSKP END WHEN PT.No.139A NORMAL.
Line No.8 (KK LOOP)	STR SIG No. 36A/B	THE END OF SANDHUMP (OR) UPTO STR. SIG No. 214A/B/C (OR) UPTO STR SIG No.12A/B.	STR SIG No. 41	UP TO END OF 139AT VSKP END WHEN PT No.139 NORMAL (OR) END OF ORL.
Line No.10 (VSP LOOP)	STR SIG No. 45	UPTO SIG. NO. 53 (OR) UPTO DS No.143	STR SIG No.38	THE END OF ORL (OR) ADV STR SIG No.206 (OR) INT. STR. SIG No.16A/B.
Line No. 11 (VSP Line)	STR SIG No.47A/B/ C	END OF 146AT AT VSKP END	STR SIG No.40	ADV.STR.SIG. No.206 (OR) INT.STR.SIG NO.16A/B.
Line No. 12 (VSP Line)	STR SIG No.49A/B/ C	END OF 145AT1 VSKP END	STR SIG No.42	ADV.STR.SIG. No.206 OR INT.STR.SIG NO.16A/B.
Line No. 13 (VSP LOOP)	STR SIG No.51A/B/ C	THE END OF ORL OR UP TO END OF 145AT1 VSKP END	STR SIG No.44	THE END OF ORL (OR) ADV.STR.SIG. No.206 (OR) INT.STR.SIG. No.16A/B

6.2.1 ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING OR DESPACHTING A TRAIN:-

-NIL-

6.2.1.1 SETTING OF POINTS AGAINST BLOCKED LINE:

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station etc., the points in rear end should immediately 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)].

Safety Point Alarm:

A safety Point Alarm is provided on the VDU table with different indications:

1. On complete arrival of a train at the station, the SM has to set the Points immediately against the occupied line.
2. In case the SM forgets to alter the points, after a time lag of 02 minutes, an audible buzzer will be heard from this instrument along with the 'RED' indication of the line on which the train has arrived.
3. The SM shall then press 'ACK' button to mute the buzzer, and immediately set the required points against the line on which the train has arrived.
4. On setting the points against the occupied line, the RED indication will disappear.

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

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:

Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2) (a) or if calling signal cannot be taken off, trains are to be piloted in on a written authority on Form T/509 given by SM on duty and delivered by a competent railway servant to the Loco Pilot of the train as per GR 5.09 (2)(C)(3)(4)(5) and SR 5.09.01.

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE Nil

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE. Nil

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

6.2.1.6 SPECIAL CONDITIONS :

a) SPECIAL INSTRUCTIONS :

- i) UP coaching trains which are bounded to go to DVD on by pass line shall be admitted on Line No.11. Similarly DN coaching trains which are coming from DVD on by pass line shall be admitted on line No.4 or 5.

b) SPECIAL RESTRICTIONS :

- i) Shunting in the face of an approaching train is prohibited.
- ii) While performing shunting engine must be leading towards falling gradient.
- iii) Through passage of passenger train is prohibited on line No.5 due to 1 in 8 ½ turn out.

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, 4.17 and SR 3.36. 01, 3.36.02, 3.36.04, 3.40.01, 3.40.02, 3.47.01, 4.17.02, and Block Working Manual).

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

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

6.4 SIMULTANEOUSRECEPTION/DESPACTH, CROSSING AND PRECEDANCE OF TRAINS:

According to the existing interlocking at the station, the following simultaneous reception and despatch of trains are permitted.

1.	Reception of an UP train on line No.1 or 2 from PDT end setting to Goods reception & despatch line of 'A' cabin .	And	<p>Despatch of another UP train from line.3 or 6 or 7 or 8 to GPT.</p> <p>OR</p> <p>Despatch of another UP train from line No.6 or 7 or 8 to 'B' Hut.(KK) line or (By pass)line or Concor cabin (VSP L-1 or VSP L-2).</p> <p>OR</p> <p>Despatch of another UP train from Line No.10 or 11 or 12 or 13 to 'B' Hut.(KK) line or By pass Line or Concor cabin (VSP L-1 or VSP L-2).</p> <p>OR</p> <p>Reception of a train from GPT(By Pas) Line or 'B' Hut (E.Co.Rly Goods Despatch) line or 'B' Hut.(KK) line or GPT (By pass) line or CONCOR CABIN (VSP L-1 or (VSP-L-2).to line No.5 or 8 setting overlap to sand hump/ overrun line 10 or 13..</p> <p>OR</p> <p>Reception of a train from 'B' Hut.(KK) line or 'B' Hut (E.Co.Rly Goods Despatch) or GPT (By pass) line or Concor cabin (VSP L-1 or VSP-L-2).to line No.10 (setting overlap to overrun line or INT STR SIG No.16 or Line No.11 (setting overlap to INT SIG No.16) or Line No.12 (setting overlap to INT SIG No.16) or Line No.12 (setting overlap to INT SIG No.16) or Line No.13(setting overlap to INT SIG No.16) Concor cabin (VSP L-1) or Concor cabin (VSP-L-2)</p>
2.	Reception of an UP train on line No.3 setting overlap to ADV STR SIG No.63 from PDT end ..	And	<p>Despatch of another UP train from line. 1 or 2 to 'A' Cabin</p> <p>AND</p> <p>Despatch of train from Line No.6 or 7 or .8 to 'B' Hut (KK line) or GPT (By pass) line or Concor cabin (VSP L-1) or Concor cabin (VSP-L-2)</p>

3.	Reception of train from PDT end to line No.3 setting overlap to advanced starter Signal No.61.	And	Reception of DN train from GPT DN line to Line No.5 or 8 (setting overlap to sand hump/overrun line).
4	Reception of train from PDT end to line No.6 setting overlap to sand hump.	and	<p>Dispatch of another train from Line No.7 or 8 to GPT or 'A' Cabin on Up line.</p> <p>OR</p> <p>Reception of train from GPT DN Line to Line No. 5 or 8. (For L-5 setting to sand hump and for L-8 setting to overrun line.)</p> <p>OR</p> <p>Reception of a train from 'B' Hut (E.Co.Rly Goods dispatch) line or 'B' Hut (KK) line or GPT (By pass) line or CONCOR cabin (VSP L-1 or L-2)to line No.5 or Line No.8.</p>
5	Reception of train from KK single line from PDT end to line No.7.	And	Reception of another DN train from 'B' Hut(E.Co.Rly Goods Despatch) or 'B' Hut (KK) or GPT(By Pass) or Concor cabin (VSP Line No.1 or Line No.2) to Line No.4 or 5.
6	Reception of train from KK single line from PDT ends to line No.8 setting overlap to overrun line.	And	<p>Dispatch of another train from Line No.6 or Line No.7 to GPT on UP line.</p> <p>OR</p> <p>Dispatch a train from L-6 or L-7 to 'A' Cabin.</p> <p>AND</p> <p>Dispatch of another UP train from Line No.6 or Line No.7 or Line No.10 or Line No.12 or Line No.13 to 'B' Hut (KK} line or GPT(By pass) Line or Concor cabin (VSP L-1 or L-2)</p> <p>OR</p> <p>Reception of another DN train on line No.4 or 5 or 6 from GPT (DN Line) or 'B' Hut (E.Co.Rly Goods Dispatch) or 'B' Hut(KK)Line or GPT (By pass)line or Concor cabin (VSP L-1 or L-2)line</p> <p>OR</p> <p>Reception of another train on line No.10 or 12 or 13 from 'B'Hut(KK)Line or GPT (By pass)line or Concor cabin VSP L-1 or L-2)line.</p>
7	Reception of train from KK single line from PDT end to line No.10 setting overlap up to DS Point No.143.	And	<p>Dispatch of another UP train from Line No.11 or 12 or 13 to 'B' Hut(KK)Line or GPT (By pass)line or Concor cabin (VSP L-1 or L-2)line</p> <p>OR</p> <p>Reception of a DN train from Concor cabin (VSP line No.1 or Line 2) or GPT(By Pass) or 'B' Hut (KK) to Line No.12 or 13.</p> <p>AND</p> <p>Reception of a DN train from 'B' Hut (E.Co.Rly goods dispatch) line No. 4 or 5 or 6 or 7 or 8</p>

			<p>OR</p> <p>Reception of a DN train from 'B' Hut(KK)Line or GPT (By pass)line or Concor cabin (VSP L-1 or L-2)line to Line No.4 or 5 or 6 or 7 or 8.</p>
8	Reception of train from KK single line from PDT end to line No.11.		<p>Reception of a train from 'B' Hut (E.Co.Rly Goods Dispatch) or 'B' Hut(KK)Line or GPT (By pass)line or Concor cabin (VSP L-1 or L-2)line to Line No.4 or 5 or 6 or 7 or 8</p> <p>AND</p> <p>Dispatch of train from Line No.12 or 13 to Concor cabin (VSP Line -2).</p> <p>OR</p> <p>Reception of train from CONCOR cabin (VSP Line -2).to line 12 or 13.</p>
9	Reception of train from KK single line from PDT end to line No.12.	And	<p>Reception of train from 'B' Hut (E.Co.Rly Goods Dispatch) or 'B' Hut(KK)Line or GPT (By pass)line or Concor cabin VSP L-1 or L-2)line to Line No.4 or 5 or 6 or 7 or 8.</p> <p>OR</p> <p>Reception of train from GPT(By Pass) line or Concor cabin (VSP line No.1 or Line No.2) to line No. 10 or 11.</p> <p>AND</p> <p>Reception of train from UP line or Middle line from PDT end to Line No.10 or 11</p> <p>OR</p> <p>Dispatch of a train from Line No.4 or 5 or 6 or 7 or 8 or 10 or 11</p>
10	Reception of train from KK single line from PDT end to line No.13 setting of overlap to overrun line .	AND	<p>Reception of train from 'B' Hut (E.Co.Rly Goods Dispatch) or 'B' Hut(KK)Line or GPT (By pass)line or CONCOR CABIN(VSP L-1 or L-2)line to Line No.10 and 11.</p> <p>OR</p> <p>Dispatch of train from Line No.10 or 11 or 12 to 'B' Hut (E.Co.Rly Goods Dispatch) or 'B' Hut(KK)Line or GPT (By pass)line or Concor cabin (VSP L-1 or L-2)line</p> <p>OR</p> <p>Dispatch of a train from Line No.4 or 5 or 6 or 7 or 8 or 10 or 11 to DN line or Middle line towards PDT end.</p>
11	Reception of an UP train from Middle line from PDT end to line No.1 or 2.	AND	<p>Dispatch of another UP train from Line No.3 or 6 or 7 or 8 to GPT.</p> <p>OR</p> <p>Dispatch of another UP train from Line No.6 or 7 or 8 to 'B Hut (KK) line or GPT (By pass)Line or Concor cabin (VSP Line No 1 or Line No.2)</p> <p>AND</p> <p>Dispatch of another UP train from line No.10 or 11 or 12 or 13 to 'B Hut (KK) line or GPT</p>

			<p>(By pass)Line or Concor cabin (VSP Line No 1 or Line No.2)</p> <p>OR</p> <p>Reception of DN train from GPT or 'B' Hut (E.Co.Rly Goods Dispatch) or 'B' Hut(KK)Line or GPT (By pass)line or CONCOR CABIN(VSP L-1 or L-2) to Line No.5 or 8 setting overlap to sand hump/overrun line</p> <p>OR</p> <p>Reception of train from 'B' Hut (KK) or GPT(By Pass) or Concor cabin (VSP Line No.1 or Line 2) to Line No.10 (setting overlap to overrun line or Intermediate starter signal No.16.) or Line No.11 or 12 or 13.</p> <p>OR</p> <p>Dispatch of a train from Line No.12 or 13 to KK single line or DN line towards PDT</p> <p>OR</p> <p>Dispatch of a DN train from Line No. 6 or 7 or 8 to DN line towards PDT end</p>
12	Reception of an UP train from Middle line from PDT end to line No.6 set to sand hump.	AND	<p>Dispatch of another train from Line No.1 or 2 , 3, 7, 8 to 'A' Cabin</p> <p>OR</p> <p>Dispatch of a train from Line No.1 or 2 or 3 or 7 or 8 to GPT on UP line</p> <p>OR</p> <p>Reception of DN train from 'B' Hut (E.Co.Rly goods dispatch) line or 'B' Hut (KK) line or GPT (by Pass) line or Concor cabin (VSP L-1 or 2) or GPT DN line to Line No.5 or 8.</p> <p>OR</p> <p>Reception of DN train from 'B'Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) or GPT DN line to line No. 10 or 11 or 12 or13.</p> <p>.OR</p> <p>Dispatch of a train from Line No.10 to 13 to KK Single line or DN line towards PDT.</p>
13	Reception of an UP train from Middle line from PDT end to line No.7.	AND	<p>Dispatch of another train from line No.1 or 2, 3 or 6 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train 'B' Hut (E.Co.Rly goods dispatch) line or 'B' Hut (KK) line or GPT (by Pass) line or Concor cabin (VSP L-1 or 2) to Line No.5 or 10, 11 12, 13.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5</p> <p>AND</p>

			<p>Reception of a DN train from KK single line to Line No.10 or 11 or 12 or 13 from PDT end.</p> <p>OR</p> <p>Dispatch of a DN train from Line No.10 or 11 or 12 or 13 to DN line towards PDT end.</p>
14	Reception of an UP train from Middle line from PDT end to line No.8 setting overlap to overrun line.	AND	<p>Dispatch of another train from Line No.1 or 2, 3, 6, 7 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to line No.5 or 6.or 10 or 11 or 12 or 13.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 or 6</p> <p>AND</p> <p>Reception of a DN train from KK single line to Line No.10 or 11 or 12 or 13 from PDT end</p> <p>OR</p> <p>Dispatch of a train from line No.10 or 11 or 12 or 13 to KK single line or DN line towards PDT end.</p>
15	Reception of an UP train from Middle line to Line No.10 setting overlap up to DS point No.143.	AND	<p>Dispatch of another train from Line No.1 or 2, 3, 6, 7, 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to Line No.5 or 6 or 7 or 8.</p> <p>OR</p> <p>Reception of DN train from 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to Line No.12 or 13.</p> <p>OR</p> <p>Reception of DN train from KK single line PDT end to Line No.12 or 13.</p> <p>OR</p> <p>Dispatch of train from Line No.12 or 13 to KK single line towards PDT.</p>
16	Reception of an UP train from Middle line to Line No.11.	AND	<p>Dispatch of another train from Line No.1 or 2 or 6 or 7 or 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Dispatch of another train from Line No.3 or 6 or 8 to 'A' Cabin.</p> <p>OR</p> <p>Reception of a train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to Line No.5 or 6 or 7 or 8./10,</p>

			<p>12, 13.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 or 6 or 7 or 8.</p> <p>AND</p> <p>Reception of a DN train from KK single line from PDT end to Line No.12 or 13.</p> <p>OR</p> <p>Dispatch of a train from Line No.12 or 13 to KK single line towards PDT end.</p>
17	Reception of an UP train from Middle line to Line No.12.	AND	<p>Dispatch of another train from Line No.1 or 2, 6, 7, 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Dispatch of another train from Line No.3 or 6 or 7 or 8 to 'A' Cabin.</p> <p>OR</p> <p>Reception of a train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to Line No.5 or 6 or 7 or 8,10.</p> <p>OR</p> <p>Reception of DN train from GPT DN line to Line No.5 or 6 or 7 or 8.</p>
18	Reception of an UP train from Middle line to Line No.13 setting overlap up to overrun line.	AND	<p>Dispatch of another train from Line No.1 or 2 ,6, 7, 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to Line No.5 or 6 or 7 or 8, 10..</p> <p>OR</p> <p>Dispatch of a train from Line No.10 or 11 or 12 to 'B' Hut(KK) line or GPT (By Pass)Line or Concor cabin (VSP Line No.1 or Line No2)</p>
19	Reception of an UP train from UP line to Line No.1 or 2.	AND	<p>Dispatch of another UP train from Line No.3 or 6, 7, 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of DN train from GPT or B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to Line No.4 or 5 or 6 or 7 or 8.</p> <p>OR</p> <p>Dispatch a DN train from Line No.4 or 5 or 6 or 7 or 8 to Middle line or DN Line or KK single line towards PDT end.</p> <p>OR</p> <p>Reception of a train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to Line No.10 or 11 or 12</p>

			<p>or 13</p> <p>OR</p> <p>Dispatch a train from Line No.10 or 11 or 12 or 13 to KK single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of UP train from Line No.6 or 7 or 8 to 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin(VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Dispatch of DN train from Line No.10 or 11 or 12 or 13 to 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of UP train from Middle line or KK single line to Line No.3 or 6 or 7 or 8 or 10 or 11 or 12 or 13 from PDT end.</p>
20	Reception of an UP train from UP line to Line No.3 .	AND	<p>Dispatch of another UP train from Line No.1 or 2 to 'A' Cabin.</p> <p>AND</p> <p>Reception or Dispatch train from GPT DN line or B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to Line No.4 or 5, 10, 11, 12 or 13 to middle line or DN line or KK Single line</p> <p>OR</p> <p>Dispatch of train from Line No.6 to 8 or 10 to 13 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) towards PDT end.</p>
21	Reception of an UP train from UP line to Line No.6 setting overlap to sand hump.	AND	<p>Dispatch of UP train from Line No.1 or 2, 3, 7, 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 setting overlap to sand hump or Line No.8 setting overlap to overrun line</p> <p>AND</p> <p>Dispatch of train from Line No.7 or 8 or 10 or 11 or 12 or 13 to 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2)</p> <p>OR</p> <p>Reception of train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to Line No.8 or 10 or 11 or 12 or 13.</p> <p>OR</p> <p>Dispatch of train towards PDT from Line</p>

			No.10 or 11 or 12 or 13 to KK single line or DN line or Middle line
22	Reception of an UP train from UP line to Line No.7 setting overlap up to end of Track Circuit .No.139AT	AND	<p>Dispatch of UP train from Line No.1 or 2, 3 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Dispatch of a train from Line No.3 to 'A' Cabin.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 setting overlap to sand hump</p> <p>AND</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2) to line No.5 or 10 or 11 or 12 or 13</p> <p>OR</p> <p>Dispatch of UP train from Line No. 10 or 11 or 12 or 13 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or Concor cabin (VSP Line No.1 or Line No2)</p> <p>OR</p> <p>Dispatch of train from Line No.10 or 11 or 12 or 13 to KK single line or DN line towards PDT end.</p> <p>OR</p> <p>Reception of UP train from KK single line to Line No.10 or 11 or 12 or 13</p>
23	Reception of an UP train from UP line to Line No.8 .setting overlap to overrun line.	AND	<p>Dispatch of UP train from Line No.1 or 2, 3, 6, 7 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 setting overlap to sand hump</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to line No.5 or 10 or 11 or 12 or 13</p> <p>OR</p> <p>Dispatch of UP train from Line No. 6 or 7 or 10 or 11 or 12 or 13 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2)</p> <p>OR</p> <p>Dispatch of train from Line No. 10 or 11 or 12 or 13 to KK single line or DN line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line to</p>

			Line No.10 or 11 or 12 or 13
24	Reception of an UP train from UP line to Line No.10 setting overlap to DS point No.143.	AND	<p>Dispatch of UP train from Line No.1 or 2, 3, 6, 7, 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 or 6 or 7 or 8</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to line No.5 or 6 or 7 or 8 or 12 or 13</p> <p>OR</p> <p>Dispatch of UP train from Line No. 6 or 7 or 8 or 11 or 12 or 13 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2)</p> <p>OR</p> <p>Dispatch of train from Line No. 12 or 13 to KK single line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line to Line No. 12 or 13</p>
25	Reception of an UP train from UP line to Line No.11.		<p>Dispatch of UP train from Line No.1 or 2, 3, 6, 7, 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 or 6 or 8</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to line No.5 or 6 or 8</p> <p>OR</p> <p>Reception a DN train from VSP (L-2) to Line No.13.</p> <p>OR</p> <p>Dispatch of UP train from Line No. 6 or 7 or 8 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2)</p> <p>OR</p> <p>Dispatch of UP train from Line No. 12 or 13 to VSP(L-2).</p> <p>OR</p> <p>Dispatch of train from Line No. 12 or 13 to KK single line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line to</p>

			Line No. 12 or 13.
26	Reception of an UP train from UP line to Line No.12.	AND	<p>Dispatch of UP train from Line No.1 or 2, 3, 6, 7, or 8 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Dispatch of another UP train from Line No.3 or 6 or 7 or 8 to GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 or 6 or 8</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to line No.5 or 6 or 8 or 10.</p> <p>OR</p> <p>Dispatch of UP train from Line No. 6 or 7 or 8 or 10 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) Line</p>
27	Reception of an UP train from UP line to Line No.13 setting overlap to overrun line.	AND	<p>Dispatch of UP train from Line No.1 or 2, 3, 6, 7, 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 or 6 or 8</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to line No.5 or 6 or 8 or 10</p> <p>OR</p> <p>Dispatch of UP train from Line No. 6 or 7 or 8 or 10 or 11 or 12 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) Line.</p>
28	Reception of a DN train from GPT DN line to Line No.4 setting overlap up to intermediate starter signal No.12.		<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.5 setting overlap to sand hump or 6, 7, 8, 10, 11, 12, 13.</p> <p>OR</p> <p>Dispatch of DN train from Line No.6 or 7 or 8 or 10 or 11 or 12 or 13 to DN Line or KK Single line or middle line towards PDT end.</p> <p>OR</p> <p>Receptions of train from KK single line from</p>

			<p>PDT endto Line No.6 or 7 or 8 or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of UP train on line No.1 or 2 or 3 from UP line</p> <p>OR</p> <p>Dispatch of UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line.</p>
29	Reception of a DN train from GPT DN line to Line No.5 setting overlap to sand hump.	AND	<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.6 or 7 or 8, 10, 11 ,12,13.</p> <p>OR</p> <p>Dispatch of DN train from Line No.6 or 7 or 8 or 10 or 11 or 12 or 13 to DN Line or KK Single line towards PDT end.</p> <p>OR</p> <p>Reception of train from KK single line or middle line and UP line from PDT end to Line No.6 or 7 or 8 or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of UP train on line No.1 or 2 or 3 from UP line or Middle line</p> <p>OR</p> <p>Dispatch of UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line.</p>
30	Reception of an DN train from GPT DN line to Line No.6.	AND	<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line No. 8, 10, 11, 12, 13.</p> <p>OR</p> <p>Dispatch of DN train from Line No. 7 or 8 or 10 or 11 or 12 or 13 to DN Line or KK Single line towards PDT end.</p> <p>OR</p> <p>Dispatch of train from Line No. 7 or 8 or 10 or 11 or 12 or 13 to "B' Hut (KK) or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2)</p> <p>OR</p> <p>Reception of train from KK single line or middle line and UP line from PDT end to Line No. 7 or 8 or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of UP train on line No.1 or 2 or 3 from UP line or Middle line</p> <p>OR</p> <p>Dispatch of UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line.</p>
31	Reception of an DN	AND	Reception of another DN train from B' Hut

	train from GPT DN line to Line No.7 or 8.		<p>(E.Co.Rly goods dispatch) 'B' Hut (KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.10 or 11 or 12 or 13.</p> <p>OR</p> <p>Dispatch of train from Line No. 10 or 11 or 12 or 13 to B' Hut (E.Co.Rly goods dispatch) or "B' Hut (KK) or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2)</p> <p>OR</p> <p>Reception of train from KK single line from PDT end to Line No.. 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of UP train on line No.1 or 2 or 3 from UP line / middle line.</p> <p>OR</p> <p>Dispatch of UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line.</p>
32	Reception of a DN train from 'B' Hut (E.Co.Rly goods dispatch) to line No.4 or 5 setting overlap up to Intermediate Starter Signal No.12.	AND	<p>Reception of another DN train from 'B' Hut (KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.6 or 7 or 8 or 10 or 11 or 12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line towards PDT end.</p> <p>OR</p> <p>Dispatch of train from Line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to "B' Hut (KK) or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line from PDT end to Line No.. 6 or 7 or 8 or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line .</p>
33	Reception of a DN train from 'B' Hut (E.Co.Rly goods dispatch) to line No.6./ Line No.7 or Line No.8 OR reception of DN train on Line No.4		<p>Reception of another DN train from 'B' Hut (KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.10 or 11 or 12 or 13.</p> <p>OR</p> <p>Dispatch of a train from line No. 10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p>

			<p>Dispatch of a train from Line No.10 or 11 or 12 or 13 to 'B' Hut (KK) or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No. 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line .</p>
34	Reception of a DN train from 'B' Hut (E.Co.Rly goods dispatch) to line No.10.setting overlap to overrun line.	AND	<p>Reception of another DN train from CONCOR CABIN (VSP Line No.1 or Line No2) to Line No. 11 or 12 or 13.</p> <p>OR</p> <p>Dispatch of an Up train from line No.11 or 12 or 13 to CONCOR CABIN (VSP Line No.1 or Line No2)</p> <p>OR</p> <p>Dispatch of a DN train from line No.11 or 12 or 13 to KK single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception and dispatch of a DN train from line No. 4 or 5 or 6 or 7 or 8 to Middle line or Dn line or KK Single line from GPT DN line.</p> <p>OR</p> <p>Dispatch of a train from line No. 5 or 6 or 7 or 8 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK Single line from PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or Up line from PDT end to Line No.. 11 or 12 or 13.</p>
35	Reception of a DN train from 'B' Hut (E.Co.Rly goods dispatch) to line No.11.	AND	<p>Reception of another DN train from CONCOR CABIN (VSP Line No.2) to Line No. 12 or 13.</p> <p>OR</p> <p>Dispatch of an Up train from line No. 12 or 13 to CONCOR CABIN (Line No2)</p> <p>OR</p> <p>Dispatch of a UP train from line No.12 or 13 to KK single line towards PDT end.</p> <p>OR</p>

			<p>Reception and dispatch of a DN train from line No. 4 or 5 or 6 or 7 or 8 to Middle line or DN line or KK Single line from GPT DN line.</p> <p>OR</p> <p>Reception of a train from KK Single line from PDT end to line No.12 or 13</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK Single line from PDT end.</p> <p>OR</p> <p>Dispatch of an UP train from Line No1 or 2 or 3 to 'A' Cabin or GPT UP line.</p>
36	Reception of a DN train from 'B' Hut (E.Co.Rly goods dispatch) to line No.12 /13.	AND	<p>Reception and dispatch of a DN train from line No. 4 or 5 or 6 or 7 or 8 to Middle line or Dn line or KK Single line from GPT DN line.</p> <p>OR</p> <p>Reception of a train on line No. 6 or 7 or 8 from Up line or Middle line or KK Single line from PDT end.</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK Single line from PDT end.</p> <p>OR</p> <p>Dispatch of an UP train from Line No1 or 2 or 3 to 'A' Cabin or GPT UP line.</p>
37	Reception of a DN train from 'B' Hut (KK) line to line No.4 / line No.5.	AND	<p>Reception of another DN train from GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line Nor 10 or 11 or 12 or 13.</p> <p>OR</p> <p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line towards PDT end.</p> <p>OR</p> <p>Dispatch of train from Line No.10 or 11 or 12 or 13 to GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line from PDT end to Line No.6 (Setting overlap to Sand hump) or. 8 (Setting overlap to overrun line) or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p>
38	Reception of a train from 'B' Hut (KK) to		Reception of another train from GPT (By Pass) Line or CONCOR CABIN (VSP Line

	line No.6 /7 8.	<p>No.1 or Line No2) to Line No.10 or 11 or 12 or 13.</p> <p>OR</p> <p>Dispatch of a train from line No. 10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train from Line No.10 or 11 or 12 or 13 to GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No. 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>.AND</p> <p>Reception of a DN train on line No.4 or 5(setting overlap to sand hump) from GPT end.</p>
39	Reception of a DN train from 'B' Hut (KK) line No.10(setting overlap to overrun line).	<p>Reception of another DN train from CONCOR CABIN (VSP Line No.1 or Line No2) to Line No. 11 or 12 or 13.</p> <p>OR</p> <p>Dispatch of a train from line No.6 or 7 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train from Line No. 11 or 12 or 13 to CONCOR CABIN (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No. 11 or 12 or 13.</p> <hr/> <p>AND</p> <p>Reception of a train from 'B' hut (E.Co.Rly goods dispatch) line to Line No.4 or 5 or 6 or 7 or 8.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 or 5 or 6 or 7 or 8 to 'A' Cabin or GPT UP line</p> <p>.OR</p>

			Reception of a DN train on line No.4 or 5 from GPT end.
40	Reception of a DN train from 'B' Hut (KK) line No.11.		<p>Reception of another DN train from CONCOR CABIN (VSP Line No2) to Line No. 12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No.6 or 7 or 8 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train from Line No.12 or 13 to CONCOR CABIN (VSP Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8.</p> <p>OR</p> <p>Reception of a train from 'B' hut (E.Co.Rly goods dispatch) line to Line No.4 or 5 or 6 or 7 or 8.</p> <p>OR</p> <p>Dispatch of a train from line No.4 or 5 or 6 or 7 or 8 to KK single line or DN line or Middle line.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 or 6 or 7 or 8 to 'A' Cabin or GPT UP line</p> <p>.OR</p> <p>Reception of a DN train on line No.4 or 5 from GPT end.</p>
41	Reception of a DN train from 'B' Hut (KK) line No.12 or Line No.13.		<p>Reception of another train from 'B' Hut (E.Co.Railway goods dispatch) line to line No.4 or 5 or 6 or 7 or 8</p> <p>AND</p> <p>Reception of a train on line No.1 or 2 or 3 from Up line from PDT end.</p> <p>OR</p> <p>Dispatch of a train from line No.6 or 7 or 8 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8.</p> <p>OR</p> <p>Dispatch of a train from line No.4 or 5 or 6 or</p>

			<p>7 or 8 to KK single line or DN line or Middle line.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 or 6 or 7 or 8 to 'A' Cabin or GPT UP line</p> <p>.OR</p> <p>Reception of a DN train on line No.4 or 5 from GPT end.</p>
42	Reception of a DN train from GPT(BY Pass)line to line No.4 / Line No.5.	AND	<p>Reception of another DN train from Line No.CONCOR CABIN(VSP Line No.1 or Line No2) to Line Nor 11 or 12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line towards PDT end.</p> <p>OR</p> <p>Dispatch of train from Line No.11 or 12 or 13 to CONCOR CABIN (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line from PDT end to Line No.6 (Setting overlap to Sand hump) or. 8 (Setting overlap to overrun line) or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p>
43	Reception of a DN train from GPT(By Pass) to line No.5 setting overlap to Sand hump.	AND	<p>Reception of another DN train from CONCOR CABIN (VSP Line No.1 or Line No2) to Line No. 11 or 12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train from Line No. 11 or 12 or 13 to CONCOR CABIN (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No. 6(setting overlap to sand hump)or 8(Setting overlap to overrun line) or 10 or 11 or 12 or 13.</p> <p>AND</p>

			<p>Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line from UP line or middle line or KK single line from PDT end.</p> <p>AND</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of DN train from GPT DN line to Line No.4.</p>
44	Reception of a train from GPT(By Pass) to line No.6 /7/ 8.	AND	<p>Reception of another train from CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.11 or 12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No. 10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train from Line No.11 or 12 or 13 to CONCOR CABIN (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No. 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5(setting overlap to sand hump) from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) to line No.4 or 5 (setting overlap to sand hump)</p>
45	Reception of a train from GPT(By Pass) to line No.10(setting overlap to overrun line).	AND	<p>Reception of another train from CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.11 or 12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No. 6 or 7 or 8 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train from Line No.11 or 12 or</p>

			<p>13 to CONCOR CABIN (VSP Line No.1 or Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5(setting overlap to sand hump) on 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line)/ 'B' Hut (KK)line to line No.4 or 5 (setting overlap to sand hump) or 6 or 7 or 8.</p>
46	Reception of a train from GPT(By Pass) to line No.11.	AND	<p>Reception of another train from CONCOR CABIN (VSP Line No2) to Line No. 12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No. 6 or 7 or 8 or KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train to KK single line from line No.12 or 13</p> <p>OR</p> <p>Dispatch of a train from Line No. 12 or 13 to CONCOR CABIN (VSP Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8</p> <p>OR</p> <p>Reception of a train from KK single line to Line No 12 or 13</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of a DN train on line No.4 or</p>

			<p>5(setting overlap to sand hump) ot 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line)/'B' Hut(KK)Line to line No.4 or 5 (setting overlap to sand hump) or 6 or 7 or 8</p>
47	Reception of a train from GPT(By Pass) to line No.12.	AND	<p>Dispatch of a train from line No. 6 or 7 or 8 or KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5(setting overlap to sand hump) to 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) to line No.4 or 5 (setting overlap to sand hump) or 6 or 7 or 8</p>
48	Reception of a train from GPT(By Pass) to line No.13(setting overlap to overrun line).	AND	<p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8 or 10</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5(setting overlap to sand hump) to 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) to line No.4 or 5 (setting overlap to sand hump) or 6 or 7 or 8</p>
49	Reception of a DN	AND	Reception of another DN train from Line

	train from CONCOR CABIN (VSP- LINE No.1) to line No.4		<p>No.CONCOR CABIN(VSP Line No2) to Line No.12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line towards PDT end.</p> <p>OR</p> <p>Dispatch of train from Line No. 12 or 13 to CONCOR CABIN (VSP Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line from PDT end to Line No.6 (Setting overlap to Sand hump) or. 8 (Setting overlap to overrun line) or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p>
50	Reception of a DN train from CONCOR CABIN (VSP- LINE No.1) to line No.5(setting overlap to overrun line)	AND	<p>Reception of another DN train from CONCOR CABIN (VSP Line No2) to Line No.12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train from Line No.12 or 13 to CONCOR CABIN (VSP Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No. 6(setting overlap to sand hump)or 8(Setting overlap to overrun line) or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line from UP line or middle line or KK single line from PDT end.</p> <p>AND</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of DN train from GPT DN line to Line No.4.</p>
51	Reception of a DN	AND	Reception of another train from CONCOR

	train from CONCOR CABIN (VSP- LINE No.1) to line No.6 /7 /8.	<p>CABIN (VSP Line No2) to Line No.12 or 13. .OR Dispatch of a train from line No. 10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end. OR Dispatch of a train from Line No. 12 or 13 to CONCOR CABIN (VSP Line No2). OR Reception of a train from KK single line or Middle line from PDT end to Line No. 10 or 11 or 12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line. OR Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line. AND Reception of a DN train on line No.4 or 5(setting overlap to sand hump) from GPT end. OR Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) to line No.4 or 5 or 6 or 7 or 8</p>
52	Reception of a DN train from CONCOR CABIN (VSP- LINE No.1) to line No.10.(setting overlap to overrun line)	<p>Reception of another train from CONCOR CABIN (VSP Line No2) to Line No.12 or 13. .OR Dispatch of a train from line No. 6 or 7 or 8 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end. OR Dispatch of a train from Line No. 12 or 13 to CONCOR CABIN (VSP Line No2). OR Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8 or 11 or 12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line. OR Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line AND Reception of a DN train on line No.4 or 5(setting overlap to sand hump) to 6 or 7 or 8 from GPT end. OR Reception of a train from 'B' Hut(E.Co.Rly</p>

			goods dispatch line) or 'B' Hut (KK) line to 4 or 5 (setting overlap to sand hump) or 6 or 7 or 8
53	Reception of a DN train from CONCOR CABIN (VSP- LINE No.1) to line No.11	AND	<p>Reception of another train from CONCOR CABIN (VSP Line No2) to Line No. 12 or 13.</p> <p>.OR</p> <p>Dispatch of a train from line No. 6 or 7 or 8 on KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train to KK single line from line No.12 or 13</p> <p>OR</p> <p>Dispatch of a train from Line No. 12 or 13 to CONCOR CABIN (VSP Line No2).</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8</p> <p>OR</p> <p>Reception of a train from KK single line to Line No 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) or 'B' Hut(KK) line or GPT (By Pass)line to line No.4 or 5 or 6 or 7 or 8</p> <p>OR</p> <p>Reception of train from GPT(By Pass) Line to Line No.10(Setting overlap to overrun line)</p>
54	Reception of a DN train from CONCOR CABIN (VSP- LINE No.1) to line No.12	AND	<p>Dispatch of a train from line No. 6 or 7 or 8 on KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p>

			<p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) 'B' Hut (KK) to line No.4 or 5 or 6 or 7 or 8.</p>
55	Reception of a DN train from CONCOR CABIN (VSP- LINE No.1) to line No.13(Setting overlap to overrun line)	AND	<p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 on KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8 or 10(setting overlap to DS point No.143)</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) 'B' Hut (KK) or GPT(By Pass)to line No.4 or 5 or 6 or 7 or 8 or 10.</p>
56	Reception of a DN train from CONCOR CABIN (VSP- LINE No.2) to line No.4	AND	<p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line from PDT end to Line No.6 (Setting overlap to Sand hump) or. 8 (Setting overlap to overrun line) or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p>
57	Reception of a DN train from CONCOR CABIN (VSP- LINE No.2) to line No.5(setting overlap to sand hump)	AND	<p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No.</p>

			<p>6(setting overlap to sand hump)or 8(Setting overlap to overrun line) or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line from UP line or middle line or KK single line from PDT end.</p> <p>AND</p> <p>Dispatch of an UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of DN train from GPT DN line to Line No.4.</p>
58	Reception of a DN train from CONCOR CABIN (VSP- LINE No.2) to line No.6 /7 /8.	AND	<p>Dispatch of a train from line No. 10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No. 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line..</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5(setting overlap to sand hump) from GPT end</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) to line No.4 or 5 .</p>
59	Reception of a DN train from CONCOR CABIN (VSP- LINE No.2) to line No.10.(setting overlap to overrun line)	AND	<p>Dispatch of a train from line No. 6 or 7 or 8 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2</p>

			<p>or 3 to 'A' Cabin or GPT UP line AND Reception of a DN train on line No.4 or 5(setting overlap to sand hump) to 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) or 'B' Hut (KK) line to 4 or 5 (setting overlap to sand hump) or 6 or 7 or 8</p>
60	Reception of a DN train from CONCOR CABIN (VSP- LINE No.2) to line No.11	AND	<p>Dispatch of a train from line No. 6 or 7 or 8 on KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Dispatch of a train to KK single line from line No.12 or 13</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8</p> <p>OR</p> <p>Reception of a train from KK single line to Line No 12 or 13..</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) or 'B' Hut(KK) line or GPT (By Pass)line to line No.4 or 5 or 6 or 7 or 8</p> <p>OR</p> <p>Reception of train from GPT(By Pass) Line to Line No.10(Setting overlap to overrun line)</p>
61	Reception of a DN train from CONCOR CABIN (VSP- LINE No.2) to line No.12		<p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 on KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p>

			<p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rlygoods dispatch line) 'B' Hut (KK) GPT (By Pass) to line No.4 or 5 or 6 or 7 or 8.</p>
62	Reception of a DN train from CONCOR CABIN (VSP- LINE No.2) to line No.13(setting overlap to overrun line)		<p>Dispatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 on KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8 or 10(setting overlap to DS point No.143)</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Dispatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut(E.Co.Rly goods dispatch line) 'B' Hut (KK) or GPT(By Pass)to line No.4 or 5 or 6 or 7 or 8 or 10.</p>
63	Reception of an DN train from WAT-MYD (A Cabin) DN line to Line No.6 or 7 or 8.	AND	<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut (KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.10 or 11 or 12 or 13.</p> <p>OR</p> <p>Dispatch of train from Line No. 10 or 11 or 12 or 13 to B' Hut (E.Co.Rly goods dispatch) or "B' Hut (KK) or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2)</p> <p>OR</p> <p>Reception of train from KK single line from PDT end to Line No.. 10 or 11 or 12 or 13.</p>
64	Reception of a DN train from WAT-MYD (A Cabin) DN line to Line No.5 setting overlap to sand hump.	AND	<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.6 or 7 or 8, 10, 11 ,12,13.</p>

			<p>OR</p> <p>Dispatch of DN train from Line No.6 or 7 or 8 or 10 or 11 or 12 or 13 to DN Line or KK Single line towards PDT end.</p> <p>OR</p> <p>Reception of train from KK single line or middle line and UP line from PDT end to Line No.6 or 7 or 8 or 10 or 11 or 12 or 13.</p>
65	Reception of a DN train from WAT-MYD (A Cabin) to Line No.4 setting overlap up to intermediate starter signal No.12.		<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut(KK) line or GPT (By Pass) Line or CONCOR CABIN (VSP Line No.1 or Line No2) to Line No.5 setting overlap to sand hump or 6, 7, 8, 10, 11, 12, 13.</p> <p>OR</p> <p>Dispatch of DN train from Line No.6 or 7 or 8 or 10 or 11 or 12 or 13 to DN Line or KK Single line or middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train on KK single line from PDT end to Line No.6 or 7 or 8 or 10 or 11 or 12 or 13.</p>

6.5 **COMPLETE ARRIVAL OF TRAINS:**

The entire block section between PDT-SCMN on both Up, Down, Middle ,KK Lines and SCMN-CONCOR CABIN Line-1,Line-2, 'B' Hut(KK) an 'B' Hut (E.Co.Rly goods dispatch)lines, SCMN-GPT Main lines and By Pass lines are monitored by axle counter system and the position of the block section whether 'Occupied' or 'Clear' is indicated on Panel at SS/SM's office. As soon as train enters in to that block section the RED indication appears on Panel. After whole train clears the block section GREEN indication appears on the Panel. This confirms the complete arrival of train and the SS/ SM on duty shall give 'Train Out of Block Section' report on seeing the section clear indication GREEN on the Panel.

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

6.6 **DESPATCH OF TRAINS:**

To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy himself by observing the visual indication on the Indication Panel Board.. He shall suspend all non-isolated shunting and the SS/SM 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. As soon as the train passes the Dn advanced starter signal, Train entering section indication will appear on the panel. The SS/SM will then send the train entering given section signal to the station in advance.
(Refer GR 3.38, 3.42, SR 3.36.04(b), 3.42.04 and BWM 2.07.5(a))

DESPATCH OF TRAINS ON DN LINE, MIDDLE LINE AND K.K LINE BETWEEN SCMN-PDT :

The Advanced starter signal No 20, 204 & 206 of SCMN shall be taken 'OFF' only when the 'Axle counter' clear indication available on the Panel.

The SS/SM on duty shall watch the safe passage of the train with its last vehicle indicator.. 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 trains. (Refer SR 4.23.02 & 4.25.02)

DESPATCH OF TRAINS ON VSP LINE-1,VSP LINE-2 BETWEENSCMN-CONCOR CABIN

The Advanced starter signal No 73 & 75 of SCMN shall be taken 'OFF' only when the 'Axle counter' clear indication available on the Panel.

The SS/SM on duty shall watch the safe passage of the train with its last vehicle indicator. If a train is worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed.

Note: Before dispatching train into SCMN-PDT and SCMN-CONCOR CABIN block section, the SS/SM on duty shall ensure the closure of the L.C.gate from the gateman on duty supported by a Private Number.

6.7 TRAINS RUNNING THROUGH:

- a.) The provision of GR 3.40, 4.17, 4.42 with relevant SRs and SR 3.42.02(a)(iv) and other relevant provision of BWM shall be observed.
- b.) The sequence for taking 'OFF' signals for run through trains is governed by SR 3.42.02 (a).
- c.) In every case in which trains are permitted to run through on a non-isolated line, all shunting shall be stopped and no vehicle unattached to an engine or not properly secured in accordance with rule 5.23 may be kept standing on a connected line which is not isolated from through line vide SR 4.11(2).
- d.) The SS/SM on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. (Ref GR 3.42,4.17 4.42,& SR 4.42.02 (b) (i) ,(ii), (iii),c & (d))

6.8 WORKING IN CASE OF FAILURE:

TRACK CIRCUITS:	In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.
AXLE COUNTER:	If the axle counter fails between the block sections, resetting procedure will be adopted as per Para 51 of SWR (App - B). If the axle counter indication does not appear 'Green & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to Sectional Signal Maintainer for rectification.
BLOCK INSTRUMENTS:	In the event of partial/total failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer SR 6.02.03 & 6.02.06)
RECEPTION OF TRAIN ON OBSTRUCTED LINE:	Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2)(a) or if calling signal cannot be taken off, trains are to be piloted as per GR 5.09(2)(C)(3)(4) (5) and SR 5.09.01.
RECEPTION OF A TRAIN ON NON SIGNALLED LINE	NIL

DEFECTIVE SIGNALS:	Whenever signals become defective, the procedure laid down in GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c)] shall be followed. In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, Station Master on duty shall before giving line clear initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]
INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:	However, before declaring a point 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]
DEFECTIVE INTERLOCKING:	When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping and padlocking of points for admission of train. [Refer SR 3.69.03(c) & 3.69.01].
DEFECTIVE/DAMAGED POINTS	When any point fails to operate normally by the route setting operation through VDU it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle.

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

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

- i) Trolleys, Motor Trolleys, Lorries which are not insulated shall not be allowed to run except on Line clear.
- ii) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly.
- iii) In all other respects the Working of a light motor trolley shall confirm to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley.

7. **BLOCKING OF THE LINES:**

When a running line is block by stabled load, wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after arrival of a train at the station the points at either end on single line section should be immediately set against the block line except when shunting or any other movement is required to be done immediately in that direction on that line.

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

A. SECURING OF VEHICLES: -

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

NOTE

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

8 SHUNTING**8.1 GENERAL PRECAUTIONS.**

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block working Manual (Refer GR 3.46, 3.52 to 3.56, 5.13 to 5.23, 8.09 to 8.15) The SS/SM on duty is authorized to supervise shunting operation. Normally back shunt, shunt below starters and intermediate starter signals shall be used for shunting operations. The official supervising the shunting shall ensure the correct setting, clamping and padlocking of points in case of Non signaled movements.

The SS/SM on duty and the official supervising shunting shall cooperate with each other regarding shunting operations. Neither reception signals nor departure signals shall be taken 'OFF' unless the shunting is isolated and the path of incoming or outgoing train is free from obstructions.

NOTE

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

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approach train is strictly prohibited.

8.3 PROHIBITION OF SHUNTING, SPECIAL FEATURES IF ANY:

- (i) Hand shunting /Fly shunting is prohibited at both ends of the yard.
- (ii) For shunting in both end of the yard, Engine should be leading towards the falling gradient.

8.4 SHUNTING OUTSIDE STATION SECTION:-

- (a) When line clear has been given, no shunting shall be permitted in the block section rear vide GR. 8.05(2).
- (b) Shunting or obstruction for any other purpose shall not be permitted in block section in rear unless it is clear and is blocked back.
- (c) Shunting or obstruction for any other purpose shall not be permitted in block section in advance unless it is clear and is block forward vide GR 8.06.(3).

8.5 SHUNTING WITHIN STATION SECTION :

If necessary signals are kept at "ON", shunting may be carried on within the station section but this shall be done only when there is no approaching train since shunting in the face of an approaching train is prohibited at this station.

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

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

9. ABNORMAL CONDITION:-

(9) <u>ABNORMAL CONDITIONS:-</u>	
(a) The rules to be observed in the event of abnormal conditions:	
i) During partial interruption / failure of electrical communications instrument.	During partial interruption of communications trains shall be worked in accordance with BWM 5.16 & 5.23 & SR 6.02.06
ii) The Authority to proceed in to the occupied block section in case obstruction of line or accident etc.	Whenever it becomes necessary to send a train into the block station already occupied by another train or due to accident, trains shall be worked in accordance with SR 6.02.05 or SR 9.12.08. The authority to proceed shall be block ticket (i.e T/A- 602 or T/C-912) as per SR 6.02.05 or SR 9.12.08 as the case may be.
iii) Trains delayed in block section.	When a train carrying passenger does not arrive within '10' minutes or a goods train within 20 minutes after allowing for its normal running time from the station in rear the Station Master at the station in advance shall immediately advise the station in rear and the Section Controller on duty of this fact. The procedure laid down in GR 6.04 and SR thereto shall be followed.
iv) Failure / Passing of intermediate block stop signal at 'ON':	NIL
v) Failure of axle counter block / BPAC:	Para No.5.0 in Appendix 'B' of this SWR to be followed.
vi) Failure of MTRC	NIL
(b) Procedure for emergency operation of Points by Crank Handle:	
(i)	The detailed procedure for emergency crank handle operation of motor operated points are mentioned in Para No.4.3.4 of Appendix 'B'
(ii)	Procedure for Emergency operation of point with axle counter track circuit failure are mentioned in Para No.4.3.4 of Appendix 'B'
(iii)	Procedure for Emergency Gate operation: As per para No.4.5.1 of Appendix 'B'.
(c) Certification of clearance of track before "calling on signal" operation is initiated:	
Before taking off Calling-on Signal during failure of track circuit/axle counter, the route and the clearance of the track over which train would pass to be verified by SM.	
(d) Reporting failure of points, Track circuits / Axle counters and interlocking:	
(i)	Whenever there is a failure of points, track circuits / axle counters or any other interlocking gear at the station the failure should be reported by SM on duty to the concerned signal maintenance staff on duty responsible for attending the failure and only after receipt of the written memo from the Signaling Maintainer for rectification of the fault, SM should restore the normal working.
(ii)	The entries in failure register to be done with message to the Section Controller.

9.1 TOTAL FAILURE OF COMMUNICATION:-

- a.) In the event of total failure of all communications, trains shall be worked in accordance with

provisions of SR 6.02.02 and SR 6.02.04 on double line and single line respectively.

b.) During partial interruption of communications the rules laid down in SR 6.02.06 shall be followed.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION :

During Temporary Single Line working on double line either between SCMN-PDT and SCMN-GPT, train shall be worked as per the procedure as per SR 6.02.02.

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

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

9.4 ABNORMAL WORKING IN CASE OF AUTOMATIC SIGNALLING SYSTEM:-

1) WORKING OF TRAINS DURING FAILURE OF ALL SIGNALS(IN DOUBLE LINE) AUTOMATIC BLOCK SYSTEM LIKELY TO LAST FOR SOME TIME AND CAUSE SERIOUS DELAY WHILE MEANS OF COMMUNICATIONS ARE AVAILABLE :-

Shall be worked as per procedure vide SR 9.12.01.

2) WORKING OF TRAINS UNDER AUTOMATIC BLOCK SYSTEM (DOUBLE LINE) DURING OBSTRUCTION OF ONE LINE WHEN SIGNALS ARE OPERATED AND COMMUNICATIONS ARE AVAILABLE :

Procedure shall be followed as per SR 9.12.03.

3) PROCEDURE FOR WORKING TRAINS UNDER AUTOMATIC BLOCK SYSTEM (DOUBLE LINE) DURING OBSTRUCTION OF ONE LINE WHEN NO MEANS OF COMMUNICATION ARE AVAILABLE.

Shall be followed as per SR 9.12.04.

4) WORKING OF TRAINS UNDER AUTOMATIC BLOCKSYSTEM (DOUBLE LINE) DURING FAILURE OF THE MEANS OF COMMUNICATION WHEN SIGNALS ARE OPERATIVE:-

Procedure as per SR 9.12.05 shall be followed.

5) PROCEDURE WHEN SEMI-AUTOMATIC STOP SIGNAL IS 'ON'.

Shall be followed as per GR 9.14 and SR there to

6) PASSING A GATE STOP SIGNAL AT 'ON' IN AUTOMATIC SIGNALING TERRITORY.-

If the Loco Pilot finds a gate stop signal at 'on' in an Automatic signaling territory:

- (a) He shall comply with the provisions of Rule 9.02 or 9.07, as the case may be, if the 'A' marker is illuminated, or
- (b) (i) If the 'A' marker light is extinguished, he shall sound the prescribed code of whistle to warn the Gateman and bring his train to a stop in rear of the signal, and
- (ii) If after waiting for one minute by day and two minutes by night, the signal is not taken 'off', he shall draw his train ahead cautiously up to the level crossing, and
- (iii) If the gateman is available and exhibiting hand signals, proceed further past the level crossing gate cautiously or

(iv) If the gateman is not available, or, is available but not exhibiting hand signals, stop in rear of the level crossing and after ascertaining that the gates are closed against road traffic and on getting hand signals from the Gateman, and in his absence from Assistant Loco Pilot, the Loco Pilot shall sound the prescribed code of whistle and cautiously proceed up to the next stop signal complying with the Rule 9.02 or 9.07 as the case may be.

7) PROTECTION OF A TRAIN STOPPED IN AN AUTOMATIC BLOCK SIGNALING SECTION.-

- (1) When a train is stopped in an Automatic block signaling section, the Guard shall immediately exhibit a stop hand signal towards the rear and checkup that the tail board or tail light is correctly exhibited.
 - (2) If the stoppage is on account of accident, failure, or obstruction and the train cannot proceed, the Loco Pilot shall sound the prescribed code of whistle and the train shall be protected immediately as per Rule 6.03 except that for the protection of the occupied line one detonator shall be placed at 90 meters from the train on the way out and similarly two detonators, 10 meters apart, not less than 180 meters from the train or at such distance as has been fixed by special instructions.
- 8) When a Loco Pilot finds a Semi-Automatic Stop signal with illuminated 'A' Marker to flicker/bob, he shall act in accordance with SR 9.02.02 or 9.07.02 as may be applicable.
 - 9) When a Loco Pilot/Motorman finds an Automatic Stop signal with an 'A' Marker or a Semi-Automatic Stop signal when working as Automatic Stop signal displaying more than one aspect simultaneously other than what have been prescribed under General Rules 3.08(4) (b) in the three aspect signaling territory and 3.08(4) (c) in four-aspect out of the aspects displayed by the signal. He shall also make a report in this regard in terms of SR 9.11.01.

10) VISIBILITY TEST OBJECT:

The signal lights of signal No.25 A/B for UP direction and Signal No.22 for down direction of Line No.1 during day and night are the visibility test object vide GR 3.61.2(b)(iii)

12) ESSENTIAL EQUIPMENT AT THE STATION:

(Details are given in Appendix-'E')

13) FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG.

FOG SIGNALLING:-

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

NOTE:- Placing of detonators during foggy or tempestuous weather between SCMN-GPT and SCMN-BYPass lines shall be dispensed with vide SR 3.61.01(d)(i).

15.1 STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

APPENDIX 'A'WORKING OF LEVEL CROSSING GATE No.SS1 of KM:870/17-181. GENERAL:1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

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

1. Number of Level Crossing Gate : S-1
2. Engineering or Traffic Gate : Engineering
3. Under control of Station Master / P.WAYInspector : P.WAY Inspector.
4. Location at KM : 870/17-18
5. At Station : SCMN YARD
6. In between stations : Towards south end of SCMN.
7. BG / MG / NG : BG
8. Single line / Double line / Multiple line: Multiple Line
9. Normal Position: Open to road Traffic
10. Interlocked / Non-Interlocked: Inter locked with Station signals.
11. Means of Interlocking : HKT/Key Transmission
12. Provision of Gate signal at Kms.
(i) Up Line : Nil
(ii) DnLine : Nil.
13. Signalling arrangements: MACLS
14. Means of Communication – Telephone / Bell etc.: Telephone connection with
SCMN RRI Cabin
15. Width of level crossing gate: 9.5 M.
16. Type of road (NH / SH / Others) : Others.
17. Name of Road : Municipal Road.
18. Metaled / non-metaled : Metaled.
19. Approach road : Metaled.
20. Width of the road : 7.5 M
21. Angle of road crossing (in case of the skew gates): 45 Degree.
22. Road gradient (if any)
(i) North / East side : 1 in 30
(ii) South / West side: 1 in 40.
23. Road alignment (straight/curve)
(i) North / East side : Straight .
(ii) South / West side: Straight
24. Provision of height gauges: Provided
25. Type of Barriers : Coupled Lifting type.
26. Length of Check rails : 9.5 M
27. Road surface in between L-Xing gates: Level.
28. Length of Rumble strip / speed breakers: 20 M from gate post.
29. Road signs: Provided
30. Speed breaker indication board: Provided
31. TVU: 20,339.5, 2018.
32. Census next due on : 2021
33. Demarcation for placement of Detonators: Provided

34. No. of Gatemen working: 3 Three
35. Nearest Railway Medical Assistance Railway Hospital: Marripalem
36. Nearest Private Medical Assistance available (if any): Private clinic at Gopalapatnam
37. List of equipment available Yes / No: Yes

1.2

EQUIPMENT:

	<u>Items</u>	<u>Quantity / Numbers</u>
1.	LED based flashing Tri Colour Hand signal lamp	3 (5 on Quadruple / Line or twin single line)
2.	Hand Signal Flag Green	1 Mounted on stocks
3.	Hand Signal Flag Red	3 (6 on Quadruple / line or Twin single line and 7 in case Hexaple Section mounted on sticks)
4.	Banner Flag Red	3 (5 on Quadruple / Line or twin single line)
5.	Posts for exhibiting red banner flag	2 (4 on Q / Twin single line and 5 on Hexaple section)
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade / Fowrah	1
12.	Rammer	1 (In case of asphalted road this may not be provided)
13.	Pick Axe	1 (In case of asphalted road this may not be provided)
14.	Tin case for flags	1
15.	Can for oil	1
16.	Water port / 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.	A Small size chain for use in case of failure of gate boom.	2

1.3

RECORDS TO BE KEPT AT GATE LODGE:

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

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.

7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.
12. S&T Register.

1.4 **MODE OF OPERATION:**

Gate shall normally be kept open to road traffic. Whenever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/dispatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate..

- i). Key 'H' extracted from the winch after closing the gate is inserted in 1 GF normal, releases 1 GF.
- ii). 1 GF when reversed releases key 'Q'. And locks gate in closed position.
- iii). Key 'Q' extracted from 1 GF is transmitted electrically through EKT to SS/SM/RRI. SS/SM operates the gate control button 166 in conjunction with group release button. Gate closed indication Green light appears on the panel. When signal is taken 'OFF' locked indication RED light also appears in the panel.
- iv). To open the gate after passage of train SS/SM operates gate control button 166 in conjunction with group release button on the panel. The gate man releases key 'Q' from EKT and WHITE light appears on the panel immediately.

1.5 **DUTIES OF GATEMAN:**

1. **COMPETENCY:** Gateman working at this gate should have competency certificate applicable to perform duty at this gate issued by the sectional JE/SE (P.Way).
2. **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.
3. **POSITION DURING PASSAGE OF TRAINS:**
During passage of trains, gateman will stand in the manner indicated below:
 - i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.
 - ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
 - iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
 - iv) He shall keep the whistle slung around his neck from a cord.
4. **ROUTING 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, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / 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 prepared to repeat any signal which guard may give to drive on walkie-talkie or in any other way.
- vii) If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest Station Master, Gangmateor 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.
- xx) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the driver to report the defect at the next station.
- xxi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xxii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xxiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xxiv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xxv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.

- xxvi) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xxvii) 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.
- xxviii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

5. **ACTION IN CASE OF UNUSUAL OCCURANCE 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 falls 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.

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

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

The gateman shall protect the line as under:-

- a) **On double line section:**

- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, fuses and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters 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 on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- b) **On single line section:**
 - i) 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) Gateman shall then proceed to protect the gate along with detonators, fuses 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 take steps to remove the obstruction and warn the driver 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 and fix the fusee to warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- c) **Other action to be taken by Gateman:**
 - i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
 - ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
 - iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

1.6 **ENGINEERING ITEMS:**

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

1.7. Failure of Telephonic Communication:

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

- i) If the telephone falls at the gate connected with the station at the despatching end, Station Master shall issue a caution order to the driver of the departing train.
- ii) SS/SM shall advise the driver to whistle continuously and proceed cautiously while approaching the gate.
- iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- iv) In case of an approaching train, the SS/SM shall advise the SS/SM at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- v) The SS/SM 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) SS/SM will also advise the gateman through Gangman / Patrolman / Loco pilot of the first train that the telephone has become defective.
- vii) SS/SM should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

1.8. Failure of Lifting Barriers:

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

- vii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repairs the lifting barrier and issue reconnection / fit memo for the same.

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

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) SS/SM on duty shall issue caution order to the Loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching a train in the block section from his end.
- vii) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.10 Failure of the Gate Key with the gate in open condition:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) SS/SM on duty shall issue a caution order to the Loco pilot of a departing train.

- v) He shall also advise the SS/SM at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before dispatching a train in the block section from his end.
- vi) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.11. Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the SS/SM on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonator and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the SS/SM 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 SS/SMR at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the SS/SM accordingly, under exchange of private number.
- x) SS/SM shall then issue a caution order to Loco pilot of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, of the gate is broken, but is clear of any obstruction.

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

1.12. Obstruction on the Track near Level Crossing Gate:

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

Appendix 'A'**WORKING RULES OF LEVEL CROSSING GATE SP-1 at KM 870/11-12:-**1. GENERAL:1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

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

- | | |
|---|---|
| 1. Number of Level Crossing Gate : | SP-1. |
| 2. Engineering or Traffic Gate: | Traffic |
| 3. Under control of Station Master /
Permanent Way Inspector | P.WAY Inspector |
| 4. Location at KM : | 870/11-12 |
| 5. At Station: | SCMN |
| 6. In between stations : | Towards South end
of SCMN. |
| 7. BG / MG / NG : | BG |
| 8. Single line / Double line / Multiple line : | Twin single Line |
| 9. Normal Position: | Open to road Traffic |
| 10. Interlocked / Non-Interlocked : | Inter locked with Station
signals. |
| 11. Means of Interlocking: | HKT |
| 12. Provision of Gate signal at Kms. | |
| (i) Up Line : | Nil |
| (ii) Dn Line : | Nil |
| 13. Signalling arrangements: | MACLS |
| 14. Means of Communication –
Telephone / Bell etc.: | Telephone connection with
SCMN RRI Cabin of SCMN |
| 15. Width of level crossing gate : | 8.5 M. |
| 16. Type of road (NH / SH / Others) : | Others |
| 17. Name of Road: | Municipal. |
| 18. Metaled / non-metaled : | Metalled |
| 19. Approach road : | Metalled |
| 20. Width of the road : | 7.5M. |
| 21. Angle of road crossing (in case of the skew gates): | 90 degree |
| 22. Road gradient (if any) | |

	(i) North / East side :	1 in 40
	(ii) South / West side :	1 in 30
23	Road alignment (straight/curve)	
	(i) North / Eastside:	Straight.
	(ii) South / West side:	Straight.
24	Provision of height gauges :	Provided
25	Type of Barriers :	Coupled Lifting type.
26	Length of Check rails:	10.5 M
27	Road surface in between L-Xing gates:	Level
28	Length of Rumble strip / speed breakers:	20 M from gate post
29	Road signs :	Provided
30	Speed breaker indication board:	Provided
31	TVU :	83341.85 on 2018.
32.	Census next due on :	2021.
33.	Demarcation for placement of Detonators:	Provided
34.	No. of Gatemen working:	3 Three
35.	Nearest Railway Medical Assistance:	Railway Hospital Marripalem
36.	Nearest Private Medical Assistance available (if any):	Private clinic at Vepagunta
37	List of equipment available Yes / No :	Yes

1.2 EQUIPMENT

S. No	Description	Requirement	To be used as
1	LED Tri colour hand signal lamps	Two	One for use and another for spare
2	Green hand signal flag	One flag mounted on sticks	To hold in furled condition while passing train.
3	Red hand signal flag	Two flags mounted on sticks	One to hold in furled condition and another for spare.
4	Red banned flag mounted with sticks	Single line -2 Double line - 2 Multiple lines -3	In case of obstruction, one flag is to be displayed on each line except on single line it is to be placed on either side of the line.
5	chains with 2 padlocks	2 chains with 2 padlocks	For securing gate against road traffic in case of gate book cannot be closed.
6	Stop Boards	2 retro reflective stop boards with stands	To display towards road traffic when gate is secured by gate chains due to failure of booms

7	padlocks	One	To lock the door of the gate lodge in case of necessity.
8	detonators	Ten (10) in a tin case	For use in case of obstruction of track
9	Tommy bar	One	For leveling the soil surface or to clean the channels of rails
10	bucket	One	To keep water
11	Whistle	One	For alerting road users on approach of train and LP/Guard to call their attention.
12	Wall clock	One	To note down the timings in PN/Log book.
13	A small size chain for use in case of failure of gate boom/leaf lock.	Two	For securing boom in closed condition in case of failure of boom lock.

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

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

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

1.4 **MODE OF OPERATION:**

Gate shall normally be kept open to road traffic. Whenever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/despatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

- i). Key 'G' extracted from the winch after closing the gate is inserted in 1 GF normal, releases 1 GF.
- ii). 1 GF when reversed releases key 'P'. And locks gate in closed position.
- iii). Key 'P' extracted from 1 GF is transmitted electrically through EKT to SS/SM/RRI SS/SM operates the gate control button 165 in conjunction with group release button. Gate closed indication Green light appears on the panel. When signal is taken 'OFF' locked indication RED light also appears in the panel.

- iv). To open the gate after passage of train SS/SM operates gate control button 165 in conjunction with group release button on the panel. The gate man releases key 'P' from EKT and WHITE light appears on the panel immediately. releases 1 GF.

1.5 **DUTIES OF GATEMAN:**

1. **COMPETENCY:** Gateman working at this gate should have competency certificate applicable to perform duty at this gate issued by the sectional JE/SE (P.Way) and CH.DTI.
2. **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.
3. **POSITION DURING PASSAGE OF TRAINS:**
During passage of trains, gateman will stand in the manner indicated below:
 - i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.
 - ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
 - iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
 - iv) He shall keep the whistle slung around his neck from a cord.
4. **ROUTING 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, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
 - iv) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
 - v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / 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 prepared to repeat any signal which guard may give to drive 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 Station Master, Gangmateor 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.
- xx) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the driver to report the defect at the next station.
- xxi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xxii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xxiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xxiv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xxv) Gateman shall keep the road surface well-watered and rammed in case of unmetalled roads.
- xxvi) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xxvii) 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.
- xxviii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

5 **ACTION IN CASE OF UNUSUAL OCCURANCE 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 endeavour to attract the attention of the Loco pilot/ guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, on telephone, to take appropriate action, under exchange of private number.

6 **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

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

The gateman shall protect the line as under:-

a) **On double line section:**

- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.

- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters 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 precede on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the driver of the approaching train.
- vii) 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 warn the loco pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- b) **On single line section:**
 - i) 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) Gateman shall then proceed to protect the gate along with detonators, fuse and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall precede 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. Thereafter he shall proceed to a distance 1200 meters on BG. 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 precede 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 take steps to remove the obstruction and warn the loco pilot of the approaching train.
 - vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

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

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

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

1.6 **ENGINEERING ITEMS:**

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

1.7 **EMERGENCY RELEASE OF GATE KEY :**

In the event of gate locked (Red) indication persists on SM's panel even after train movement is completed or when it is required to open the gate due to emergency in gate locked condition on panel the following procedure shall be adopted by both station master on duty and gate man..

1. Station Master on duty shall first cancel the signal by signal cancellation control of the relevant signal.
2. Station Master on duty then shall click on the 'Emergency gate release control' in the gate pop up menu.
3. The 'Red' locked indication will flash for 120 seconds and after the time has elapsed the 'Red' indication will disappear.
4. Station Master on duty then shall transmit 'Gate Control' by clicking 'Transmit control' (31).
5. The 'Key In' indication (white) starts flashing suggesting the key is transmitted to Gate man.
6. At gate lodge an indication will appear near RKT suggesting that the key can be released from the RKT for opening of the LC gate.
7. Seeing the indication gate man on duty shall extract the key from RKT and operate the gate.
8. On release of key from RKT flashing indication will disappear.

Any failure regarding transmission / extraction of gate key shall be intimated to the S&T officials for proper rectification. Till such time the failure is rectified the Station Master on duty shall pass the trains by P/IN 'or by P/OUT as the case may be.

1.8 FAILURE OF TELEPHONIC COMMUNICATION:

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

1.9 Failure of Lifting Barriers:

- i) When the gate cannot be closed due to failure of lifting barriers, the gateman shall immediately inform the SS/SM on duty under exchange of private number, and ensure that lifting of 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 that gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the driver of the approaching train.
- v) SS/SM on duty shall issue caution order to the Loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number; to similarly issue a caution order to the driver before dispatching a train in the block section.

- vii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the lifting barrier and issue reconnection / fit memo for the same.

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

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge / cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / dispatch of trains as prescribed for non-interlocked gates should be adopted.
- v) SS/SM on duty shall issue caution order to the Loco pilot of a departing train.
- vi) He shall also advise the SS/SM 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) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.11 Failure of the Gate Key with the gate in open condition:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM 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) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) SS/SM on duty shall issue a caution order to the Loco pilot of a departing train.

- v) He shall also advise the SS/SM 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) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.12. Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the SS/SM on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, fusee and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The SS/SM 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) SS/SM shall then issue a caution order to Loco pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, 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) SS/SM shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection / fit memo for the same.

1.13. Obstruction on the Track near Level Crossing Gate:

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

WORKING OF LEVEL CROSSING GATES**LEVEL CROSSING GATE NO.490 AT KM: 864/33A-865/1A BETWEEN SIMHACHALAM NORTH AND PENDURTI.**1. GENERAL:1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

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

1. Number of Level Crossing Gate : 490
2. Engineering or Traffic Gate: Engineering
3. Under control of Station Master/
P.WAY Inspector/Permanent Way Inspector: Waltair.
4. Location at KM: 864/33A – 865/1A)
5. At Station : NIL
6. In between stations: SCMN & PDT
7. BG / MG / NG: BG
8. Single line / Double line / Multiple line: Multiple Line
9. Normal Position : Open to road Traffic
10. Interlocked / Non-Interlocked: Inter locked
11. Means of Interlocking: Inter locked with gate signals
12. Provision of Gate signal at Kms.
(i) Up Line : Up Main line gate signal between Km 864/27A-29A
Up KK gate signal between km 865/3-4
(ii) Dn Line :Dn Main line gate signal between km 865/6A-8A
Dn KK gate signal between km864/14-15.
13. Signallingarrangements : Gate Signals.
14. Means of Communication – Telephone / Bell etc: Telephone connection with
SCMN RRI Cabin of SCMN
15. Width of level crossing gate : 8 M
16. Type of road (NH / SH / Others) : Others
17. Name of Road : Municipal Raod
18. Metaled / non-metaled : Metaled
19. Approach road: Metaled
20. Width of the road : 7.5M
21. Angle of road crossing (in case of the skew gates): 90 degree
22. Road gradient (if any):
(i) North / East side: Level
(ii) South / West side : 1 in 30
23. Road alignment (straight/curve)
(i) North / East side : Straight
(ii) South / West side: Straight
24. Provision of height gauges : Provided.
25. Type of Barriers: Coupled Lifting type
26. Length of Check rails : 9.5 M
27. Road surface in between L-Xing gates: Level
28. Length of Rumble strip / speed breakers : 6.8 M
29. Road signs: Provided
30. Speed breaker indication board: Provided

31. TVU : 288815 on 2018
 32. Census next due on : 2021
 33. Demarcation for placement of Detonators: Provided
 34. No. of Gatemen working: 3 (Three)
 35. Nearest Railway Medical Assistance: Railway Hospital Marripalem
 36. Nearest Private Medical Assistance available (if any): Private clinic at Gopalapatnam,PDT,Vepugunta
 37. List of equipment available Yes / No: Yes

1.2

<u>EQUIPMENT:</u>		
	<u>Items</u>	<u>Quantity / Numbers</u>
1.	LED based tri color Hand Signal Lamp	3 (5 on Quadruple / Line or twin single line)
2.	Hand Signal Flag Green	1 Mounted on stocks
3.	Hand Signal Flag Red	3 (6 on Quadruple / line or Twin single line and 7 in case Hexaple Section mounted on sticks)
4.	Banner Flag Red	3 (5 on Quadruple / Line or twin single line)
5.	Posts for exhibiting red banner flag	2 (4 on Q / Twin single line and 5 on Hexaple section)
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	12
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade / Fowrah	1
12.	Rammer	1 (In case of asphalted road this may not be provided)
13.	Pick Axe	1 (In case of asphalted road this may not be provided)
14.	Tin case for flags	1
15.	Can for oil	1
16.	Water port / 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.	A Small size chain for use in case of failure of gate boom	2 Nos

1.3

RECORDS TO BE KEPT AT GATE LODGE:

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

1. Gate Working Instructions in Hindi / English.

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

1.4 **MODE OF OPERATION:**

Gate shall normally be kept open to road traffic. Whenever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/dispatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate

- i). Key 'G' extracted from the winch after closing the gate is inserted in 1 GFI, releases 1 GF.
- ii). 1 GF when reversed effects boom locking and releases key 'G1'. and locks gate in closed position.
- iii). Key 'G1' extracted from 1 GF after boom locking, is to be inserted in RKT and turned.
- iv). Key in contact of RKT along with the reversal of switches will clear signal No. 1S, 3S, 5S, 2S, 4S, 6S respectively.

1.4.1 **Brief Description**

This is an "B" Class interlocked level crossing gate located at KM 864/17 between SCMN and Pendurti across the Down, Up, Middle and KK line. The gate is provided with coupled lifting barriers operated with winch from gate lodge.

1.4.2 **INTERLOCKING**

The gate is provided with Manually operated Multi Aspect Colour Light signals with necessary "G" marker. A push button on the panel is provided for operation of signals. The signals are interlocked with the gate through this panel.

DESCRIPTION OF SWITCHES:-

Switch No.	Functions.
1S	Switch for UP gate signal No. 1 Sof Up Main line.
3 S	Switch for UP gate signal No. 3 S of Middle line.
5 S	Switch for Dn gate stop signal No. 5 S of KK line.
2 S	Switch for Up gate stop signal No. 2 S of KK line.
4 S	Switch for Dn gate stop signal No. 4 S of Dn Main line.
6 S	Switch for Dn gate stop signal No.6 S of Middle line.

1.4.3 ASPECT CONTROLLING OF SIGNALS :-

- a) Gate signal Nos.1S(for UP Line),3S (for Midline on DN. direction) shall not assume 'Green' aspect until the gate at KM: 864/17 is closed against road traffic and the signal is taken off.
- b) Gate signal Nos. 2S.(for KK line) and 4S (for DN Line on DN direction) are combined signals and work as distant signals of PDT in their corresponding directions.
- i) When the gate at KM: 864/33A is in closed condition and the signal Nos.2S and 4S/6S is taken off the signal/signals assume Double 'Yellow' aspect, when the Pendurti Station Home is 'ON'.
- ii) When the gate at KM: 864/17 is in closed condition and the signal is taken off it assumes 'Double Yellow' (attention) aspect or 'Green' aspect provided Pendurti Station Home Signal is taken off for Loop Line or Main Line respectively.

1.5 DUTIES OF GATEMAN:

1. **COMPETENCY:** Gateman working at this gate should have competency certificate applicable to perform duty at this gate issued by the sectional JE/SE (P.Way) and by CH.TI.

2. 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.

3. POSITION DURING PASSAGE OF TRAINS:

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

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

4. ROUTINGDUTIES 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, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / 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 prepare to repeat any signal which guard may give to drive on walkie-talkie or in any other way.
- vii) If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest SS/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.
- xx) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the driver to report the defect at the next station.
- xxi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xxii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xxiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xxiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xxv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xxvi) Gateman shall keep the road surface well-watered and rammed in case of unmetalled roads.

- xxvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xxviii) 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.
- xxix) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

5. **ACTION IN CASE OF UNUSUAL OCCURANCE 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 driver / 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 driver / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If driver / guard falls to take notice, gateman shall immediately inform the Station Master, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the driver / 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.

6. **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 SS/SM on duty, if connected by telephone, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

a) **On double line section:**

- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, fusees and red flag by day and red hand signal lamp by night.
- vi) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters 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 on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the driver of the approaching train.
- vii) 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 and fix the fuse to warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

b) **On single line section:**

- i) 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) Gateman shall then proceed to protect the gate along with detonators, fuse 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 take steps to remove the obstruction and warn the driver of the approaching train.
- viii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- ix) Thereafter, he shall light up and fix the fusee to warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- c) **Other action to be taken by Gateman:**
 - i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
 - ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
 - iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

1.6 **ENGINEERING ITEMS:**

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

1.6 **Intimation to the gateman**

- i) Immediately after departure of the train, SM/SS shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.
- ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the SS/SM to the gateman, as soon as he receives train entering section advice from the dispatching station.
- iii) If the actual running time of the train from either end of the section is less than 10 minutes, SS/SM will convey this advice to the gateman before obtaining / granting line clear.
- iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

1.7 Failure of Telephonic Communication:

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

- i) If the telephone falls at the gate connected with the station at the dispatching end, SS/SM shall issue a caution order to the Loco pilot of the departing train.
- ii) SS/SM shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
- iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- iv) In case of an approaching train, the SS/SM shall advise the SS/SM at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- v) The SS/SM 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) SS/SM will also advise the gateman through Gangman / Patrolman / Loco pilot of the first train that the telephone has become defective.
- vii) SS/SM should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

1.8 Failure of Lifting Barriers:

- i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman shall immediately inform the SS/SM on duty under exchange of private number, and ensure that lifting of barriers do not foul the track.

- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure that gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the Loco pilot of the approaching train.
- v) SS/SM on duty shall issue caution order to the Loco pilot of a departing train.
- vi) He shall also advise the SS/SM 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.
- vii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the lifting barrier and issue reconnection / fit memo for the same.

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

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge / cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / dispatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) SS/SM on duty shall issue caution order to the driver of a departing train.
- vi) He shall also advise the SS/SM 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) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.

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

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

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone.
- 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) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) SS/SM on duty shall issue a caution order to the driver of a departing train.
- v) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the driver before dispatching a train in the block section from his end.
- vi) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

1.11. Defective Gate Signals:

- i) The gateman shall treat the gate as defective and must not lower them under following circumstances:
 - a) If gate signals can be taken 'OFF' without closing the gate, or
 - b) The key can be extracted from the operation winch when the gate is in open condition, or
 - c) The key can be extracted from the leaf gates when the gate is in open condition
- ii) If the Gate or the Gate Signal or Warner / Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wires, if necessary.
- iii) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.

- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / dispatch as prescribed for non-interlocked gates should be adopted.
- v) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- vi) SS/SM on duty will issue a caution order to the driver of a departing train.
- vii) He shall also advise the SS/SM 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.
- viii) SS/SM shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection / fit memo for the same,

1.12. Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the SS/SM on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, fusee and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the SS/SM who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master shall also inform the SS/SM 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 SS/SM accordingly, under exchange of private number.
- x) SS/SM shall then issue a caution order to drivers of all trains to proceed cautiously, and pass the gate 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) SS/SM shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staff rectifies the defective lifting barriers and issue reconnection / fit memo for the same.

1.13. Obstruction on the Track near Level Crossing Gate:

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

**APPENDIX-"B" TO STATION WORKING RULES OF SIMHACHALAM
NORTH STATION. DETAILS OF SIGNALING AND INTERLOCKING FOR
WORKING THEM NORMALLY AND IN EMERGENCY ETC INCLUDING
THE POWER SUPPLY ARRANGEMENTS**

- 1.1** The power signalling and interlocking installations are as per the signalling plan No.SI-23090 ALT-H together with control tables, route section plans and wiring diagrams.

Based on the above signalling plan the Station Working Rules diagram attached to the Station Working Rule shows the following.

The complete layout of the Station including the non-interlocked lines and sidings within the station limits. In addition to signalling features the diagram indicates gradients, holding capacity of all individual lines, the position and number of lines, over run lines, special restrictions, track circuits, ground frames, cabins, goomties aspect control of signals and inters yard telecommunication facilities including paging and talkback equipment.

- 1.2** In this installation where the points are power operated, the point remaining in the last operating position. If the position of the points required to be changed, it shall be resorted individually by operating the concerned point button (WN) in conjunction with Point Group Button(WWN) to required position.
- 1.3** Charts are given in the Appendix-" B" showing the operation of entrance and exit buttons for various routes governed by stop signals, calling on signals and shunt signals, slots and the designation of various signals etc., for the convenience of the operation of points & signals by the SM on duty.
- 1.4** The Station is of Standard III interlocked equipped with Manually Operated Multi Aspect Colour Light Signals and power operated points with track circuit control over points and berthing tracks etc. centrally controlled from Route Relay Cabin through Siemens Type Route Relay installation based on the principles of entrance and exit to conform to signalling and interlocking plan No.SI-23090 ALT-H.
- 1.5** Route Relay Cabin is controlling the movements of trains from/to Pendurthi, GPT, (including Bye-Pass) WMY,(RYD,S.E Despatch and KK), and CONCOR CABIN.

**2.0 SIEMENS DOMINO PANELS - OPERATING AND INDICATING FOR
OPERATION OF THE POWER SIGNALING:-**

Two panels viz. operating (control) panel and indication panel are installed in the RRI Cabin Simhachalam North.

OPERATING (CONTROL) PANEL:-

The operating (control) panel is a small console, provided with various operating push buttons for signals, points, individual route section release, emergency operations and other miscellaneous buttons on a small layout of the entire yard in accordance with the geographical position at site. Special illuminated indicator indicating power failures is provided on this panel.

All the controlling push buttons are provided with indications and designation, number showing the corresponding number of the signal or route or points or any other field units as per the signalling and interlocking plan. The panel Station Master while operating the controlling buttons, switches, counters etc., on the operating panel for controlling the traffic movements or any other operation connected with power signalling installations in the yard should at the same time monitor the conditions of the traffic movements, condition of lines, position of the Block Instruments and condition of all other units and the indication panels.

2.2 INDICATION PANEL:

The indication panel shows in a domino form interlocked portion of Simhachalam North complete yard with connections to the ancillary yards together with the geographical co-relation the tracks, points, signals and various other controls as existing at site. This panel through various illuminating indications provided for the field functions, indicates the condition of a particular field gear at a given time in a miniature form so that the entire traffic operation in the yard as well as the position of power signalling and interlocking installations may be constantly monitored by the panel Station Master. Each track circuited line on the indication panel is represented by a separate and distinct colour on the face of the panel and is illuminated indicating the conditions of route setting, route releases, track clearance and occupancy of the track etc. Non-track circuited lines are shown in black colour for maintaining visual contact but they are not illuminated.

2.3 POSITIONING OF CONTROLLING BUTTONS ON THE OPERATING PANEL

The field function controlling buttons of points, signals, routes, slots etc., are located close to the position where the field function are represented on the operation panel. The common buttons such as emergency cancellation button, common point buttons and various counters (meant for counting emergency operations), signal power supply control buttons, signal and point intensity control buttons, are all housed on the top of the panel. In order to avoid the difficulty of the operator in reaching two buttons "for any operation". Some common buttons are multiplied on the operation panel at convenient places.

2.4 CRANK HANDLE RELEASE PUSH BUTTON:

To release any Crank Handle, concerned Crank Handle control button & Crank Handle group release button (CHRB) to be pressed simultaneously. Then the steady White light near the Crank Handle button starts flashing till such time the control released accepted by the field agency. At site Red indication appears when the Key is extracted from Key lever unit a flashing Red indication will appear on the Panel and White light extinguishes after the completing the work when the key is inserted and turned in the Key lock unit the flashing Red light become steady and the White light starts flashing. After seeking the indication SM/Panel Operated with draw the control by operating the concerned CH button in conjunction with group Crank Handle Normal Button (CHNB).

2.5 LAMP MUTING PUSH BUTTON:

Whenever any signal lamp is fused, a flashing indication appears on the panel in the concerned signal aspect with a buzzer. To stop the buzzer this button is to be operated.

- a) A white indication is provided on the panel to indicate closing of the level crossing gate
- b) The level crossing key is electrically interlocked with the panel. When key is extracted from the winch after closing the level crossing when inserted in the RKT the "key in contact" appears on the panel, which release the concerned signals.
- c) The track circuits are indicated on the panel with "WHITE" light for clear and "RED" light for occupation.
- d) Point indicators (white light) are provided for "Reverse" and "Normal" position of the points. A point failure indication is also provided with Flashing light.
- e) In case of failure of Motor operated points, the procedure detailed in rule No. 20.06 of Operating Manual, should be followed for setting of the points by Crank Handle.

2.6 SIGNALS AND THEIR INDICATIONS:-

- a) Manually operated multiple aspect colour light signals are provided at this RRI installation. The indications of various aspects of signals provided in this yard are as follows:-
 - i) **Red-**
Red indicates "Danger" aspect and signifies stop dead till the signal is taken off.
 - ii) **Single Yellow:**
Single Yellow indicates "Caution" aspect and signifies proceed cautiously preparing to stop dead at the next stop signal.
 - iii) **Double Yellow:**
Double Yellow indicates "Attention" aspect and signifies proceed prepared to pass the next signal at a restricted speed.
 - iv) **Green:**
Green indicates "Clear" aspect and signifies "Proceed".
- b) **Route Indicators:**
It takes the form of a row of a luner white lights above the signals at junction points at various degrees from the vertical to the left or right as the case may be to indicate whether the turnout at the junction point is set to the right or to the left side of the driver. In case of more than one such arm of route indicator on the same side, the top most reads to the first loop and the others for subsequent loops in regular order of sequence from the Main line.

3.0 a) LIST OF COUNTERS WITH THEIR CODE AND FUNCTION:-

Any emergency operations such as full route release, sub-route release, emergency overlap release, emergency point operation etc., are registered in respective counters which are fixed on the top of the panel adjacent to the concerned emergency operation button. The following counters are provided.

Sl. No	Description	Code	Remarks
1.	Emergency full-route release counter.	EUUYZ	The three button cancellation of any route which set is registered in this counter.
2.	Emergency sub-route release counter.	EUYZ	Individual sub-route release in case of failure is registered in this counter.
3.	Emergency overlap release counter	OYZ	Emergency release of any overlap in case of failure is registered in this counter.
4.	Emergency point operation counter.	EWZ	Emergency operation of points under track circuit failure operation is registered in this counter.
5.	Calling on signal counter.	COGGZ	Whenever a calling on signal is cleared the, operation is registered in this counter.

b) LIST OF OPERATING BUTTONS WITH THEIR CODE AND COLOUR:

The operating buttons are distinctly coloured for easy identification. The following is the list of the important buttons with their designations in codes and colours:

Sl. No	Description	Code	Colour	Remarks
1.	Main signal button.	S.1 GN	Red	No.1 indicates signal number.
2.	Shunt signal button.	Sh.3 GN	Yellow	3 Indicates shunt signal number
3.	Route button.	34 OUN	Grey	34 O indicates track circuit number.
4.	Buttons for panel intensity control	Ind. Lamp 1,2,3.	White	Three such buttons are provided-
5.	Points button without route section emergency release facility.	179 WN	Blue	No. 179 indicates the point number.
6.	Points button with route section (emergency) release facility.	151 WN	Blue with a White dot.	151 indicates the number of points.
7.	Emergency full route release button (group).	EUUYN	Grey	Duplicated for easy access.
8.	Emergency route section release button (individual).	EUYN	Grey	Duplicated for easy access
9.	Common push button for points.	WWN	Blue	Duplicated for easy access

Sl.No	Description	Code	Colour	Remarks
10.	Point emergency push button.	EWN	Blue	Duplicated for easy access
11.	Button for silencing buzzer for signal:	GXYN	White	
12.	Button for silencing buzzer for points	WXYZ	White	
13.	Emergency group button for putting back a signal to 'ON' position.	EGGN	Red	Duplicated for easy access.
14.	Calling on signal group button.	COGGN	Greasy	For taking off a calling on signal this button is pressed along with the concerned signal button.
15.	Slot button (individual)	Stot-88	Green	No. 88 indicates the slot number
16.	Group slot button.	GSB	Green	For giving/canceling slot to ground frames/cabins etc. this has to be pressed along with individual slot buttons.
17.	Group slot cancellation button.	GSRB	Green	Buttons are Duplicates for easy access.
18.	Emergency overlap release button.	OYN	Grey	Duplicated for easy access.
19.	Crank handle group button (individual).	CH4	Blue	CH 4 indicates crank handle No.4.
20.	Group crank handle release button.	CHRB	Blue	Duplicated for easy reach. These buttons are pressed along with the individual crank handle group button for releasing the crank handle and subsequent normalization.
21.	Group crank handle normal button	CHNB	Blue	
22.	Siding point control button.	C166	Green	C166 means control 166. This button is to be pressed along with GSB/GSRB.
23.	Level crossing control button	LX-4	Green	No.4 indicates the control No. This button is to be pressed along with GSB/GSRB.
24.	Power failure alarm suppression button	XYN	White	Button to be pressed to mute alarm bell due to power failure
25.	Last vehicle verification key release button.	LVVYN	Grey	This button is to be pressed along with GSB/GSRB in case of manual verification of last vehicle indicator during failure of Axle counter.

Sl. No	Description	Code	Colour	Remarks
26	Common button to introduce Auto working of a main signal.	AGGN	Red	Button is to be pressed along with the signal button to put into auto mode.
27	Common button to introduce Auto working of a main signal.	AGGYN	Red	Button is to be pressed along with the signal button to put into manual mode.

The sequences/of button operations to be made for different operations on the panel is as under:

Srl No	Operation	Button used	Sequence of operation
1	To clear a calling on signal	GN & UN EGGN COGGN	First initiate the stop signal route by pressing GN & UN simultaneously, then press GN and EGGRN to throw back the stop signal to "ON" (whether it is cleared or not) and then press GN & COGGN simultaneously, release COGGN keeping GN pressed and press UN.
2	To clear a main signal	GN&UN	Press both buttons simultaneously.
3	To clear shunt signal	Sh.GN & UN	Press both buttons simultaneously.
4	To throw cleared signal to danger whether a stop Signal or a calling on signs or a shunt signal.	GN&EGGN	Press the concerned GN and EGGRN simultaneously.
5	To cancel a route already set after replacing the cleared signal °ON"(whether it is a stop signal or calling on signal or a shunt signal)	GN, EUUYN &UN	Press the GN & EUUYN simultaneously, release EUUYN keeping GN pressed and press UN. This is known as three button cancellation.

NOTE: When the signal is approach locked or dead approach locked on pressing GN & EUUYN. a flashing dot indication below the concerned signal configuration appears. Wait till it becomes steady and then press GN & EUUYN, release EUUYN keeping GN pressed and press UN.

Srl No	Operation	Button used	Sequence of operation
6	To release individual rout section under emergency.	WN & EUYN	The key under the custody of SSE/Sig, SE/Sig/RRI to be inserted and turned to "ON" position. Then WN and EUYN buttons are to be pressed simultaneously for emergency sub-route release.
7	Individual operation of points, tracks are clear.	WN & WWN	Press the point's button concerned and common points button together.
8	Individual operation of points, when points tracks fail.	WN & EWN	Break open the seal of EWN key box. insert& turn the key and press both the buttons simultaneously. This operation by panel Station Master is registered in the EWN Counter.
9	To release a locked over lap in case of failure.	UN & OYN	The key under custody of the SSE/Sig. SE/Sig./RRI is to inserted and turned to "ON" position. Then "UN" and "OYN" buttons to be pressed simultaneously for emergency overlap release.
10	To Change the position of points after arrival of train.	WN WWN	Concerned Point Button (WN) and Group Point Button (WWN) to be pressed.
11	To put sig. in to Auto mode	AGGN GN	Concerned signal button and group auto button (AGGN) to be pressed.
12	To put sig. in to Manual mode	AGGYN GN	Concerned signal button and group auto release button (AGGYN) to be pressed.
13	DN Train Arriving ACKfor GPT-SCMN (M/L) Auto sec	---	Pressed to stop buzzer approach arrival of train
14	DN Train Arriving ACK for GPT-SCMN (BypassLine) Auto sec	---	Pressed to stop buzzer approach arrival of train
15	UP TC/AXLE Counter Failure ACK button SCMN-GPT (M/L) Auto sec.	---	Pressed to stop buzzer when Track circuit/Axle counter failure occurs.
16	UP TC/AXLE Counter Failure ACK button SCMN-GPT (Bypass Line) Auto sec.	---	Pressed to stop buzzer when Track circuit/Axle counter failure occurs.
17	56 point failure acknowledgment button	---	Pressed to acknowledgment 56 point is in normal condition.
18	Approch warning buzzer (Mainline)	---	Pressed to stop buzzer when train is approaching in main line
19	Approch warning buzzer (Bypass line)	---	Pressed to stop buzzer when train is approaching in Bypass line.

4.0 SPECIAL AND IMPORTANT NOTES:-

- a) It is essential that only two push buttons concerned are pressed positively with deliberation and the buttons should be kept pressed for three to eight seconds.(as necessary)
- b) In order to avoid failure of any operation, when the two buttons concerned are pressed it is essential that no other button is pressed.
- c) Whenever bi-directional movements are permitted over a berthing track, two buttons viz., one route button for movements in Down direction and one for UP direction are provided.
- d) The locking on the points giving flank protection cannot be released by cancellation of the individual route section with in which these points are located but by release of the individual route section which had commanded such flank protection/isolation.

In the power signaling installations, generally the complete route of a stop signal comprises of the route between the concerned signal and signal ahead and also the adequate distance (signal overlap). The complete route of shunt signal or a calling on signal comprises of the route between the subject signal and signal ahead.

Normally the portion of the track between two consecutive stop signals or between two consecutive shunt signals or between a shunt signal and the stop signal ahead termed as full-route is made up of several individual route sections each route section controlling the various field elements like track circuits, points, level crossing gates, flank protection etc., not only in its immediate jurisdiction but also within its ambit of control. The signal overlap locking/setting is released in an emergency operation through the berthing track control.

Normally each route section is designated after the most pre-eminent number of the points that fall within the immediate jurisdiction of the individual route section, so the numbers of the point button and individual route section are the same. Therefore the common point button coloured blue with a white dot on the top (along with the concerned group push button) should be operated either for individual operation of the points in the route section or for the release of individual route section in case of failures etc., under special emergency provisions.

In some cases, however, where there are more than one set of points or cross- overs in a particular individual route section, the route section is designated generally after the number of the pre-eminent set of points or cross-overs in that part of the route section zone.

In all such cases the individual operation of the points and the release of the individual route section occur/with the operation of the common button (which is coloured blue with white dots). The operation of all other individual points or cross-overs in that route section zone is dependent on the individual operation of the concerned point button which are coloured blue without any white dot) together with the group button provided such an operation is only possible when the controlling route section is not engaged. This is applicable in the following cases:-

Point buttons **without** white dot.

1. 108 Section/Sections being free
2. 112 Section/Sections being free
3. 129 Section/Sections being free
4. 122 Section/Sections being free

In addition to the provision of the buttons on the operating panel for initiating a route setting and taking off a signal certain other illuminated white or coloured light indications and buttons as below are provided on the operation and indication panels to enable the Panel Station Master to constantly watch the condition or state of various fields gears and to control the traffic movements in a direct and expeditious manner :-

5.0 Indications:-

These indications exhibited on the indication panel to indicate the condition or state of controls at any given line of field gears, ground frames, goomties, siding controls and shunting free indicator controls. These controls released by the Panel Station Master for controlling:-

- i) Rotary Key Transmission unit for siding operations.
- ii) Crank Handle Transmission control for emergency motor point crank handle control keys are clubbed into one group and the following are the indications exhibited on the operation panel.
 - a) A white steady light indication the normally of the control Panel i.e., Crank Handle not released.
 - b) Whenever a control is released from the RRI cabin to the field agencies, a flashing white light will appear till such time the said control release is accepted by the concerned field agencies and as the control is accepted at the field site a flashing Red light appears.
 - c) A steady Red light and a White flashing appears when the field work is completed and controls returned by the field agencies.
 - d) After the Panel Station Master withdraws his control or release by operating the appropriate buttons a White steady light appears again.

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

Instructions are to be followed as per 4.2(general portion) of this SWR .

6.1 ELECTRIC POWER SUPPLY INDICATIONS.

Power signaling and interlocking installations and the satellite ancillary field units are fed from the following sources of power supply.

- i) Normal supply from APSEB supply 3 Phase 400V- 50HZ.
- ii) Stand-by supply-I from 25 KV Traction supply through Auxiliary Transformers -single phase 220V-50HZ.
- iii) Stand by supply- II Diesel Generator power supply-3 phase 400V-50HZ.

The availability of the normal power supply is indicated by a stencil indicator" M1" on the operating panel when the normal supply fails, the traction supply is automatically switched on and stencil indicator" M2 " appears.

In the event of failure of power supply from both the above sources the Cabin Station Master on duty should immediately advise his staff to start the D/Generator provided in the D/Generator Room in the RRI compound. After the D/Generator is started the Station Master on duty should put "ON" the Main Switch provided in the Panel Room. Then the D/Generator supply will be extended to panel. The indication "M3" lits on the panel. When the normal power supply or standby power supply is restored the same will be switched over automatically. Whenever power is switched to standby supply a buzzer/indication appears. This should be acknowledged by the panel operator by pressing the Acknowledgement button and then put off the main switch and stop the D/Generator. The Station Master should intimate the Traction Power Controller and the Section Controller to arrange for early repairs.

7.0 INTENSITY OF PANEL LIGHT INDICATORS:-

These indicators provided at Operating Panel alongside the panel illumination intensity control button 1, 2, & 3, show the accordance of the illumination brightness of the panel lights with the controlling buttons Nos.1,2, & 3. Only one button can be operated at a time.

8.0 TRACK INDICATORS:-

Each track circuit is given a separate and distinguishable colour on the face of the indication panel and entire length of the track circuited portion of the track provided with recti-liner transparent filters and illuminated from behind to indicate the conditions of track circuited lines at any given movement (whether engaged and route set or occupied). When once a route is set by pressing the entrance and exit buttons for Signaled route. For the purpose of giving indications to the Panel Station Master about the occupancy of any or all of the track circuited section/sections, the route is split into four portions and the details of the four portions are as follows:-

- i) Approach track either in rear of the first stop signal or any other stop signal in the station yard.
- ii) Entry portion of a route from the subject signal up to the fouling mark of the berthing track.
- iii) The berthing track and
- iv) The overlap (where provided).

The approach track of a stop signal other than the first stop signal) is normally lit WHITE when a route is set for a train movement leading to the above stop signal and this white strip of indication of the track (throughout the route section and berthing tracks en-route) change to RED one after the other progressively in the direction of the train movement as the train passes and finally the RED light extinguishes when the vehicle or train clears these various portions of the track circuits on the route.

In the second part of the route whenever a train is occupying the track circuited section i.e., at the entrance end at the track circuit indication shows RED light (changing from WHITE to RED) and as soon as a train or vehicle has cleared this portion of the route section/track circuited portion of the line, the RED light extinguishes on this portion of the track. This sequence of operation of track indications signifies the sectional route release for facilitating subsequent traffic movements.

In the third part of the route, whenever a train is on the berthing track, it continues to show the RED light (changing from white to red) till berthing track is cleared of this train or vehicle.

In the fourth part of the route the overlap will continue to show WHITE light for period of 120 seconds after the berthing track is occupied by the train and when these lights extinguish, it shows the release of the overlap control (because by the time a train would have either come to a stop at the stop signal protecting the overlap or has passed past it). The overlap WHITE light indication originally showing WHITE light at the time of route setting will change to RED if the overlap portion of the track circuit is occupied by the train.

In all the four parts of complete route the failure or occupation of any track circuit is indicated by a RED light.

9.0 POINT ENGAGED INDICATION:

At the apex of points, a small circular dot indicator is provided on the panel on the track portion itself. This indicator lights up whenever the point is locked in a particular position indicating that it is engaged. (Constituting either a part of the route section or an overlap set).

10.0 POINT INDICATION:

At each point the Normal and Reverse indications of point positions are shown by a small strip light on the straight for the normal setting and on the cross over portion i.e diagonally for the Reverse setting.

11.0 APPROACH TRAIN INDICATION:

At the approach of Simhachalam North yard approach track indications are provided which shall show RED lights as soon as the train occupies the track in rear of the Home Signals from respective directions.

12.0 APPROACH LOCKING INDICATIONS:

Approach locking indications are provided at all signals on the indication panel (other than those signals which have no points or level crossing gates etc- on their routes)

The expression Approach locking connotes that the locking is effective on a signal route when once the concerned signal is taken off and the train has come within a pre-determined distance from that signal. For signals which do not have approach track circuit in rear, dead approach locking connotes that the locking is effective on the signal when once the signal is taken off.

In case it is necessary to cancel a signal that was once taken off three button emergency operation cancellation should be resorted to. Whenever there is no train on the approach track the three button cancellation should be operated straight-away and at once. This operation is counted on the Veeder Counter.

12.1 BLOCK RELEASE INDICATIONS:

There are three indications (White) provided on the operating panel:

- (a) Down Block release Block Hut-SCMN.
- (b) UP Block release PDT-SCMN.

Whenever Down train clears Block section Block Hut-SCMN) UP Train clears Block section PDT-SCMN and arrives at SCMN a White light lits at Down Block release section /Block Hut-SCMN/Up Block release section PDT-SCMN which indicates that the Block section is clear.

12.2 BUTTON STUCK UP INDICATION:

When any of the Signal Buttons/Point Buttons *or* Route Buttons (GNCR, UNCR. WNCR) is remains in the pressed position for more than) 5 seconds, the Panel becomes inoperative and White light appears on the Panel with, a audible indication (Buzzer).

If Signal Button (GN) remains in pressed a White light appears near GNCR or if a point Button (WN) remains in pressed position a White light appears near UNCR. The visible audible indication will continue till such time the fault is rectified.

13.0 AUDIBLE INDICATIONS ON OPERATING PANEL

a) SIGNAL FAILURE BUZZER:

Whenever a signal becomes blank due to fusing of RED lamp the signal failure buzzer/sounds and continues till the buzzer muting button viz., XYN (S) on the panel is pressed for acknowledging the failure. A stencil "G" indication also appears and continues till the lamp is replaced.

b) POINT FAILURE BUZZER:

In case of failure of a point this buzzer/sounds and continue till the buzzer muting button viz., WXYN is pressed for acknowledging the failure. A stencil "W" indication also appears and continues till the defect is rectified-

c) GROUP BUTTON BUZZER:

When one or more of the operating button/buttons remains/remain in the pressed down position for more than 15 seconds this buzzer continue to buzz until the fault is rectified and ail the buttons are put at normal position, the panel remains inoperative. So, it should be ensured by Pane! Station Master that no operating button is pressed for more than 15 seconds

d) POINT CHAIN GROUP BELL

In case of any failure of power operation of points through the chain group, this bell rings until it is acknowledged by pressing of the button below P/indicator. However, the flashing indicator "P" continues till the defect is rectified

e) TC/AXT Failure Buzzer for Main line & Bypass line:-

The HASSDAC axle counter and Conventional track circuits are provided in redundant to each other. In case of failure of either Axle counter or track circuit the buzzer occurs and to be acknowledged.

f)**Train approach buzzer for GPT-SCMN Main & Bypass line:-**

When the train enters the block section on main line and Bypass line and if the concerned home signal is not yet taken off by the SS/SCMN the buzzer occurs and to be acknowledged.

g)**Indications on the operating panel:-**

- (i) TC/AXT Fail Main line indication.
- (ii) TC/AXT Fail Bypass line indication.
- (iii) Approach warning Main line indication.
- (iv) Approach warning Bypass line indication.

14.0 SIGNAL SYMBOLS AND THEIR INDICATION ON INDICATION PANEL

Main Signals are symbolically represented by a small rectangular box with a stem (in black painted over the indicating panel) along the track lines corresponding to their position at site with provision of exhibiting two aspect viz., a steady Red light when the signals at the site shows a red aspect and a steady Green light when the signal at the site displays any aspect/aspects other than Red.

Junction stencil indicators on the stop signals are indicated in a box at the top of the stop signal symbolically and provision for indicating a WHITE light in a slit whenever any junction/signal indicator of the signal concerned at the site lit.

In case of a shunt signal below a stop signal, the aspect of the same is shown in a hexagonal box (colored Black) with an aperture. When the shunt signal is taken off it displays a WHITE light on a diagonal slit and no light when the signal is at "ON" position.

In case of a Calling on signal it displays a WHITE DOT light on the stem with a circular box (colored black) and no light when the signal is at "ON" position.

In case of semi auto signals, a WHITE DOT light on the when the signal is in auto mode and no light when in manual mode.

14.1 SPECIAL INSTRUCTIONS REGARDING SIGNAL LAMPS:

At this station, Triple pole lamps with two filaments viz. Main and Auxiliary are provided for all Main Signals. In the triple pole lamp of Signal, if the Main filament is fused. Auxiliary filament will lit automatically. However a Buzzer will ring and an indication will appear on the indication panel when one of the Main filament of the Signal lamps controlled by SCMN RRI cabin fuses. The Station Master on duty on panel has to press the ACK (Acknowledgement) button provided on the operating panel for stopping the Buzzer. However indication will continue until the fused lamp is replaced. Twenty-eight such indicators are provided at SCMN RRI cabin for DD/KK,

UP dist. Main, Homes/ Routing Homes/ Starters, Advance starters, D/Dist VSP Line 1&2, UP Dist. SER/GD, UP Dist. KK.

The Station Master on duty shall inform the incidence of fusing of the Signal lamp main filament at RRI cabin to S&T maintenance staff (ESM/SE (Signal)) to attend the above. Reporting the fusing of Main filament of Signal lamp should be promptly done by the Station Master on duty, so that Signal lamp is replaced by S&T staff in time before Auxiliary filament also which will otherwise result detention of trains.

- 14.2** The Station Master on duty at 00.00 hours must also ensure that all the Signal lights are burning properly. This fact must be recorded in the diary under a separate entry and confirm to the Section controller on duty as per the instructions contained in Division Safety Circular No. 82/82, Dated. 03.05.1982.

15.0 INDICATIONS IN CASE OF FAILURE OF SIGNAL ASPECT:

In case of any off aspect lamp fuses at the site, the Green indication flashes on the corresponding signal aspect indicating on the indication panel. If the Red lamp fuses the RED indication on the corresponding signal symbol flashes.

Magnetic button collars are provided and the same should be used on the operating panel on the concerned lines/points when the same are engaged/blocked as a visual reminder in accordance with SR. 5.04.01.

16.0 FAILURE OF POWER SUPPLY INDICATIONS:

The failure of power supply to the Route Relay Installations is indicated by audio and visual indicators on the operating panel.

CHART SHOWING THE OPERATION OF THE ENTRANCE AND EXIT BUTTONS FOR CLEARING STOP SIGNAL /CALLING ON SIGNALS:

The push buttons chart for initiating Stop Signals and Calling on Signals.						
Srl No	Signal Route	From Signal	To Destination	Buttons Operated		Remarks
				Signal	Route	
1.	S-1 (A)	S-1	S-9	S-1	9	
2.	S-1 (A)	S-1	S-9	S-1	9/1	
3.	S-1 (A)	S-1	S-9	S-1	9/2	
4.	C-1 (A)	C-1	S-9	S-1 + EGGN S-1+COGGN		
5.	C-1 (A)	C-1	S-9	S-1 + EGGN S-1+COGGN	9/1	

6.	C-1 (A)	C-1	S-9	S-1 + EGGN S-1+COGGN	9/2	
7.	S-1 (B)	S-1	S-17	S-1	107 A	
8.	S-1 (B)	S-1	S-1 7	S-1	107 A/2	
9.	C-1 (B)	C-)	S-17	S-1 + EGGN S-1+COGGN	107 A	
10.	C-1 (B)	C-1	S-17	S-1 + EGGN S-1+COGGN	107 A/2	
11.	S-1 (C)	S-1	S-21	S-1	21	
12.	S-1 (C)	S-1	S-21	S-1	21/1	
13.	S-1 (C)	S-1	S-21	S-1	21/2	
14.	C-1 (C)	C-1	S-21	S-1 + EGGN S-1+COGGN	21	
15.	C-1(C)	C-1	S-21	S-1 + EGGN S-1+COGGN	21/1	
16.	C-1(C}	C-1	S-21	S-1+EGGN S-1+COGGN	21/2	
17.	S-3(A)	S-3	S-15	S-3	107	
18.	C3(A)	C-3	S-15	S-3 + EGGN S-3+COGGN	107	
19.	S-3 (B)	S-3	S-17	S-3	107 A	
20.	S-3 (B)	S-3	S-17	S-3	107 A /1	
21.	S-3 (B)	S-3	S-17	S-3	107 A /2	
22.	C-3 (B)	C-3	S-17	S-3 + EGGN S-3+COGGN	107 A	
23.	C-3(B)	C-3	S-17	S-3+EGGN S3+COGGN	107 A/1	
24.	C-3 (8)	C-3	S-17	S-3 + EGGN S-3+COGGN	107 A/2	
25.	S-3 (C)	S-3	S~21	S-3	21	
26.	S-3(C)	S-3	S-21	S-3	21/1	
27.	S-3 1C)	S-3	S-21	S-3	21/2	
28.	C-3(C)	C -3	S-21	S-3 EGGN S-3+COGGN	21	
29.	C-3(C)	C-3	S-21	S-3 + EGGN S-3+COGGN	21/1	
30.	C-3(C)	C-3	S-21	S-3 + EGGN S-3+COGGN	21/2	
31.	S-4	S-4	Dn.M/H of PDT	S-4	Dn Dep.	
32.	5-6	S-4	UP KK H/S of PDT	S-6	3	
33.	S-9 (A)	S-9	S-25	S-9	L1U1	
34.	S-9 (A)	S,9	S-25	S-9	L1U2	
35.	c-9(A)	C-9	S-25	S-9 + EGGN S-9+COGGN	L1U1	
36.	C-9(A)	C-9	S-25	S-9 + EGGN S-9+COGGN	L1U2	
37.	S-9 (B)	S-9	S-27	S-9	L2U1	
38.	S-9 (B)	S-9	S-27	S-9	L2U2	

39.	C-9 (B)	C-9	S-27	S-9 + EGGN S-9+COGGN	L2U1	
40.	C-9 (B)	C-9	S-27	S-9 + EGGN S-9+COGGN	L5U2	
41.	S-9 (C)	S-9	S-29	S-9	13U1	
42.	S-9 (C)	S-9	S-29	S-9	L3U2	
43.	C-9 (C)	C-9	S-29	S-9 4 EGGN S-9+COGGN	L3U1	
44.	C-9 (C)	C-9	S-29	S-9 + EGGN S-9+COGGN	L3U2	
45.	S-9 (D)	S-9	S-15	S-9	107	
46.	C-9 (D)	C-9	S-15	S-9 + EGGN S-9+COGGN	107/J	
47.	S-9 (E)	S-9	S-17	S-9	107A	
48.	S-9 (E)	S-9	S-17	S-9	107 A/2	
49.	C-9 (E)	C-9	S-17	S-9 + EGGN S-9+COGGN	107 A	
50.	C-9 (E)	C-9	S-17	S-9 + EGGN S-9+COGGN	107 A/2	
51.	S-11(A)	S-11	S-15	S-11	107/1	
52.	S-11(B)	S-11	S-17	S-11	107A	
53.	S-11(C)	S-11	S-21	S-11	2/1	
54.	C-11(A)	C-11	C-15	S-11+EGGN S-11+COGGN	107/1	
55.	C-11(B)	C-11	C-17	S-11+EGGN S-11+COGGN	107 A	
56.	C-11(C)	C-11	C-21	S-11+EGGN S-11+COGGN	2/1	
57.	S-12(A)	S-12	S-14	S-12	106	
58.	C-12(A)	C-12	S-14	S-12+ EGGN S-12+ COGGN	106	
59.	S-12 (B)	S-12	S-4	S-12	4	
60.	C-12(B)	C-12	S-4	S-12 + EGGN S-12+COGGN	4	
61.	S-14(A)	S-14	S-6	S-14	6	
62.	C-14(A)	C-14	S-6	S- 4 + EGGN S- 4+COGGN	6	
63.	S-14(B)	S-14	S-4	S- 14	4	
64.	C-14(B)	C-14	S-4	S- 14+ EGGN S-14 +COGGN	4	
65.	S-15 {A}	S-15	S-25	S- 15	L1U1	
66.	S-15 (A)	S-15	S-25	S- 15	L1U2	
67.	C-15(A)	C-15	S-25	S-15 +EGGN S-15+COGGN	LIU1	
68.	C-15(A)	C-15	S-25	S-15 +EGGN S-15+COGGN	L1U2	
69.	S-15 (B)	S-15	S-27	S-15	L2U1	
71.	S-15 (B)	S-15	S-27	S- 15	L2U2	
72.	C-15(B)	C-15	S-27	S-15+EGGN S-15+COGGN	L2U1	

72A	C-15(B)	C-15	S-27	S- 15 + EGGN S- 15+COGGN	L2U2	
73	S-15(C)	S-15	S-29	S- 15	L3U1	
74	S-15(C)	S-15	S-29	S- 15	L3U2	
75	C-15(C)	C-15	S-29	S- 15 + EGGN S- 15+COGGN	L3U)	
76	C-15(C)	C-15	S-29	S- 15+&3GN S 5+COGGN	L3U2	
77	S-15{D}	S-15	S-37	S- 15	L6U1	
78	S-15{D}	S-15	S-37	S- 15	L6U2	
79.	C-15 (D)	C-15	S-37	S- 15 + EGGN S- 15+COGGN	L6U1	
80.	C-15 (D)	C-15	S-37	S-15+ EGGN S-15+COGGN	L6U2	
81.	S-16(A)	S-16	S-6	S- 6	6	
82.	C-16(A)	C-16	S-6	S-16+EGGN S-16+COGGN	6	
S3.	S-16(B)	S-16	S-4	S- 16	4	
84.	C-16 (B)	C-16	S-4	S-16+ EGGN S-16+COGGN	4	
85.	S-17 (A)	S-17	S-37	S- 17	L6U1	
86.	S-17(A)	S-17	S-37	S- 17	L6U2	
87.	C-17(A)	C-17	S-37	S-17+ EGGN S-17+COGGN	L6U1	
86.	C-17 (A)	C-17	S-37	S-17 + EGGN S-17+COGGN	L6U2	
89.	S-17(B)	S-17	S-39	S-17	L7U	
90.	C-17(B)	C-17	S-39	S-17 + EGGN S-17+COGGN	L7U	
91.	S-17(C)	S-17	S41	S- 17	L8U1	
92.	S-17(C)	S-17	S-41	S- 17	L8U2	
93.	C-17(C)	C-17	S-41	S-17+ EGGN S-17 +COGGN	L8U1	
94.	C-17(C)	C-17	S-41	S-17+ EGGN S-17+COGGN	L8U2	
95.	S-21 (A)	S-21	S-45	S-21	L 10U	
96.	C-21 (A)	C-21	S-45	S-21 + EGGN S-21+COGGN	L10U	
97.	S-21 (B)	S-21	S-47	S-21	L11U	
98.	C-21 (B)	C-21	S-47	S-21 + EGGN S-21+COGGN	L11U	
99.	S-21 (C)	S-21	S-49	S-21	L12U	
	C-21 (C)	C-21	S-49	S-21+ EGGN S-21+COGGN	L12U	
100	S-21 (D)	S-21	S-51	S-21	L 13U1	
101	S-21 (D)	S-21	S-51	S-21	L13U2	
102	C-21 (D)	C-21	S-51	S-21 + EGGN S-21+COGGN	L13U1	
103	C-21(D)	C-21	S-51	S-21 + EGGN S-21+COGGN	L13U2	

104.	S-25 (A)	S-25	S-61	S-25	61	
105.	C-25 (A)	C-25	S-61	S-25 + EGGN S-25+COGGN	61	
105A	S-21(A)	S-21	S-45	S-21	L10U2	
105B	C-21(A)	C-21	S-45	S-21+COGGN	L10U2	
106.	S-25 (B)	S-25	S-63	S-25	63	
107.	C-25(B)	C-25	S-63	S-25+EGGN S-25+COGGN	63	
108.	S-27 (A)	S-27	S-61	S-27	61	
109.	C-27 (A)	C-27	S-61	S-27 + EGGN S-27+COGGN	61	
110.	S-27(B)	S-27	S-63	S-27	63	
111.	C-27(B)	C-27	S-63	S-27+EGGN S-27+COGGN	63	
112.	S-28(1)	S-28	S-12	S-28	107 B	
113	S-28(2)	S-28	S-12	S-28	107 B/1	
114.	C-28(1)	S-28	S-12	S-28 + EGGN S-28+COGGN	107 B	
115	C-28(2)	S-28	S-12	S-28 + EGGN S-28+COGGN	107 B/1	
116.	S-29(A)	S-29	S-61	S-29	61	
117.	C-29(A)	C-29	S-61	S-29 + EGGN S-29+COGGN	61	
118.	S-29(8)	S-29	S-63	S-29	63	
119.	C-29(B)	C-29	S«3	S-29+EGGN S-29+COGGN	63	
120.	S-30(1)	S-30	S-12	S-30	107 B	
121.	S-30(2)	S-30	S-12	S-30	107 B/1	
122.	C-30(1)	S-30	S-12	S-30+EGGN S-30+COGGN	107 B	
123.	C-30(2)	C-30	S-12	S-30+EGGN S-30+COGGN	107 B/1	
124.	S-32 (A)	S-32	S-14	S-32	106	
125.	S-32(A)	C-32	S-14	S-32+EGGN S-32+COGGN	106	
126.	S-32(B)	S-32	S-12	S-32	107B	
127.	C-32(B)	C-32	S-12	S-32+EGGN S-32+COGGN	107B	
128.	S-34(A)	S-34	S-14	S-34	106	
129	S-34(A)	S-34	S-14	S-34	106/1	
130	C-34(A)	C-34	S-14	S-34 + EGGN S-34+COGGN	106	
131	C-34 (A)	C-34	S-14	S-34 + EGGN S-34+COGGN	106/1	
132	S-34(B)	S-34	S-12	S-34	107B	
133	C-34(B)	C-34	S-12	S-34+EGGN S-34+COGGN	107B	
134.	S-36(A)	S-36	S-14	S-36	106	
135.	S-36 (A)	S-36	S-14	S-36	106/1	

136.	C-36(A)	C-36	S-14	S-36+EGGN S-36+COGGN	105	
137.	C-36 (A)	C-36	S-14	S-36+EGGN S-36+COGGN	106/1	
138.	S-36(B)	S-36	S-12	S-36	107B	
139.	C-36(B)	C-36	S-12	S-36 + EGGN S-36+COGGN	107B	
140.	S-37(1)	S-37	S-43	S-37	139	
141.	C-37(1)	C-37	S-43	S-37+COGGN	139	
142.	S-37(2)	S-37	S-43	S-37	139/1	
143.	C-37(2)	C-37	S-43	S-37+COGGN	139/1	
144.	S-38(1)	S-38	S-16	S-38	16	
145.	C-38(1)	C-38	S-16	S-38+COGGN	16	
146.	S-38(2)	S-38	S-16	S-38	16/1	
147.	C-38(2)	C-38	S-16	S-38+COGGN	16/1	
148.	S-39(1)	S-39	S-43	S-39	139	
149.	C-39(1)	C-39	S-43	S-39 + COGGN	139	
150.	S-39(2)	S-39	S-43	S-39	139/1	
151.	C-39(2)	C-39	S-43	S-39+COGGN	139/1	
152.	S-40(1)	S-40	S-16	S-40	16	
153.	C-40(1)	C-40	S-16	S-40+COGGN	16	
154.	S-40(2)	S-40	S-16	S-40	16/1	
155.	C-40(2)	C-40	S-16	S-40+COGGN	16/1	
156.	S-41(1)	S-41	S-43	S-41	139	
157.	C-41(1)	C-41	S-43	S-41+ COGGN	139	
158.	S-41(2)	S-41	S-43	S-41	139/1	
159.	C41(2)	C-41	S-43	S-41+ COGGN	139/1	
160.	S-42(1)	S-42	S-16	S-42	16	
161.	C-42(1)	C-42	S-16	S-42+ COGGN	16	
162.	S-42(2)	S-42	S-16	S-42	16/1	
163.	C-42(2)	C-42	S-16	S-42+ COGGN	16/1	
164.	S-43 (A)	S-43	S-61	S-43	61	
165.	C-43 (A)	C-43	S-61	S-43+COGGN	61	
166.	S-43 (B)	S-43	S-63	S-43	63	
167.	C-43 (B)	C-43	S-63	S-43+ COGGN	63	
168.	S-43(C)	S-43	S-69	S-43	69	
169.	C-43(C)	C-43	S-69	S-43+ COGGN	69	
170.	S-43 (D)	S-43	S-53	S-43	148	
171.	S-43(D)	S-43	S-53	S-43	148/1	
172.	C-43 (D)	C-43	S-53	S-43+ COGGN	148	
173.	C-43 (D)	C-43	S-53	S-43+ COGGN	148/1	
174.	S-44(1)	S-44	S-16	S-44	16	
175.	C-44(1)	C-44	S-16	S-44 +COGGN	16	
176.	S-44(2)	S-44	S-16	S-44	16/1	
177.	C-44(2)	C-44	S-16	S-44+ COGGN	16/1	
178.	S-45(1)	S-45	S-53	S-45	148	
179.	C-45(1)	C-45	S-53	S-45+ COGGN	148	
180.	S-45(2)	S-45	S-53	S-45	148/1	
173.	C-43 (D)	C-43	S-53	S-43+ COGGN	148/1	

174.	S-44(1)	S-44	S-16	S-44	16	
175.	C-44(1)	C-44	S-16	S-44 +COGGN	16	
176.	S-44(2)	S-44	S-16	S-44	16/1	
177.	C-44(2)	C-44	S-16	S-44+ COGGN	16/1	
178.	S-45(1)	S-45	S-53	S-45	148	
179.	C-45(1)	C-45	S-53	S-45+ COGGN	148	
180.	S-45(2)	S-45	S-53	S-45	148/1	
181.	C-45(2)	C-45	S-53	S-45+EGGN S-45+COGGN	148/1	
182.	S-47(A)	S-47	S-53	S-47	148	
183.	C-47(A)	C-47	S53	S-47+EGGN S-47+COGGN	148	
184.	S-47(B)	S47	S-73	S-47	73	
185.	C-47(B)	C-47	S-73	S-47+EGGN S-47+COGGN	73	
186.	S-47(C)	S-47	S-75	S47	75	
187.	C-47(C)	C-47	S-75	S-47+EGGN S-47+COGGN	75	
188.	S-49 (A)	S-49	S-53	S-49	148	
189.	C-49(A)	C-49	S-53	S-49+EGGN S-49+COGGN	148	
190.	S-49 (B)	S-49	S-73	S-49	73	
191.	C-49 (B)	C-49	S-73	S-49+EGGN S-49+COGGN	73	
192.	S-49(C)	S-49	S-75	S-49	75	
193.	C-49(C)	C-49	S-75	S-49+EGGN S-49+COGGN	75	
194.	S-51 (A)	S-51	S-53	S-51	148	
195.	C-51 (A)	C-51	S-53	S-51+EGGN S-51+COGGN	148	
196.	S-51 (B)	S-51	S-73	S-51	73	
197.	C-51 (B)	C-51	S-73	S-51+EGGN S-51+COGGN	73	
198.	S-51 (C)	S-51	S75	S-51	75	
	C-51(C)	C-51	S-75	S-51+EGGN S-51+COGGN	75	
199.	S-52(A)	S-52	S-35	S-52	L8D1	
200.	S-52 (A)	S-52	S-36	S-52	L8D2	
201.	S-52(A)	S-52	S-36	S-52	L8D3	
202.	C-52 (A)	C-52	S-36	S-52+EGGN S-52+COGGN	L8D1	
203.	C-52(A)	C-52	S-36	S-52+EGGN S-52+COGGN	L8D2	
204.	C-52 (A)	C-52	S-36	S-52+EGGN S-52+COGGN	L8D3	
205.	S-52 (B)	S-52	S-34	S-52	L7D1	
206.	S-52 (B)	S-52	S-34	S-52	L7D2	
207.	C-52 (B)	C-52	S-34	S-52+EGGN S-52+COGGN	L7D1	

208.	C-52 (B)	C-52	S-34	S-52+EGGN S-52+COGGN	L7D2	
209.	S-52(C)	S-52	S-32	S-52	L6D1	
210.	S-52 (C)	S-52	S-32	S-52	L6D2	
211.	C-52C)	C-52	S-32	S-52+EGGN S-52+COGGN	L6D1	
212.	C-52(C)	C-52	S-32	S-52+EGGN S-52+COGGN	L6D2	
213.	S-53 (A)	S53	S-69	S-53	69	
214.	C-53 (A)	C-53	S-69	S-53+EGGN S-53+COGGN	69	
215.	S-53(B)	S-53	S-71	S-53	71	
216.	C-53 (B)	C-53	S-71	S-53+EGGN S-53+COGGN	71	
217.	S-53 (C)	S-53	S-73	S-53+EGGN S-53+COGGN	73	
218.	C-53 (X)	C-53	S-73	S-53+EGGN S-53+COGGN	73	
219.	S-53 (D)	S-53	S-75	S-53	75	
220.	C-53 (D)	C-53	S-75	S-53 + EGGN S-53 + COGGN	75	
221.	S-61	S-61	Up H/Sig of A Cabin	S-61	GRL	
223.	S-62(A)	S-62	S-S2	S-62	139	
224.	S-62 (A)	S-62	S-52	S-62	J39/J	
225.	S-62 (A)	S-62	S-52	S-62	1 39/2	
226.	C-62(A)	C-62	S-52	S-62 + EGGN S-61 + COGGN	139	
227.	C-62 (A)	C-62	S-52	S-62 + EGGN S-62 + COGGN	139/1	
228.	C-62 (A)	C-62	S-52	S-62 + EGGN S-62 + COGGN	1.39/2	
229.	S-62(B)	S-62	S-30	S-62	L.1D1	
230.	S-62 (B)	S-62	S-30	S-62	L5D2	
231.	C-62(B)	C-62	S-30	S-62 + EGGN S-62 + COGGN	L5D2	
232.	S-62 (C)	S-62	S-28	S-62	UD	
235.	C-62 (C)	C-62	S-28	S-62 + EGGN S-62 + COGGN	MD	
234.	SA-63	SA-63	SA-17 OF GPT	S-63	LJPJ3E P.	
235.	S-66 (A)	S-66	S-52	S-66	139	
236.	C-66 (A)	S-66	S-52	S-66	159/1	
237.	S-66 (A)	S-66	S-52	S-66	139/2	
238.	C-66 (A)	C-66	S-52	S-66 + EGGN S-66 + COGGN	139	
239.	C-66 (A)	C-C6	S-52	S-66 + EGGN S-66 + COGGN	159/1	
240.	C-66 (A)	C-66	S-52	S-66 + EGGN S-66 + COGGN	IM/2	

241.	S-66 (B)	S-66	S-30	S-66	L5D1	
242.	S-66 (B)	S-66	S-30	S-66	L5D2	
243.	C-66 (B)	C-66	S-30	S-66 + EGGN S-66 + COGGN	L5D1	
244.	C-66 (B)	C-66	S-30	S-66 + EGGN S-66 + COGGN	L5D2	
245.	S-66(C)	S-66	S-28	S-66	L4D	
246.	C-66(C)	C-66	S-28	S-66 + EGGN S-66 + COGGN	L4D	
247.	S-68 (A)	S-68	S-52	S-68	139	
248..	S-68 (A)	S-68	S-52	S-68	139/1	
249.	S-68 (A)	S-68	S-52	S-68	1 39/2	
250.	C-68 (A)	C-68	S-52	S-68 + EGGN S-68 + COGGN	139	
251.	C-68 (A)	C-68	S-52	S-68 + EGGN S-68 + COGGN	139/1	
252.	C-68(A)	C-68	S-52	S-68 + EGGN S-68 + COGGN	139/2	
253.	S-68 (B)	S-68	S-30	S-68	L5D1	
254.	S-68 (B)	S-68	S-30	S-68	L5D2	
255	C-68(B)	C-68	S-30	S-68 + EGGN S-68 + COGGN	L5D1	
256	C-68(B)	C-68	S-30	S-68 + EGGN S-68 + COGGN	L5D2	
257	S-68 (C)	S-68	S-28	S-68	L4D	
258.	C-68(C)	C-68	S-28	S-68 + EGGN S-68 + COGGN	L4D	
259.	S-69	S-69	Dn H/S of MYD B/Hut	S-69	80	
260.	SA-71	SA-71	SA-22 (GPT)	S-71	82	
261.	S-72 (A)	S-72	S-44	S-72	L1 3D1	
262.	S-72 (A)	S-72	S-44	S-72	L1 3D2	
263.	C-72 (A)	S-72	S-44	S-72 + EGGN S-72 + COGGN	L1 3D1	
264.	C-72 (A)	C-72	S-44	S-72 + EGGN S-72 + COGGN	L1 3D2	
265.	S-72 (B)	S-72	S-42	S-72	L1 2D1	
266.	S-72 (B)	S-72	S-42	S-	L1 2D2	
267.	C-72 (B)	C-72	S-42	S-72 + EGGN S-72 + COGGN	L1 2D1	
268.	C-72 (B)	C-72	S-42	S-72 + EGGN S-72 + COGGN	L1 2D2	
258.	C-68(C)	C-68	S-28	S-68 + EGGN S-68 + COGGN	L4D	
259.	S-69	S-69	Dn H/S of MYD B/Hut	S-69	80	
260.	S-71	S-71	S-22 (GPT)	S-71	82	
261.	S-72 (A)	S-72	S-44	S-72	L1 3D1	
262.	S-72 (A)	S-72	S-44	S-72	L1 3D2	

263.	C-72 (A)	S-72	S-44	S-72 + EGGN S-72 + COGGN	L1 3D1	
264.	C-72 (A)	C-72	S-44	S-72 + EGGN S-72 + COGGN	L1 3D2	
265.	S-72 (B)	S-72	S-42	S-72	L1 2D1	
266.	S-72 (B)	S-72	S-42	S-	L1 2D2	
267.	C-72 (B)	C-72	S-42	S-72 + EGGN S-72 + COGGN	L1 2D1	
268.	C-72 (B)	C-72	S-42	S-72 + EGGN S-72 + COGGN	LI 2D2	
269.	S-72 (C)	S-72	S-40	S-72	L11 D	
270.	C-72 (C)	C-72	S-40	S-72 + EGGN S-72 + COGGN	L11 D	
271.	S-72 (D)	S-72	S-38	S-72	L10 D1	
272.	S-72 (D)	S-72	S-38	S-72	L10 D2	
273.	C-72 (D)	C-72	S-385	S-72 + EGGN S-72 + COGGN	L10 D1	
274.	C-72(D)	C-72	S-38	S-72 + EGGN S-72 + COGGN	L10 D2	
275.	S-72 (E)	S-72	S-52	S-72	139	
276.	S-72 (E)	S-72	S-52	S-72	139/1	
277.	S-72 (E)	S-72	S-52	S-72	139/2	
278.	C-72 (E)	C-72	S-52	S-72 + EGGN S-72 + COGGN	139	
279.	C-72 (E)	C-72	S-52	S-72 + EGGN S-72 + COGGN	139/1	
280.	C-72(E)	C-72	S-52	S-72 + EGGN S-72 + COGGN	139/2	
281.	S-72(F)	S-72	S-30	S-72	L5DI	
282.	S-72(F)	S-72	S-30	S-72	L5D2	
283.	C-72(F)	C-72	S-30	S-72 + EGGN S-72 + COGGN	L5D1	
284.	C-72 (F)	C-72	S-30	S-72 + EGGN S-72 + COGGN	L5D2	
285.	S-72 (G)		S-28	S-72	L4 D	
286.	C-72(G)	C-72	S-28	S-72 + EGGN S-72 + COGGN	L4 D	
287.	S-73	S-/3	UP.H/sig or VDI'D L.1	S-73	84	
288.	S-75	S-75	UP.H/Sig-Of VDPD L2	S-75	86	
289.	S-78 (A)	S-78	S-72	S78	158	
290.	C-78 (A)	C-78	S-72	S-78 +EGGN S-78+ COGGN	158	
291.	S-78 (B)	S-78	S-68	S-78	68	
292.	C-78 (B)	C-78	S-68	S-78+ EGGN S-78+ COGGN	68	
293.	S-78 (C)	S-78	S-66	S-78	66	
294.	C-78 (C)	C-78	S-66	S-78+ EGGN S-78+ COGGN	66	

295.	S-80 (A)	S-80	S-72	<i>S-80</i>	158	
296.	C-80 (A)	C-80	<i>S-72</i>	S-80+ EGGN S-80+ COGGN	158	
297.	S-80 (B)	S-80	S-68	S-80	68	
298.	S-80(B)	S-80	S-68	S-80	68/1	
299.	C-80(B)	C-80	S-63	S-80+ EGGN S-80+ COGGN	68	
300.	C-80 (B)	C-80	S-68	S-80+ EGGN S-80+ COGGN	68/1	
301.	S-82 (1)	S-82	S-72	S-82	158	
302.	S-82 (2)	S-82	S-72	S-82	158/1	
303.	S-82 (3)	S-82	S-72	S-82	158/2	
304.	C-82 (1)	C-82	S-72	S-82 + KGGN S-82 + COGGN	158	
305.	C-82 (2)	C-82	S-72	S-82 + KGGN S-82 + COGGN	158/1	
306.	C-82 (3)	C-82	S-72	S-82 + EGCN S-82 + COGGN	158/2	
307.	S-84(A)	S-84	S-44	.S-84	L13D1	
308.	S-84(A)	S-84	S-44	S-84	L13D2	
309.	C-84 (A)	C-84	S-44	S-84 + EGGN S-84 + COCGN	L13D1	
310.	C-84(A)	C-84	S-44	S-84 + EGGN S-84 + COGGN	L13D2	
311.	S-84(B)	S-84	S-42	S-84	L12D1)	
312.	S-84 (B)	S-84	S-42	S-84	L12D2	
313.	C-84(B)	C-84	S-42	S-84 + EGGN S-84 + COGGN	L12D1	
314.	C-84(B)	C-84	S-42	S-84 + EGGN S-84 + COGGN	L12D2	
315.	S-84(C)	S-84	S-40	S-84	L11D	
316.	C-84(D)	C-84	<i>S-40</i>	S-84 + EGGN S-84 + COGGN	L11D	
317.	S-84 (D)	S-84	.S-72	S-84	158	
318.	S-84 (D)	S-B4	S-72	S-84	158/1	
319.	S-84 (D)	<i>S-84</i>	S-72	<i>S-84</i>	158/2	
320.	C-84 (D)	C-84	S-72	S-84 + EGGN S-84 + COGGN	158	
321.	C-84 (D)	C-84	S-72	S-84 + EGGN S-84 + COGGN	158/1	
322.	C-84 (D)	C-84	S-72	S-84 + EGGN S-84 + COGGN	158/2	
323.	S-86 (A)	S-86	S-44	S-86	L13D2	
324.	S-86 (A)	S-86	S-44	S-86	L13D2	
325.	C-86 (A)	C-86	S-44	S-86 + EGGN S-86 + COGGN	L13D1	
326.	C-86 (A)	C-86	S-44	S-86 + EGGN S-86 + COGGN	LI3D2	
327.	S-86 (B)	S-86	S-42	S-86	L12D1	
328.	S-86 (B)	S-86	S-42	S-86	L12D2	

329.	C-86 (B)	C-86	S-42	S-86 + EGGN S-86 + COGGN	L12D1	
330.	C-86 (B)	C-86	S-42	S-86 + EGGN S-86 + COGGN	LI2D2	
331.	S-86 (C)	S-86	S-40	S-86	L11D	
332.	C-86 (C)	C-86	S-40	S-86 + EGGN S-86 + COGGN	L11D	
333.	S-86 (D)	S-86	S-72	S-86	158	
334.	S-86(D)	S-86	S-72	S-86	158/1	
335.	S-86 (D)	S-86	S-72	S-86	158/2	
336	S-203	S-203				
337	C-203	C-203				
338	S-206	S-206	UP to UP KK HOME signal of PDT			
339	S-204	S-204	UP to DN HOME signal of PDT			
340	S-214	S-214				
341	C-214	C-214				
342	C-86 (D)	C-86	S-72	S-86 + EGGN S-86 + COGGN	158	
343	C-86(D)	C-86	S-72	S-86 + EGGN S-86 + COGGN	158/1	
344	C-86(D)	C-86	S-72	S-86 + EGGN S-86 + COGGN	158/2	
345	S-74 (A)	S-74	S-52	S-74	139	
346	S-74 (A)	S-74	S-52	S-74	139/1	
347	S-74 (A)	S-74	S-52	S-74	139/2	
348	S-74 (B)	S-74	S-30	S-74	L5D1	
349	S-74 (B)	S-74	S-30	S-74	L5D2	
350	S-74 (C)	S-74	S-28	S-74	L4D	
351	C-74 (A)	C-74	S-52	S-74 + EGGN S-74 + COGGN	139	
352	C-74 (A)	C-74	S-52	S-74 + EGGN S-74 + COGGN	139/1	
353	C-74 (A)	C-74	S-52	S-74 + EGGN S-74 + COGGN	139/2	
354	C-74 (B)	C-74	S-30	S-74 + EGGN S-74 + COGGN	L5D1	
355	C-74 (B)	C-74	S-30	S-74 + EGGN S-74 + COGGN	L5D2	
356	C-74 (C)	C-74	S-28	S-74 + EGGN S-74 + COGGN	L4D	
357	S-65	S-65	UP Home of WAT MYD Block HUT	S-65	78	
358	S-43 (E)	S-43	S-65	S-43	65	
359	C-43 (E)	C-43	S-65	S-43 + EGGN S-43 + COGGN	65	

360	S-53 (E)	S-53	S-65	S-53	65	
361	C-53 (E)	C-53	S-65	S-53 + EGGN S-53 + COGGN	65	

NOTE:

For taking off Calling -on signal after initiating the route, the main signal should be put back by operating the concern signal button and EGGN button. Press Concern signal button and COGGN button.

THE PUSH BUTTON CHART FOR INITIATING SHUNT SIGNALS:

Srl No	Shunt Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
1.	SH-5(A)	SH-5	SH-15	SH-5	107	
2.	SH-5 (B)	SH-5	SH-17	SH-5	107A	
3.	SH-5 (C)	SH-5	SH-21	SH-5	21	
4.	SH-7 (A)	SH-7	SH-15	SH-7	107	
5.	SB-7 (B)	SH-7	SH-17	SH-7	107A	
6.	SH-7 (C)	SH-7	SH-21	SH-7	21	
7.	SH-9 (A)	SH-9	SH-25	SH-9	L1U1	
8.	SH-9 (B)	SH-9	SH-27	SH-9	L2U1	
9.	SH-9 (C)	SH-9	SH-29	SH-9	L3U1	
10.	SH-9 (D)	SH-9	SH-15	SH-9	107	
11.	SH-9 (E)	SH-9	SH-17	SH-9	107A	
12.	SH-12 (A)	SH-12	SH-14	SH-12	106	
13.	SH-12 (B)	SH-12	S-4	SH-12	4	
14.	SH-12 (C)	SH-12	ANCC Sdq.	SH-12	ANCC	
15.	SH-14(A)	SH-14	S-6	SH-14	6	
16.	SH-14(B)	SH-14	S-4	SH-14	4	
17.	SH-15(A)	SH-15	SH-25	SH-15	L1U1	
18.	SH-15(B)	SH-15	SH-27	SH-15	L2UI	
19.	SH-15(C)	SH-15	SH-29	SH-15	L3U1	
20.	SH-15(D)	SH-15	SH-37	SH-15	L6U1	
21.	SH-15(E)	SH-15	L4U	SH-15	L4LI	
22.	SH-15(F)	SH-15	Dn. Main Line	SH-15	L5U	
23.	SH-16 (A)	SH-16	S-6	SH-16	6	
24.	SH-16 (B)	SH-16	S-4	SH-16	4	
25.	SH-17 (A)	SH-17	SH-37	SH-17	L6U1	
26.	SH17-(B)	SH-17	SH-39	SH-17	L7U1	
27.	SH17-(C)	SH-17	SH-41	SH-17	L8U1	
28.	SH-19	SH-19	SH-9	SH-19	9	
29.	SH-21(A)	SH-21	SH-45	SH-21	L10U	
30.	SH21-(B)	SH-21	SH-47	SH-21	LIU	
31.	SH21-(C)	SH-21	SH-49	SH-21	L12U	
32.	SH21-(D)	SH-21	SH-51	SH-21	.L13U1	
33.	SH25-(A)	SH-25	S-61	SH-25	61	
34.	SH25-(B)	SH-25	S-63	SH-25	63	
35.	SH27-(A)	SH-27	S-61	SH-27	61	

36.	SH27-(B)	SH-27	S-63	SH-27	63	
37.	SH-28	SH-28	SH-12	SH-28	107B	
38.	SH29-(A)	SH-29	S-61	SH-29	61	
39.	SH29-(B)	SH-29	S-63	SH-29	63	
40.	SH-30	SH-30	SH-12	SH-30	107B	
41.	SB-32(A)	SH-32	SH-14	SH-32	106	
42.	SH-32(B)	SH-32	SH-12	SH-32	107B	
43.	SH-34(A)	SH-34	SH-14	SH-34	106	
44.	SH-34(B)	SH-34	SH-12	SH-34	107B	
45.	SH-36(A)	SH-36	SH-U	SH-36	106	
46.	SH-36(B)	SH-36	SH-12	SH-36	107B	
47.	SH-37	SH-37	SH-43	SH-37	139	
48.	SH-38	SH-38	SH-16	SH-38	16	
49.	SH-39	SH-39	SH-43	SH-39	139	
50.	SH-40	SH-40	SH-16	SH-40	16	
51.	SH-41	SH-41	SH-43	SH-41	139	
52.	SH-42	SH-42	SH-16	SH-42	16	
53.	SH-43(A)	SH-43	S-61	SH-43	61	
54.	SH-43(B)	SH-43	S-63	SH-43	63	
55.	SH-43(C)	SH-43	S-69	SH-43	69	
56.	SH-43(D)	SH-43	SH-53	SH-43	148	
57.	SH-43(E)	SH-43	SCMGdsSdg	SH-43	SGS	
58.	SH-43(F)	SH-43	TowerWagon Siding	SH-43	TWS.	
59.	SH-44	SH-44	SH-16	SH-44	16	
60.	SH-45	SH-45	SH-53	SH-4i	148	
61.	SH-47(A)	SH-47	SH-53	SH-47	148	
62.	SH-47(B)	SH-47	S-73	SH-47	73	
63.	SH-47(C)	SH-47	S-75	SH-47	75	
64.	SH-49(A)	SH-53	SH-53	SH-49	148	
65.	SH-49(B)	SH-49	S-73	SH-49	73	
66.	SH-49(C)	SH-49	S-75	SH-49	75	
67.	SH-51(A)	SH-51	S-53	SH-51	148	
68.	SH-51(B)	SH-51	S-73	SH-51	73	
69.	SH-51(C)	SH-51	S-75	SH-51	75	
70.	SH-52(A)	SH-52	SH-36	SH-52	LSD1	
71.	SH-52(B)	SH-52	SH-34	SH-52	L7D1	
72.	SH-52(C)	SH-52	SH-32	SH-52	L6D1	
73.	SH-53(A)	SH-53	S-69	SH-53	69	
74.	SH-53(B)	SH-53	S-71	SH-53	71	
75.	SH-53(C)	SH-53	S-73	SH-53	73	
76.	SH-53(D)	SH-53	S-75	SH-53	75	
77.	SH-64(A)	SH-&4	SH-52	SH-64	139	
78.	SH-64(B)	SH-54	SH-30	SH-54	LSD1	
79.	SH-64(C)	EH-64	SH-28	SH-64	L4D	
80.	SH-68(A)	SH-68	SH-52	SH-68	139	
81.	SH-68(B)	SH-S3	SH-30	SH-68	L5D1	
82.	SH-68(C)	SH-68	SH-28	SH-68	L4D	
83.	SH-70(A)	SH-70	SH-52	SH-70	139	

84.	SH-70(B)	SH-7Q	SH-30	SH-70	L5D1	
85.	SH-70(C)	SH-70	SH-28	SH-70	L4D	
86.	EH-72(A)	SH-72	SH-44	SH-72	L13D1	
87.	SH-72(B)	SH-72	SH-42	SH-72	L12D1	
88.	SH-72(C)	SK-72	SH-50	SH-72	L11D	
89.	SH-72(D)	SH-72	SH-38	SH-72	L10D1	
90.	SH-72(E)	SH-72	SH-52	SH-72	139	
91.	SH-72(F)	SH-72	SH-30	SH-72	L5D1	
92.	SH-72(G)	SH-72	SH-2S	SH-72	L4D	
93.	SH-88(A)	SH-88	SH-62	SH-88	139	
94.	SH-88(B)	SH-8S	SH-30	SH-88	L5D1	
95.	SH-88(C)	SH-88	SH-28	SH-88	L4D	
96.	SH-88(D)	SH-88	LSD	SH-88	L3D	
97.	SH-88(E)	SH-88	L2D	SH-88	L2D	
98.	SH-88(F)	SH-88	L1D	SH-88	L1D	
99.	SH-90(A)	SK-90	SH-52	SH-90	139	
100.	SH-90(B)	SH-90	SH-30	SH-90	L5D1	
101.	SH-90(C)	SH-90	SH-28	SH-90	L4D	
102.	SH-90(D)	SH-90	L3D	SH-90	L3D	
103.	SH-90(E)	SH-90	L2D	SH-90	L2D	
104.	SH-90(F)	SH-90	L1D	SH-90	L1D	
105.	SH-92(A)	SH-92	SH-72	SH-92	158	
106.	SH-92(B)	SH-92	SH-68	SH-92	68	
107.	SH-94	SH-94	SH-72	SH-S4	158	
108.	SH-96(A)	SH-96	SH-44	SH-96	L13D1	
109.	SH-96(B)	SH-96	SH-42	SH-95	L12D1	
110.	SH-96(C)	SH-85	SH-40	SH-96	L11D	
111.	SH-96(D)	SH-96	SH-72	SH-96	158	
112.	SH-98(A)	SH-98	SH-44	SH-98	L13D1	
113.	SH-98(B)	SH-98	SH-42	SH-98	L12D1	
114.	SH-98(C)	SH-98	SH-40	SH-98	L11D	
115.	SH-98(D)	SH-98	SH-72	SH-98	158	
116.	SH-213(A)	SH-213	S-15	SH-213	127	
117.	SH-213(B)	SH-213	S-17	SH-17	127	
118.	SH-213(C)	SH-213	S-21	SH-21	127	
119.	SH-213(D)	SH-213	S-49	SH-49	L12	
120.	SH-213(E)	SH-213	S-51	SH-51	L13	
120.	SH-214(A)	SH-214	S-206	SH-214	MIDDLE	
122.	SH-214(B)	SH-214	S-204	SH-214	DN	
123.	SH-214(C)	SH-214	S-20	SH-214	KK	

THE PUSH BUTTON CHART FOR SIDINGS. CRANK HANDLES AND LEVEL CROSSING GATES:

Sl. NO	Description of control	Buttons operated
1.	Releasing control for opening level crossing gate at KM 870/9-1 0	1 65+Group Trans GSB

2.	Withdrawing control after dosing level crossing gate at KM 870/9-10	165+Group Release GSRB
3.	Releasing control for opening level crossing gate at KM 870/13-14	1 66+Group Trans GSB
4.	Withdrawing control after closing level crossing gate at KM 870/1 3-14	1 66+Group Release GSRB
5.	Releasing control for Hot axle /Sub-station siding.	131+Group Trans GSB
	With drawing control of Hot-axle sub-station Siding	131+ Group release GSRB
6.	Releasing control for Goods stable line siding	11 7+Group Release GSB
	With drawing controlof Goods stable line siding	117 + Group release GSRB
7.	Releasing control for Goods stable line siding	128+Group Trans GSB
	Withdrawing control of Goods stable line siding	128 + Group release GSRB
8.	Releasing control for ANCC siding	104+Group Trans GSB
	Withdrawing control of ANCC siding	104 + Group release GSRB
9.	Permission to release CH-1 Key	CH-1 YN + Group CHRB
10.	Withdrawal of control of CH-1 Key	CH-1 YN + Rel. CHNB
11.	Permission to release CH-2 Key	CH-2 YN + Group CHRB
12.	Withdrawal of control of CH-2 Key	CH-2 YN + Rel. CHNB
13.	Permission, to release CH-3 key	CH-3 YN+ Group Trans CHRB
14.	Withdrawal of control of CH-3 Key	CH-3 YN+ Group Rel. CHNB
15.	Permission to release CH-4 key	CH-4 YN+ Group Trans CHRB
16.	Withdrawal of control of CH-4 Key	CH-4 YN+ Group Rel. CHNB
17.	Permission to release CH-5 key	CH-5 YN+ Group Trans CHRB
18.	Withdrawal of control of CH-5 Key	CH-5 YN+ Group Rel. CHNB
19.	Permission to release CH-6 key	CH-6 YN+ Group Trans CHRB
20.	Withdrawal of control of CH-6 Key	CH-6 YN+ Group Rel. CHNB
21.	Permission to release CH-7 key	CH-7 YN+ Group Trans CHRB
22.	Withdrawal of control of CH-7 Key	CH-7 YN+ Group Re!. CHNB
23.	Permission to release CH-8 key	CH-8 YN+ Group Trans CHRB
24.	Withdrawal of control of CH-8 Key	CH-8 YN+ Group Rel. CHNB
25.	Permission to release CH-9 key	CH-9 YN+ Group Trans CHRB
26.	Withdrawal of control of CH-9 Key	CH-9 YN+ Group Rel. CHNB
27.	Permission to release CH-10 key	CH-10 YN+Group Trans CHRB
28.	Withdrawal of control of CH-1 0 Key	CH-10 YN+Group Rel!. CHNB
29.	Permission to release CH-1 1 key	CH-11 YN+Group Trans CHRB
30.	Withdrawal of control of CH-1 1 Key	CH-11 YN+Group Rel!. CHNB
31.	Permission to release CH-1 3 key	CH-13 YN+Group Trans CHRB
32.	Withdrawal of control of CH-1 3 Key	CH-13 YN+Group Rel. CHNB
33.	Permission to release CH-1 4 key	CH-14 YN+Group Trans CHRB
34.	Withdrawal of control of CH-1 4 Key	CH-14 YN+Group Rel. CHNB
35.	Permission to release CH-1 5 key	CH-15 YN+Group Trans CHRB
36.	Withdrawal of control of CH-1 5 Key	CH-15 YN+Group Rel. CHNB
37.	Permission to release CH-1 6 key	CH-16 YN+Group Trans CHRB
38.	Withdrawal of control of CH-1 6 Key	CH-16 YN+Group Rel. CHNB
39.	Permission to release CH-1 7 key	CH-17 YN+Group Trans CHRB
40.	Withdrawal of control of CH-1 7 Key	CH-17 YN+Group Rel. CHNB

41.	Permission to release CH-18 key	CH-18 YN+Group Trans CHRB
42.	Withdrawal of control of CH-18 Key	CH-18 YN+Group Rel. CHNB
43.	Permission to release CH-19 key	CH-19 YN+Group Trans CHRB
44.	Withdrawal of control of CH-19 Key	CH-19 YN+Group Rel. CHNB
45.	Permission to release CH-20 key	CH-20 YN+Group Trans CHRB
46.	Withdrawal of control of CH-20 Key	CH-20 YN+Group Rel. CHNB
47.	Permission to release CH-21 key	CH-21 YN+Group Trans CHRB
48.	Withdrawal of control of CH-21 Key	CH-21 YN+Group Rel. CHNB
49.	Permission to release CH-22 key	CH-22 YN+Group Trans CHRB
50.	Withdrawal of control of CH-22 Key	CH-22 YN+Group Rel. CHNB
51.	Permission to release CH-23 Key	CH-23 YN+Group Trans CHRB
52.	Withdrawal of control of CH-23 Key	CH-23 YN+Group Rel. CHNB
53.	Permission to release CH-24 key	CH-24 YN+Group Trans CHRB
54.	Withdrawal of control of CH-24 Key	CH-24 YN+Group Rel. CHNB
55.	Permission to release CH-25 key	CH-25 YN+Group Trans CHRB
56.	Withdrawal of control of CH-25 Key	CH-25 YN+Group Rel. CHNB
57.	Permission to release CH-26 key	CH-26 YN+Group Trans CHRB
58.	Withdrawal of control of CH-26 Key	CH-26 YN+Group Rel. CHNB
59.	To put SA63 into Auto mode	AGGN + SA63 GN
60.	To cancel Auto mode	AGGYN + SA63 GN
61.	To put SA71 into Auto mode	AGGN + SA71 GN
62.	To cancel Auto mode	AGGYN + SA71 GN

OPERATION OF SIGNALS:

All signals are directly operated from the Route Relay interlocking cabin as shown in the Station Working Rules diagram.

17.0 STATION MASTER KEY FOR OPERATING PANEL:

This key when inserted in the lock (provided on the Operating Panel) and turned right the panel becomes operative. The key when inserted in the lock and either turned to left or extracted out from the lock renders the panel inoperative except for putting back the signals to “ON” position in case of emergencies. When the SM’s key is inserted and turned to right a white indication lights by the side of SM’s key.

18.0 DISTANT SIGNALS AND THEIR ASPECTS:

The distant signals work automatically, since the aspects of these signals being controlled by the aspect of the respective Home Signals.

19.0 EMERGENCY OPERATIONS AND THE COUNTERS:

Operation of the following buttons is recorded on the respective counters provided on the operating panel.

- i) Control for Emergency Point Button (EWN).
- ii) Control for Emergency full Route Release Button (EUUYN).
- iii) Control for Emergency Route Section Release Button (EUYN).
- iv) Control for “Calling on” Signal (COGN).

v) Control for Emergency Overlap Release Button (OYN).

The Panel Station Master on duty should keep a proper record of all such operations. A Register with separate portions for each button should be maintained. Each time a button is operated the readings on the respective counter should be recorded in the register mentioning clearly therein the circumstances under which the emergency operation had to be resorted to. At the time of handing over charge the relieved Panel Station Master should record and sign the last readings on the counters in the register and the Panel Station Master who takes over charge must verify, by physical check, the correctness of the readings recorded and counter sign the entry.

In case of failure of track circuit, the points can be set by operation of the emergency point button (EWN) and the point button concerned (after unlocking the EWN control lock) provided the point concerned was not engaged earlier or not locked. This electrical lock (ignition type) shall be in personal custody of the cabin Station Master and no emergency operations should be carried out without his permission.

The Panel Station Master on duty is responsible for all emergency operations explained above. The Panel Station Master is responsible for correct operation of the emergency buttons and record the operations in the register.

The Panel SM should not permit any unauthorized person to operate the control panel.

For every operation the signal button at the entrance point and the route button at the exit point have to be simultaneously positively pressed down for initiating the route setting, locking and taking off the signal.

Similarly for any individual point operation, the point button (WN) and the group point button (WWN) have to be pressed simultaneously.

The Panel Station Master on duty must ascertain by visual verification that the indication appearing on the indicating panel is in conformity with the operation of the buttons on the operating panel. The Panel Station Master must also ensure that not more than two buttons are operated simultaneously at any given time.

20.0 APPROACH LOCKING OF A ROUTE:

Once a signal (either a stop signal or a shunt signal) is taken off, the route including signal overlap in case of main signal gets back locked and the set route cannot be altered or interfered with unless the signal concerned is put back to “ON” position and the route is cancelled by emergency three button operation. After the initiation of such emergency three Button operation, the complete route gets cancelled provided there is no train on the approach track. If there is a train/vehicle on the approach track, the route gets approach locked and can be released only after the countdown of 120 Seconds by the timer.(The approach locking distance being variable according to the aspect of the signal in rear and other important safety considerations such as maximum permissible sectional speed on the approaching line etc.)

The special cases of exceptions are the signal No.6,30,67,69,71,73,75,97,99 where dead approaching locking is provided with a special conditional releases.

The shunt signal No.3,5,6,16,11,31,32,45,51,58,65,68,80 have been provided with dead approaching locking (in the absence of approach track circuit) and in such case the route once set cannot be altered by emergency operation for a period of 120 Seconds after putting back the signal to “ON” position. Every such three button emergency cancellation is countered on the veeder counter.

21.0 EMERGENCY RELEASE OF INDIVIDUAL – ROUTE SECTION AND OVERLAPS:

A complete route of signal comprises of one or more Route Sections (as also the overlap in case of a stop signal) and whenever any route section or overlap is not released by either passage of the train or by emergency cancellation of the entire route as already mentioned above the emergency cancellation of the Route Section with the co-ordination of the SSE (Sig)/SE (Sig)/RRI on duty can be done and such cancellation is individually counted on the counter fitted on the panel.

22. TAKING OF CALLING ON SIGNALS:**TAKING ‘OFF’ CALLING ON SIGNALS:**

The Calling ‘ON’ signals have been provided below the following stop signals at North End

NORTH END:

Sl.No	Button No	Signal No
1.	C 1	Up Home signal No.1 (on Up main line)
2.	C 3	Down Home signal No. 3 (on KK line)
3.	C 9	Up routing signal No. 9 (on Up main line)
4.	C 12	On routine starter signal No.12 (on Dn. main line)
5	C 14	On routing starter signal No.14 (on KK line)
6.	C 15	On routing Home signal No. 15 (on Dn. main line)
7.	C 16	On routing starter signal No. 16 (on VSP line)
8.	C 17	On routing Home signal No. 17 (on KK line)

9.	C 21	On routine Home signal No. 21	(on VSP line)
10.	C 28	On starter signal No. 28	(on Dn. main line)
11.	C 30	On starter signal No. 30	(on Dn. loop)
12.	C 32	On starter signal No. 32	(on L.6 goods line)
13.	C 34	On starter signal No. 34	(on L.7 KK line)
14.	C 36	On starter signal No. 36	(on L.8 KK line)
15.	C 38	On starter signal No. 38	(on L10 VSP line)
16.	C 40	On starter signal No. 40	(on LI 1 VSP line)
17.	C 42	On starter signal No. 42	(on L.12 VSP line)
18.	C 44	On starter signal No. 44	(on L.13 VSP line)
19.	C-11	On Up Home signal No.11	(On middle line)
20.	C-203	On DN Home signal No.203	(On KK Line)
21.	C-214	On Intermediate signal No.214	(On Dn Line)

The "Calling on" signals have been provided below the following stop signals at South end.

Sl.No	Button No	Signal No
1.	C25	On starter signal No. 25 (on Up 2 TM * loop)
2.	C27	On starter signal No. 27 (on Up 1" loop)
3	C29	On starter signal No. 29 (on Up main line)
4.	C37	On starter signal No.37 (on line No. 6)
5.	C39	On starter signal No.39 (on line No. 7)
6.	C41	On starter signal No. 41 (on line No. 8)
7.	C43	On routing starter signal No. 43 (on KK line)
8.	C45	On starter signal No. 45 (on line No. 10)
9.	C47	On starter signal No. 47 (on line No. 11)
10.	C49	On starter signal No. 49 (on line No. 12)
11.	C51	On starter signal No. 51 (on line No. 13)
12.	C52	On routing Home signal No. 52 (on KK line)
13.	C53	On routing starter signal No. 53 (on VSP line)
14.	C62	On routing Home signal No. 62 (on Dn. main line)
15.	C66	On routing Home signal No. 66 (on goods despatch line)
16.	C68	On routing Home signal No. 68 (on KK line)
17.	C72	On routing Home signal Na. 72 (on Bypass line)
18.	C78	On Dn. Home signal No. 78 (on goods despatch line)

19.	C80	On Up. Home signal No. 80 (on KK line)
20.	C82	On Dn. Home signal No. 82 (on bye-pass line)
21.	C84	On Dn. Home signal No. 84 (on VSP line No.1)
22.	C86	On Dn. Home signal No. 86 (on VSP line No.2)
23.	C74	On DN Home signal No.74 (on MYD-A cabin reception and dispatch line)

During the failure of the stops signal either due to failure of any track circuits on the route including the overlap or for any other causes the “Calling on” signals may be taken off after the train has come to a stand at the stop signal, provided all the other conditions for taking off the stop signal have been fulfilled and the approach track immediately in rear of the said stop signal is occupied by train. After initiating the “Calling on” signal the “Calling on” signal indication shows a white flashing light for 60 seconds and after which it shows a steady white light. It is only when such a steady white light appears the “Calling on” signal displays “OFF aspect”. Every such operation is registered on a counter provided on the operating panel.

23. **FAILURE OF APPROACH TRACK AND SPECIAL MEASURES FOR TAKING OFF A “CALLING ON” SIGNAL:**

In case of failure of the approach track, instead of taking off the “Calling on” signal the trains shall be piloted treating “Calling on” signal as failure and S & T official shall be informed for immediate rectification.

During the failure of track circuit before taking off “Calling on” signal the clearance of the track on the entire route between stop signals to stop signal must be certified by the Station Master to the Panel Station Master. In all cases of reception/dispatch of a train by taking off the “Calling on” signal necessary particular including the train No. “Calling on” signal No. and the No. registered on the corresponding veeder counter should be recorded in a register maintained for the purpose.

24. **TAKING OFF THE SHUNT SIGNALS:**

For taking off a shunt signal the corresponding route button and the shunt signal button should be pressed simultaneous and released.

25. CLEARING OF STOP SIGNAL:

Whenever it is necessary to clear a stop signal, it is necessary to press the signal button and the exit button where after this route setting is initiated, the route is lined up and locking executed on all the route sections and the overlap thus holding the route ultimately proving the way and circuits for the signal clearance.

26. ORDINARY AND SPECIAL ALTERNATIVE OVERLAP OF STOP SIGNALS:

Some of the Stop signal have been provided with more than One overlap(Which is designated after the next stop signal a head).

The Details of these overlaps are as follows:

S.N	Signal No	Route No.	Move to	Overlap	Points.
1	S1 (A), C1 (A)	1 A	S-9	a) OV1-9	105 N
				b) OV2-9	105 R, 107 N
				c) OV3-9	105 R, 107 R
2	S1 (B), C1 (B)	1 B	S-17	a) OV1-17	115 N, 116 N
				b) OV3-17	115 R
3	S1 (C), C1 (C)	1C	S-21	a) OV1-21	121 N, 122 N
				b) OV2-21	121 N, 122 R
				c) OV3-21	121 R
4	S3 (A), C3 (A)	3A	S-15	a) OV2-15	109N, 110R
5	S3 (B), C(B)	3B	S-17	a) OV1-17	115N,116N
				b) OV2-17	115N, 116N
				c) OV3-17	115R
6	S3(C), C3(C)	3C	S-21	a) OV1-21	121N, 122N
				b) OV2-21	121N, 122R
				c) OV3-21	121R
7	S9(A), C9 (A)	9A	S-25	a) OV1-27	132N, 133N
				b) OV2-27	132N,152N,153N,133R
8.	S9 B, C9 B	9B	S-27	a) OV1-27	132 N, 133 N
				b) OV2-27	132N, 152H 153N. 133R
9.	S9(C).C9(C)	9C	S-29	a) OV1-29	133N, 152N, 153N
				b) OV2-29	133N, 152N, 153R
10.	S9 D. C9 (D)	9D	S-15	a) OV1-15	109 R
11.	S9 (E), C9 (E)	9E	S-17	a) Ov1-17	115 N, 116 N
				b) OV3-17	115R
12.	S12 A, C12 A	12A	S14	a) OV1-14	102N, 103 N
13.	S15 A, C15 A	15A	S25	a) OV1-25	133 N, 132 R
				b) OV2-25	151N. 152N, 153N. 132R, 133R
14.	S15 B, C15B	15B	S27	a) OV1-27	132 N, 133 N
				b) OV2-27	132N, 152N, 153N, 133R
15.	S15 C, C15 C	15 C	S27	a) OV1-29	133N, 152N. 153N
				b) OV2-29	133N. 152N, 153R
16.	S15 D, C15 D	15D	S37	a) OV1-37	129 N
				b) OV2-37	130N, 129R, 139N
17.	S17 A, C17 A	17A	S37	a) OV1-37	129 N

				b) OV2-37	130N, 139N, 129R
18.	S17 B, C17 B	17B	S39	a) OV-39	129N, 130N, 139N
19.	S17 C, C17 C	17C	S41	a) OV1-41	130 N
				b) OV2-41	139 N, 130 R
20.	S21 A, C21 A	21 A	S45	a) OV1-45	143 N
				b) OV2-45	143 R, 146 N, 148 N
21.	S21 B, C21 B	21 B	S47	a) OV-47	145 N, 146 N
22.	S21 C, C21 C	21 C	S49	a) OV-49	144 N, 145 N
23.	S21 D, C21 D	21 D	S51	a) OV1-51	144 N
				b) OV2-51	145 N, 144 R
24.	S28 (1), C28	2811)	S12	a) OVI-12	105 N, 106 N
25.	S28 (2), C28	2812)	S 12	a) OV2-12	105 N, 106 R
26.	S30 (1), C30	3011)	S 12	a) OVI-12	105 N, 106 N
	S30 (2). C30	30(1)	S 12	b) OV2-12	105 N, 106 R
27.	S32 A, C32 A	32 A	S14	a) OV1-14	102 N, 103 N
	S32 B, 032 B	32 B	S12	b) OV1-12	105 N, 106 N
28.	S34 A, C34 A	34 A	S14	a) OV1-14	102 N, 103 N
	S34 A, C34 A	34A	S14	b) OV2-14	102 R, 103 N
29.	S34 B, C34 B	34B	S12	a) OVI-12	105 N, 106 N
30.	S36 A, C36 A	36 A	S14	a) OV1-14	102 N, 103 N
				b) OV2-14	102R, 103N
31.	S36 B, C36 B	36 B	S 12	a) OV1-12	105N, 106N
32.	S37 (1), C37	37 (1)	S43	a) OV1-43	139 N
	S37 (2), C37	37 (2)	S43	a) OV2-43	139 R, 140IR
33.	S38 (1) C38	38(1)	S 16	a) OVI-16	102 N. 103 R
	S38 (2) C38	38(2)	S 16	a) OV2-16	102 R, 103 R
34.	S39 (1). C39	39(1)	S 43	a) OV1-43	139 N
	S39 (2). C39	39(2)	S 43	a) OV2-43	139 R. 140 R
35.	S40 (1). C40	40(1)	S 16	a) OVI-16	102 N. 103 R
36.	S40 (1). C40	40(21	S 16	a) OV2-16	102 R, 103 R
	S41 (2). C41	41(1)	S 43	a) OVI-43	139N
	S41 (2), C41	41(2)	S 43	a) OV2-43	139R, 140 R
37.	S42 (1), C42	42(1)	S 16	a) OVI-16	102 N, 103 R
	S42 (2), C42	42(2)	S 16	a) OV2-16	102 R, 103 R
38.	S43(D),C43(D)	43D	S 53	a) OV1-53	158 N
39	S44 (1), C44	44(1)	S 16	a) OV1-16	102 N, 103 R
	S44 (2), C44	44(2)	S 16	a) OV2-16	102 R, 103 R
40	S45 (1), C45	45(1)	S 53	a) OV1-53	158N
	S45 (2), C45	45(2)	S 53	a) OV2-53	158R
41.	S47 (A), C47W	47(A)	S 53	a) OV1-53	158N
42.	S49(A). C49(A)	49(A)	S 53	a) OV1-53	158N
43.	S51(A1, C51(A)	51(A)	S 53	a) OV1-53	158 N
44.	S52(A).C52(A)	52(A)	S 36	a) OVI-36	115 N
				b) OV2-36	106N. 107N.108N,115R
				c) OV3-36	115R. 107 R
45.	S52(B).C52 B)	52(B1	S 34	a) OV1-34	106N. 107N. 108N. 115N, 116N

				b) OV2-34	116N, 115N. 107R
46.	S52(C).C52(C)	52(C1	S 32	a) OV1-32	116N, 107 N. 109 R
				b) OV2-32	106N. 107N. 108N. 115N, 116R
47.	S62(A).C62(A)	62(A)	S 52	a) OV1-52	130 N, 129 N
				b) OV2-52	130 R
				c) OV3-52	130 N. 129 R
48.	S62(B).C62(B)	62(B)	S 30	a) OV1-30	114N
				b) OV2-30	110N. 109N. 107N, 114R
49.	S62(C).C62(C)	62 (C)	S 28	a) OV-28	114N. 110 N, 109 N, 107N
50.	S66(A).C66(A)	66(A)	S 52	a) OV1-52	130 N, 129 N
				b) OV2-52	130 R
				c) OV3-52	130 N. 129 R
51.	S66(B).C66(B)	66(B)	S 30	a) OV1-30	114N
				b) OV2-30	110N, 109N, 107N, 114R
52.	S66(C).C66(C)	66(C)	S 28	a) OV-28	114N. 110N, 109 N. 107 N
53.	S68(A).C68(A)	68(A)	S 52	a) OV1-52	130 N, 129 N
				b) OV2-52	130 R
				c) OV3-52	130 N, 129 R
54.	S68(B).C68(B)	68(B)	S 30	a) OV1-30	114 N
				b) OV2-30	110N, 109N, 107N, 114R
55.	S68(C).C68(C)	68(C)	S 28	a) OV-28	114N, 110N, 109N, 107N
56.	S72(A).C72(A)	72(A1	S 44	a) OV1-44	123 N
				b) OV2-44	121 R, 123 R
57.	S72(B).C72(B)	72(B)	S 42	a) OV1-42	123 N, 121 N
				b) OV2-42	123 N, 121 R
58.	S72(C).C72(C)	72(C)	S 40	a) OV-40	122 N, 121 N
59.	S72(D).C72(D)	72(D)	S 38	a) OV1-38	122 N
				b) OV2-38	121 N, 122R
60.	S72(E).C72(E)	72(E)	S52	a) OV1-52	130 N, 129 N
				b) OV2-52	130 R
				c) OV3-52	130N,129R
61.	S72(F).C72(F)	72(F)	S30	a) OV1-30	114N
				b) OV2-30	110N,109N,107N.114R
62.	S72(G).C72(G)	72(G)	S28	a) OV-28	114N,110N,109N,107N
63.	S78(A).C78(A)	78(A)	S72	a) OV1-72	148 N
64.	S78(B).C78(B)	78(B)	S68	a) OV1-68	150 N, 148 N, 147 N
65.	S78(C).C78(C)	78(C)	S66	a) OV 66	149 N
66.	S80(A).C80(A)	80(A)	S72	a) OV1-72	148 N
67.	S80(B).C80(B)	80(B)	S68	a) OV1-68	150N, 148N, 147N
				b) OV2-68	150N, 148N, 147R, 139N, 140N
68.	S82(1).C82(1)	82(1)	S72	a) OV1-72	148 N
69.	S82(2).C82(2)	82(2)	S72	a) OV2-72	148 R, 147 N
70.	S84IA).C84(A)	84(A)	S44	a) OV1-44	123 N
				b) OV2-44	121 R, 123 R

71.	S84(B),C84(B)	84(B)	S42	a) OV1-42	123 N, 121 N
				b) OV2-42	123 N, 121 R
72.	S84(C),C84(C)	84(C)	S40	a) OV 40	122 N, 121 N
73.	S84(D),C84(DI	84ID)	S72	a) OV1-72	148 N
				b) OV2-72	148 R, 147 N
74.	S86(A),C86(A)	86(A)	S44	a) OV1-44	123 N
				b) OV2-44	121 R, 123 R
75.	S86(B),C86(B1	86(B)	S42	a) OV1-42	123 N, 121 N
				b) OV2-42	123 N, 121 R
76.	S86(C),C86(C)	66(C)	S40	a) OV40	122 N, 121 N
77.	S86(D),C86(D)	86(D)	S72	a) OV1-72	148 N
				b) OV2-72	148 R, 147 N
				c) OV3-72	140 N, 139 N, 147 R, 148 R
78	S74(A),C74(A)	S74(A)	S52	a) OV1-52	130 N, 129 N
				b) OV2-52	130 R
				c) OV3-52	130N,129R
79	S74(B),C74(B)	S74(B)	S30	a) OV1-30	114N
				b) OV2-30	110N,109N,107N,114R
80	S74(C),C74(C)	S74(C)	S28	a) OV-28	114N,110N,109N,107N

NOTE:

Whenever any route is initiated by pressing the entrance and exit buttons, OV will set automatically along with the route. OV1 or OV2 can be set either setting the route of the head signal or according to the line of the points as the case may be.

Alternative overlap has been provided for some signals affording flexibility in the yard operations. When a route is initiated, the overlap (designated as OV) is automatically set over the route on which the train travels. But when an alternate overlap has to be set, first the route ahead has to be set by operation of entrance and exit buttons, then initiate the routes of the rear signal – after this operation the signal ahead may not be put back to “ON” and the route cancelled.

For these over laps, it is not necessary to initiate the signal route for the advance section. The overlaps will be set according to the line of the point at the time of the initiation of the route and therefore the Panel Station Master has to be mindful of keeping of the points on the overlap in the desired position before initiating the route.

27.0 TIME RELEASE OF OVERLAP:

Any overlap, which is set for signaled route will be released after the train comes and stops at the berthing track to ensure that the train has come and stopped on berthing track. A time release of 120 seconds is provided for the release of overlap. Accordingly counting of time space as soon as the train comes on the berthing track just in rear of the signal and after a lapse of 120 seconds the overlap is released automatically permitting other routes to be set on the portion of the overlap.

In case of failure of release of the overlap at the end of 120seconds due to any reason, emergency overlap release is effected by pressing the concerned route button and a overlap release button (OYN). The overlap is released immediately and the operation is recorded in the emergency overlap is counter (OYN).

28.0 PUTTING BACK THE SIGNAL TO “ON” POSITION:

In exigencies, when a stop signal or a “Calling on” signal or a Shunt signal has to be put back to “ON” before passage of the train, the concerned signal button (GN) and the emergency signal cancellation button (EGGN) should be pressed simultaneously.

29.0 LOCKING OF POINTS NORMAL AND SPECIAL CASES:

Normally the electric machine operated points can be set and locked provided the point zone track circuit is free and the subject point is not locked either by a route section or an overlap on flank protection arrangement.

The locking on the point is normally released immediately after the clearance of the route section or the overlap and the flank protection locking is released after the clearance of the controlling route section.

30.0 INDIVIDUAL OPERATION OF POINTS WHEN THE TRACK CIRCUIT/CIRCUITS IN THE POINT ZONE HAVE NOT FAILED:

Whenever an individual point/crossover is to be set the point button (WN) concerned and the group button (WWN) should be simultaneously pressed and released. Such an operation will change the point /crossover from normal to reverse or from reverse to normal provided the track circuit/circuits in the point zone are not occupied.

Whenever any point cannot be operated to house either in normal or reverse position, a flashing indication appears on the point concerned on the indication panel. The point can be set to its original position by the operation of the point button (WN) concerned and the group point button (WWN).

31.0 INDIVIDUAL OPERATION OF POINTS IN CASE OF FAILURE OF TRACK CIRCUITS /TRACK CIRCUITS POINT ZONE:

In the event of failure of the track circuits controlling the points, the Panel Station Master should first personally or through field AYM ensure that the track circuit concerned is not occupied by a train /vehicle and then go for emergency operation of

points the Cabin Station Master should unlock the EWN lock on the operating panel by operating EWN key (provided for the purpose), press the point button (WN) along with the emergency point button (EWN) and release the buttons. Each time point is thus operated, the same will be recorded on the “EWN” counter.

32.0 FAILURE OF THE POINTS DUE TO ANY OTHER CAUSES:

If any point fails before a route is lined up, the Cabin Station Master should first try to set and reset the same point by individual operation to ascertain if the said point can be set in a particular position.

If the said points cannot be set in any position, the Cabin Station Master should not use the route concerned for normal signaled movement until the defect is rectified by Signal staff and certificate to this effect is obtained from SE (Sig),/ JE (Sig) on duty. However, Crank handle operation may be done.

33.0 PADLOCKING AND CRANKING OF POINTS WITH CRANK HANDLE AND ITS CONTROLLING KEYS AND SPECIAL PRECAUTIONS:

For the use of Crank handle for motor operated points the instructions laid down in rule No.20.06 of operating Manual should be followed.

When the points are set by means of Crank handle, the field Station Master on duty shall ensure that the entire route is correctly set, all the facing and trailing points are clamped and padlocked.

All the points on the route must be clamped and padlocked for any signaled movement. The keys of the padlock of all the clamped and locked points should be kept in the personal custody of the field Station Master before the pilot memo is handed over to the LP.

When once the route is so set manually by the field Station Master and all the points on the route are clamped and padlocked, the same shall not be interfered with in any way until the movement over the points concerned is completed or, the movement is cancelled, and such cancellation is authenticated by exchange of Private Number.

If any point has failed after setting of the route in Normal/Reverse position or both. A white indication strip start flashing depending upon the position at which the point had failed. In such case the route concerned shall be cancelled and shall not be used until the defect is rectified by signal staff.

34.0 **RELEASING OF A SUB-ROUTE SECTION:**

If any route section over a point zone is not released after passage of a train due to failure of track circuit or otherwise, the route section can be released by means of Emergency operation by Station Master on duty in presence of SE (Sig) .

35.0 **FAILURE OF TRACK CIRCUITS AND SIGNALS:**

In the event of failure of track circuits over points zone setting of the points will be done by Emergency operation after the Field SM ensures that the points zone is clear of vehicles and gives an assurance supported by a Private number to that effect. In case of failure of track circuits, calling-on-signals where provided may be taken off. If there is no Calling-on-signal or if the same is out of order, the train concerned should be piloted past the signal concerned up to next stop signal ahead after ensuring the clearance of the route and setting, clamping and padlocking the points on the route by the field SM.

36.0 **SIGNAL ASPECT:**

The aspect control chart of the signals in Simhachalam Yard in accordance with the aspect control chart as indicated in the Interlocking Plan No:- 23090 ALT-H (Simhachalam RRI).

The failure of a Signal lamp of an aspect at site renders the signal to assume its next restrictive aspect. During failure of signal lamp the physical aspects of the signal at site and indications on indication panels are given below.

Srl No	Aspect Displayed before failure of signal lamp.		Particulars of failure of lamp	Aspect displayed after failure of signal lamp.	
	By signal at site	By signal symbol on panel		By signal at site	By signal symbol on panel.
1.	Red	Red	Red lamp-main filament fused.	Dim red.	Flashing red.
2.	Red	Red	Red lamp-both filaments fused.	Bland. Signal in rear reverts back to ON position.	Flashing red.
3.	Yellow	Green	Yellow lamp main filaments fused	Dim yellow	Steady Green.
4.	Yellow	Green	Yellow lamp both filaments fused.	Red	Flashing Green with Red.
5.	Double yellow	Green	One yellow lamp both filaments fused	Yellow	Flashing Green
6.	Double yellow	Green	Both yellow lamps both filaments of both lamps fused.	Red	Flashing Green with steady red
7.	Green	Green	Green lamp main Filament or auxiliary filament fused	Double yellow in 4 aspect signals and yellow in 3 aspect signals.	Flashing Green.
8.	Green	Green	Green lamp both filaments fused	Yellow	Flashing Green.

SPECIAL NOTE:

- i) In addition to the failure of both filaments of Green lamp, failure of one or both filaments of one or both filaments of yellow fail the aspect assumed by the signal at site is Red.
- ii) A small flashing white light is lit near the main signal symbol, if the signal is put to danger and route cancellation is initiated when it is approach locked. This light remains flashing for 120 seconds after which it becomes steady. Then the panel Station Master should commence three button emergency route cancellation.
- iii) When a Calling on Signal below a stop signal is taken off, a white dot is lit below the stop signal.
- iv) White is not provided on indication panel/operating panel is lit above Green indication signal symbol whenever signal is taken “off” with route indicator for a diversion.

37.0 ANCC SIDING:

On receiving the order number from SCR/WAT regarding placement of any load/rake in ANCC siding, SS/SM on duty at SCMN RRI cabin shall depute one of the TPM's to the goomty for operation of siding point. TPM who is deputed, shall proceed to the goomty, extract the key from RKT when it is transmitted from RRI as per the procedure given in Para No.1.2, unlock the unit as required, set the point, clamp and padlock. The same compliance of instructions from SS shall be fulfilled by the TPM and confirmed by a private number. SS/SM on duty at RRI cabin, on receiving the confirmation supported by private number to the effect of setting, clamping and padlocking of the siding take off point, shall take off concerned

shunt signals or handover an authority on form No.T-806 (shunting authority) to the Loco pilot of the train through the guard of the train. SS/SM on duty shall advise the TPM at the goomty to show proceed hand signal. After safe passage of the pilot past the take of point, TPM on duty shall normalize the point, transmit back the key to panel through RKT. While returning also pilot shall stop at the STOP BOARD in rear of the take off point and shall obey the aspect of shunt signal No.19 as and when it is taken off or otherwise the specific instructions received from the SS/SM on duty at RRI Cabin.

The Guard of the pilot, immediately after placement of the rake in the siding, shall make necessary entries of the timings of placement etc., in the register maintained for the purpose by the siding holder. Similarly entries of clearance of the rake shall be recorded in the register while clearing from the siding.

Lever Number	Description
Lever No. 1	Siding control key of RRI Cabin of SCMN.
Lever No. 2	Lock bar on crossover No.3 at South end.
Lever No. 3	Crossover point connecting UP Main Line to ANCC siding.
Lever No. 4	Lock bar on crossover No.3 at North end.

The levers can be released by insertion and unlocking with a Key 'P' released from RKT at Goomty when push button No- 104 on RRI Board is pressed.

When button No.104 in its "Reverse" position on the operating panel at Simhachalam North RRI Cabin all reception signals of UP Line SCMN towards HWH end of the yard will be locked in "Normal" position.

The return pilot will stop short of the stop board near ground lever frame goomty. The guard working the pilot will inform the PM, about the readiness of the pilot. The PM will inform the SS on duty RRI who in turn arrange the reception of the pilot in consultation with SCR on duty and nominate a clear line on to which the pilot is

consultation with SCR on duty and nominate a clear line on to which the pilot is intended to be received.

The field PM after complying with the instructions given by the SS/ on duty RRI Cabin, set and lock the route nominated line, release the key to the ANCC ground lever frame goomty for the pilot admission on getting confirmation of setting the siding point from the points Man, SS/RRI Cabin shall take off Shunt Signal admission into yard. The transaction between SS/ RRI Cabin and PM shall be supported by Private Number.

After the safe passage of pilot over the crossover No.3 at goomty and entering into the UP line/nominated line the points will be normalized by the TPM and the Control key from the goornity will be transmitted back to the RRI Cabin through RKT. Normally pilot movement should not be permitted when an UP train is on line clear or in the section. Such movement if necessary can only be permitted after the SS/ RRI Cabin on duty satisfying himself that the said UP train has come to stop at the first stop signal.

No shunting to be permitted inside the factory by the pilot engine except dropping of the inward loads and clearing of the outward loads in one hook. Not more than one pilot shall be allowed to work into the factory at a time.

38.0 TOWER WAGON SIDING:

The Tower wagon siding takes off from KK Line towards Block Hut side of the yard. The Tower wagon siding point No. 150 to be operated from the panel to set the route for placement or drawn out the Tower Wagon. When the point is set towards Tower wagon siding the UP reception and Downdespatch signals of KK Line will held locked.

39.0 i) HOT AXLE SIDING /SUB-STATION SIDING:

The Hot Axle siding is takes off from Line No. 1 at VSKP end of the yard. Hand plunger lock is fitted at entrance point and the corresponding derailing switch is operated by an Arc lever fitted at site. The Hot Axle siding point key will be released at site, on pressing push button No. 131 (Colour Green) and group slot button (GSB) from RRI Panel. The key, which is released from RKT to be carried manually to the site and operate the point for placement or drawn out any vehicle. When the key is extracted from RKT reception and dispatch signals for Line No.1 is held locked. The Hot Axle siding is having CSL of 60 M. A sub-station siding is takes off from the hot axle siding and terminated as dead end. The sub-station siding is operated by a hand point fixed at site. The sub-station siding having CSL of 50 M.

ii) HOT AXLE SIDING :

A hot axle siding takes off from goods stabling siding having both sides entry. It is isolated by means of DS at either end. The entrance points of DS are hand operated by Arc lever provided at site. The points are locked by means of clamping and padlock during shunting operations.

iii) SCM Siding

SCM siding takes 'OFF' from E.Co.Rlydespatch line at South end (ELS/Block hut end). The entry to & from siding is authorised by Shunt signals interlocked with yard signal of KK grid line No 6, or 7 or 8.

The siding has 2 supurs which terminates into a dead end at GPT end.

The Main Spur CSR 905.6M

And

The Loop Spur CSR 275 M(DS to DE)

The loop spur takes 'off' from main spur near the SCM station foot over bridge and is hand operated locally at site.

When the movement is not covered by taking 'OFF' shunt signal due to failure or due to any other reason the points facing & trailing must be clamped and pad locked before allowing any movement, the operating staff in charge of shunting operation shall ensure the same and confirm to the SM RRI supported by a private number through paging & talk back or VHF set if provided. The authority for shunting in such case shall be on form. T/806 the details of work to be done in siding shall also be written in the shunting order.

40. **SIGNAL REPLACEMENT AND CANCELLATION OF A ROUTE ALREADY SET:**

Once a signal is taken off it should not be put back to "ON" position unless absolutely required. For this, the signal button concerned and the emergency signal group button EGGN should be pressed simultaneously. This operation will make the signal to assume 'ON' aspect while the route is still held and the three button emergency route cancellation processes must be initiated for cancelling the route already set. Refer to the following Para.

41.0 **CANCELLATION OF A ROUTE:**

If, after setting of the whole route and taking off the signal concerned, the route is to be altered the signal concerned must first be put back to "ON". If there is a train on the approach track or the signal is provided with dead approach locking the subject route gets released only after count-down of 120seconds after the signal is put back to "ON". Then route can be cancelled by three buttons cancellation.

The countdown of 120 seconds time interval is indicated by flashing white light on the approach lock indicator provided at the foot of the corresponding signal symbol on the indication panel. After the interval 120 seconds a steady white light appears and the flashing light ceases. The panel SS/SM should press the signal button and the emergency button EUUYN, keeping the signal button still pressed on, he should press the relevant route button. This operation will release the whole route and this will be indicated by extinguishing of the concern route lights on the panel. However, if the approach track of the signal is not free the cancellation cannot be done immediately. In both cases this cancellation operation is counted electrically on the digital counter. The transaction along with the time and reasons and the number registered on the counter should be recorded in a register specially kept for the purpose.

42.0 **REPLACEMENT OF 'CALLING-ON-SIGNAL TO 'ON' POSITION:**

After taking off a Calling-on-Signal if the same is to be put back to "ON position, the signal button concerned" (GN) and the emergency signal group button (EGGN) should be pressed simultaneously. In this case, also the route that was originally set and locked by the process of clearance of the signal is to be cancelled in accordance with instructions contained in the route cancellation Para mentioned above.

43. **ROUTE INDICATORS:**

a) The Signal No.S16, S32, S36 on North end and S25 on South end are provided with stencil type route indicators and are provided above the respective signals in the form of the rectangular box pattern fitted with a transparent sheet as affront cover plate. The stencil type route indicator will indicate the concerned route by means of illuminated letter (KK/M) as the case may be.

b)

The signal No. S1, S3, S9, S12, S15, SI 7.S21 &S34 on North end and S27. S29, S43, S45, S47, S49. S51. S52. S53, S62, S66, S68, S73, S78, S80, S84 and S86 on South end are provided with directional type route indicators. Directional type route indicators are provided in the form of 5 lunner white lights above the respective signals at varying degrees from the vertical to the left or to the right side of the driver. In case of more than one such route indicators on the same side the top most corresponds to the first loop and other for subsequent loops in the regular order of sequence.

44.0 **FORMATS FOR VARIOUS EMERGENCY OPERATIONS****FORMAT (a) FOR EMERGENCY SUB-SECTION ROUTE RELEASE:**

Date & Time	Route Section	Counter Number		Remarks	Signature	
		Before Release	After Release		On duty SS/SM RRI	On duty SSE (Sig)/ SE (Sig)/RRI

FORMAT (b) FOR EMERGENCY OVER LAP RELEASE.

Date & Time	Overlap route button No.	Counter Number		Remarks	Signature	
		Before Release	After Release		On duty SS/SM RRI	On duty SSE (Sig)/ SE (Sig)/RRI

FORMAT (c) FOR EMERGENCY POINT OPERATION:

Date & Time	Time of operation	Counter Number		Track circuit No failed.	Signature	
		Before Operation	After Operation		On duty Dy.SS RRI	

FORMATE (d) FOR EMERGENCY FULL ROUTE CANCELLATION:

Date & Time	Time of operation	Counter Number		Route cancelled	Reason for cancellation	Signature
		Before Operation	After Operation			On duty Dy.SS RRI

45. **EMERGENCY CRANK HANDLE INTERLOCKING:**

Except the mechanically operated points which are duly controlled by the Route Relay Cabin, all points in Simhachalam North Yard are operated through electrical point machine provided at site. These are remotely controlled and operated from Route Relay Cabin normally. Whenever there is a failure of a power-operated point, it should be crank handled at site. For this purpose, it is necessary to insert aperture with the help of the concerned and associated control key. Unless this aperture is opened by the operation of the controlling key the emergency crank handle cannot be inserted in the motor and operated to set the points. This control key will remain held on the point motor while it is being operated by the emergency crank handle. After the point is set and the crank handle is removed, the control key can be extracted and in that process the crank handle-inserting aperture gets closed and locked automatically.

The crank handle interlocking key is inserted in the crank handle interlocking box housed in the location/goomty and turned anti-clockwise when, it gets locked. This key cannot be extracted from the box unless the control for releasing the key is transmitted from the Route Relay Cabin when the release control is transmitted from the Route Relay Cabin a white indication appears just below the key. After obtaining the above indication the RED button below the key must be pressed and the key must be turned clockwise and extracted simultaneously. One/Two/Three controlling keys are provided in each box with individual indication and button below the respective key.

Inter locking has been provided between signals and emergency crankhandle control keys in such a way that the points which controls and once the crank handle key is extracted it is not possible to set the route and clear the signal/signals reading over that point/points till such time the key is restored back to its box. For the purpose of facilitation & flexibility and quick reach of the emergency crank handle the crank handle keys have been provided in different groups at different areas in the Yard.

Zone	Crank Handle controlling key combinations Nos.	Controlled Point Nos.	Location
NORTH	CH 15	123	CH GOOMTY
	CH 16	121,122,125	
	CH 17	110,111,112,113	CH GOOMTY
	CH 18	114	
	CH 19	115,116	
	CH 20	109	
	CH 21	127	

	CH 22	107	CH GOOMTY
	CH 23	105, 106	
	CH 24	103	CH GOOMTY
	CH 25	102	
	CH 26	101	
SOUTH	CH 1	161	CH GOOMTY
	CH 2	160,162	
	CH 3	158,159	
	CH 4	147, 148, 150	CH GOOMTY
	CH 9	145, 146, 143	
	CH 11	144	
	CH 12	Spare	
	CH 5	153	CH GOOMTY
	CH 6	152	
	CH 7	149	
	CH 8	138, 139, 140	CH GOOMTY
	CH 10	132, 133	
	CH 13	130	CH GOOMTY
	CH 14	129	

One crank handle is kept in a pad locked box kept at each of the above places and the keys of this padlock after locking the crank handle shall remain in the personal custody of the Station Master RRI.

The crank Handle along with the concerned controlling key can be handled only by the concerned field SM and the S&T maintenance staff as per the instruction of the Cabin Station Master. It is the personal responsibility of the field SM/ Station Master to ensure that as soon as the required manual operation of the point /points in his zone are completed, the crank handle is restored to the padlocked box and the box properly pad locked and that the crank handle control key is also returned to the respective crank handle interlocking box and transmitted to the Route Relay Cabin expeditiously

It will be seen from the above table that, in all there are nine groupings covering all the power-operated points in Simhachalam North yard. Control keys have special arrangements of configuration for each group and the point machines of the corresponding group have a matching configuration at the key hole permitting the entry of the key meant only for the particular set of points in that group. The detailed procedure of the emergency crank handle operation of points at different zone are given below:

46. **POINT ON SOUTH AND NORTH ZONE:**

The concerned field Points man(PM) shall exchange private number with the Station Master from the respective zones (South /North) giving his identification. The Private Number shall be recorded in the crank handle register. The Station Master should then release the concerned crank handle controlling key. The Panel Station Master should release the control by pressing the concerned crank handle button and the crank handle group button (CHRB). The release of CHNB the control is indicated by flashing WHITE indication on the panel near the crank handle button.

At site on the concerned crank handle-interlocking box, the RED indication appears below the key. The field PM should then press the RED button below that key and extract the key from the box. The extraction of the key is indicated on the Route Relay Panel by flashing RED indication.

The point/points is/are then operated with the help of the emergency crank handle taken out by the field PM from the pad locked box in the goomty/gate lodge after opening the aperture in the point machine with the help of the controlling key by the field PM at site and set to the desired position, clamped and pad locked both facing and trailing and the keys of the pad lock shall be in the personal custody of the field PM after which the field PM shall restore the controlling key to its original place in the crank handle interlocking box (after locking the crank handle in its box) and turned clockwise.

Restoration of the controlling key back in its place is indicated by turning of the flashing 'RED' indication into steady 'RED' with flashing 'WHITE' indication. The panel operator should then withdraw the released control by pressing the crank handle button and the CHNB. The steady RED indication disappears and steady WHITE indication appears indicating the normal condition. The WHITE indication on the crank handle interlocked box at site also disappears.

When the control has been withdrawn the field PM should advise the Station Master communicating a Private Number assuring him that the desired point/points has been operated to the required position as ordered by Station Master, set correctly, clamped and padlocked in their proper position and the control is returned. The private number given by the field SM shall be recorded in the crank handle register.

The Station Master on duty, after ensuring the correct setting of defective points shall verify from the visual indication available on the panel that all the points on the route are set to the desired position and shall instruct the Panel Station Master to take off the concerned signal for movement of train over the said point/points.

If the correct setting of the defective points in the desired position is not indicated on the panel, the train shall be piloted IN/OUT in terms of Subsidiary rules No.3.69.01, 3.69.02, 3.69.03, 3.70.01 and 3.70.02.

The route once set and locked for receiving or dispatch a train shall not be interfered with unless the said movement is completed or cancelled and expressly so directed by the Station Master.

Whenever the crank handle is required to be used by a signal official for maintenance work or for attending failure, the signal official must give disconnection memo (SI-4) to the Station Master on duty. After making necessary entries in the crank handle register, the Station Master shall obtain the acknowledgement of the signal official in the crank handle register and then release the concerned crank handle controlling key to the signal official.

The concerned point/points shall be treated as defective till the emergency crank handle controlling key is restored to its normal place and control is withdrawn by the Panel Station Master.

Before parting/releasing control with the emergency crank handle for maintenance work by signal official, the Station Master shall ensure that the reception/departure signals for effected line/lines are at "ON" position. The points as the effected line should be treated as non-interlocked and the Station Master should instruct the concerned field PM for setting clamping and padlocking the facing and trailing points over which the train is to pass and such assurance is taken by the Station Master from the field PM supported by Private Number before piloting IN/OUT of trains over the affected points as per GR 3.69, 3.70, 5.09 and SR's thereto.

An emergency crank handle register is to be maintained in the Route Relay Cabin with the following proforma by on duty Station Master of Route Relay Cabin wherein the particulars of usage of the emergency crank handle must be recorded.

- i) Date.
- ii) Point No, which failed or required to be tested.
- iii) Time of failure.
- iv) Disconnection Memo No. received from S&T staff.
- v) Points controlling key No. released from Route Relay Cabin.
- vi) Time when release was given.
- vii) Private Number/ signature assuring correct setting, clamping and padlocking of the concerned points.
- viii) Private Number or signature of the official to whom the controlling key is released.
- ix) Date and time fault rectified.
- x) Time when controlling key release withdrawn by Panel Station Master.
- xi) Signature and designation of official who rectified the fault.
- xii) Remarks.

When point become defective the Cabin Station Master must comply with GR 3.51, 3.77, 5.10 and SR's thereto and he must notify all concerned promptly for speedy restoration.

When interlocking fails all the effect points on a route, both facing and trailing points must be clamped and padlocked before allowing any movements over the affected points.

For use of Crank Handle for motor operated point refer to rule No.2.19 of Operating Manual also.

47.0 INTERLOCKING BETWEEN SIGNAL AND BLOCK INSTRUMENTS

1) LAST STOP SIGNAL CONTROL:

- a) The Block working of UP and Down line section SCMN-PDT, SCMN-"A" Cabin WMY & SCMN & ELS Block hut are controlled with the provision of double line Lock and Block Instruments (SGE type) and are provided at Route Relay Cabin. The Down Advanced starter signal No. S 4(towards PDT) and Advanced Starter signal No. S 61 (towards "A" Cabin WMY) are interlocked with the respective Lock and Block Instrument, in such a way that the UP/Down Advanced starter signal can not be taken off unless the line clear is obtained from the block station in advance with the needle of the concerned block instruments is in the "Line Clear" position.
- b) The block working of the following single line sections SCMN-PDT (KK and middle line), SCMN-Block Hut, SCMN-CONCOR CABIN on VSP Line I, SCMN-CONCOR CABIN on VSP Line II are controlled with the provision of Token-less Block Instrument (Handle type) and are provided at Route Relay Cabin. The Advanced starter signals of the single line sections are interlocked with the respective Token-less block Instrument in such a way that the an Advanced starter signals cannot be taken off unless the line clear is obtained from the block station in advance and the handle of the Token-less block instrument is turned to "TGT" position.

The concerned Advanced starter signal aspect will be changed from "OFF" aspect to "ON" aspect as soon as the leading pair of the train wheels occupies the concerned Advanced starter signal replacement track circuit provided a head of the respective signal, for both double line & single line.

2) BLOCK RELEASE

- a) The block instruments are restored to normal (Line Closed condition) only after the complete arrival of the train past the block overlap a head of the respective Home signal on either side of the SCMN yard.
- b) Failure to turn the commutator of DLBI at the receiving station to "Train on Line" position as soon as the train has entered the block section may result in the failure of the block working.
- c) It is possible to restore the last stop signal of station in rear to "ON" position by receiving station by turning the commutator of DLBI "Train on Line" position in case of emergency.
- d) All the power signaling installations in the Simhachalam North yard are centrally controlled from the Route Relay Cabin and it is explicit in this arrangement that the complete arrival of a train into the yard from the block section can not be vouched by the operating personnel in the centrally located Route Relay Cabin and in order to ensure complete arrival of the incoming train. Axle Counters are provided between SCMN-PDT (KK Line), PDT- SCMN (UP Line), SCMN-Block Hut (E.Co.Rly. Goods Dispatch), SCMN-Block Hut (KK Line), SCMN-Concor cabin (VSP Line I) and SCMN-Concor cabin (VSP Line II) and (SCMN-GPT) main & By pass line in both UP & DN directions of the SCMN Yard. Thus the Axle Counters provided at the end of the Block Overlap ahead of the signal to ensures complete arrival of the incoming trains.
- e) In the event of failure of Axle Counter block working of the section concerned is to be suspended. Line clear Station Master shall not normalise the commutator of the concerned block instrument to " Line Closed" position and shall not Despatch "Train out of block section" report to the station in rear until he is satisfied by seeing the last vehicle indicator on the last vehicle of the incoming train (after arrival) of which Axle Counters failed or obtaining the complete arrival certificate from the Guard of the train, or by a competent Railway servant who was deputed to confirm the same in case of train with out guard.

- f) After satisfying as above, line clear Station Master should obtain permission of Station Master in rear concerned as the case may be for resetting the Axle Counter. The button of the Axle Counter reset unit should be pressed and released the same after "Permission granted" indication in Yellow appears in the reset unit. At the same time "Permission Received" indication in Yellow appears on the reset unit concerned in Route Relay Cabin/Simhachalam North.

Line clear Station Master in Route Relay Cabin should, then unlock and press SMs reset button on the reset unit concerned after which "Permission granted" indication on the reset unit of the station in rear and "Permission received" indication in Route Relay Cabin disappears and Axle Counters will be reset and "Axle Counter Section Clear" indication in Green appears on the reset unit at Route Relay Cabin. Also the counter of the reset unit registers next higher number which should be recorded in Train Signaling Register. Number of the resetting counter of LVCD.(Axle counter) for each re-set should be recorded in a separate counter register by the SM/RRI in addition to recording in TSR. The line clear Station Master may then normalize the commutator of the block instrument to "Line Closed Position" and Despatch "Train out of block section" report to the station in rear.

- g) In case the Axle Counters are not reset by above operation "Section Occupied" indication in Red will continue to appear on the reset unit concerned in Route Relay Cabin. On duty SE(S)/ Route Relay Cabin should be promptly advised to rectify the Axle Counter failure.

- h) Until the failure of Axle Counter is rectified by signal staff the following procedure should be adopted to check the complete arrival of train and to normalize the commutator of the block instrument concerned. During the failure of Axle Counters line clear Station Master should depute a senior points man with a Private Number book to the Guard of the train for checking and taking the "intact" of complete arrival of trains.
- i) When the failure of Axle counters is rectified by the signal staff. Line Clear Station Master should re-set the Axle Counters in co-operation with the Station Master in rear as explained in the foregoing pares. Then the points man in the goomty on being unlocked and advised by Line Clear Station Master should extract the key from RKT2 by pressing the push button and insert in RKT1 and operate the same. Then the study Yellow indication on the right side of LVVYN button on the control panel starts flashing. The Panel Station Master should withdraw the control by pressing LVVYN button concerned and GSRB button. Simultaneously Line Clear Station Master should also press the acknowledge button. Then the flashing indication ceases and steady Yellow indication on the left side appears indication that the Axle Counter is re-set and normal working is resumed.

NOTE:

The same procedure to be adopted for Motor trolleys working in case of Axle Counter failure

49 Reset process of last vehicle check device system.

Last vehicle check device resetting system is installed in RRI building. Last vehicle check device is provided between SCMN -CONCOR CABIN on VSP line No.1&2only.

This system has three indication lamps as red for suggesting the Station Master on duty that the block section is not clear or the system has failed and Green indication for suggesting the station Master on duty that the block section is clear.

In the event of Red indication continues even after the complete arrival of the train, the resetting procedure of LVCD is to be resorted to-Before resetting of the system, the Station Master on duty shall verify the completeness of the train by verifying last vehicle indication for run through trains or by sending train complete arrival register to the Guard of the train and ascertaining certification from the Guard in the train complete arrival register for stopping trains. Guard shall not sign the register unless he verifies the last vehicle indicator of his train and train is standing clear of the fouling mark,

TPM/TP whoever goes for ascertaining complete arrival, shall also verify the last vehicle indicator and that the train is standing clear of fouling mark shall repeat to the station Master on duty the complete arrival of the train supported by Private number through goomty phone or shall deposit back the complete arrival register to the station Master on duty whichever is earlier.

After ascertaining complete arrival of the train as above, the resetting process shall be resorted to

For resetting of the system, Station Master on duty shall advise the Station Master on duty at CONCOR CABIN the complete arrival of the train supported by Private number and also advise to co-ordinate resetting as follows.

- i) At both the stations concerned i.e. SCMN&CONCOR CABIN will insert SM's reset key, press and turn.
- ii) Thereby 'preparatory'(PREP) reset indication appears at both the stations on reset box.

After completion of both the operations as above, the first train on the effected section shall be piloted at either of the stations. Subsequent to piloting, the system shall resume.

50. Resetting procedure of HASSDAC between SCMN-GPT Main line & Bypass line:-

HASSDAC is provided between SCMN-GPT main line and Bypass line in both UP & DN directions. If the system fails i.e., when occupied (RED LED) lits, then manual resetting of axle counter procedure are to be followed.

After complete arrival of train, if the Last vehicle axle counter of the does not clear or Last vehicle Axle counter section free indication and Green does not appear in the panel, The receiving station SM shall apprise 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 whether the last train that entered into the section has arrived or not. And, if arrived fully shall so intimate authenticated by exchanging private number with the sending station.

The status of the section LVCD i.e. Clear (Green) occupied (RED), preparatory reset (Green) and power on the indications (white) are provided in the reset box.

The procedure to be followed for resetting by both of sending end and receiving end individually is as follows.

On being advised by SM of SCMN station, SM of GPT station inserts the key in the Reset Box, turns right and presses both the key and the Push Button (RED) simultaneously with the SM of SCMN. The Counter on the Reset Box at SCMN station and GPT station registers the next higher number and after five seconds miniature green preparatory Reset indication appears on the Reset Box both at GPT and SCMN. The step by the step procedure shall be followed as given in “b” to “i”.

- (i) SM SCMN station & SM GPT station shall then insert SM's LV reset key and turn right.
- (ii) Press LV reset button provided on the panel.
- (iii) Release SM's LV reset key and remove it.
- (iv) The system obtains preparatory reset state and preparatory reset indication (Green) glows on the panel. The counter reading increases by one count after a gap of 5 seconds approximately.
- (v) The counter reading should be recorded.
- (vi) One train is to be piloted in the section to make the system normal.
- (vii) The SM on duty shall record it in the Trains Signal Register indicating the resetting operations in detail i.e. train number, time private number exchanged with SM of sending station and giving reasons for the resetting operations.
- (viii) If the axle counters functioning properly now, then block section cleared indication “G” will appear on the panel and the concerned Block working will normalized.
- (ix) If the LV 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.

51 TRACK CIRCUITS:

Line No.1,2,3,4,5,6,7,8,10,11,12 and 13 are track circuited. In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in all the directions are also provided. For Calling-on signals (7 Rail length) track circuits are also provided in rear of the Home signals in all directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited. Indications for the above track circuits are available on Indication Panel at SS/SM's office. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel at SS/SM's office. When a signal is cleared the route indication ' Yellow ' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.

52 **AXLE COUNTER:**

- (i) Simhachalam North - Pendurti (KK Line, Middle Line & Dn line).
- (ii) Pendurti-Simhachalam North (UP Line, Middle line. & KK Line)
- (iii) Simhachalam North- ELS Block Hut (E.Co.Rly Goods Despatch & reception).
- (iv) Simhachalam North – ELS Block Hut (KK Line Single line).
- (v) Simhachalam North – Concor siding cabin (VSP Line No. 1 Single Line).
- (vi) Simhachalam North - Concor siding cabin (VSP Line No.2 Single Line).
- (vii) Simhachalam North – WAT MYD (A-Cabin)
- (viii) SCMN-GPT DN Main Line.
- (ix) SCMN-GPT UP Main Line.
- (x) SCMN-GPT Bypass Line (UP line)
- (xi) SCMN-GPT Bypass Line (DN line)

For Section SCMN-GPT(Main Line)

High Availability Single Section digital Axle counters (HASSDAC) are provided between SCMN-GPT Main line on both UP & DN lines for monitoring clearance/ Occupancy of the block section for verification of last vehicle (LVCD). The total block section is divided in to one axle counter track circuit on both UP & DN lines 32XT (GPT) and 63XT (SCMN) respectively.

For Section SCMN-GPT(Bypass Line)

High Availability Single Section digital Axle counters (HASSDAC) are provided SCMN-GPT bypass line on both UP & DN lines for monitoring clearance/ Occupancy of the block section for verification of last vehicle (LVCD) . The total block section is divided in to one

axle counter track circuit on both UP & DN lines 71XT (SCMN) and 21XT (GPT) respectively.

FOR SEC: SCMN-PDT:- 4 pairs of Digital axle counter are provided between SCMN-PDT on Up line, Dn line, Middle line and KK line.

FOR SEC: SCMN-CONCOR CABIN: 2 pair of digital axle counters are provided on VSP line No.1 and VSP line No.2.

FOR SEC: SCMN-WAT MYD(A-Cabin): 1 pair of digital axle counters are provided on E Co Rly goods reception and dispatch line.

The position of the Block section whether cleared or occupied are reflected in the Panel 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 last vehicle has arrived complete at the receiving station by exchanging Private Number then resetting to be complied with.(Details of resetting procedure given in APPENDIX-'B' of this SWR).

NOTE:

Before taking off reception and dispatch signals for Up and Down directions the SS/SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The indication of track will exhibit Red Light when track is occupied and White light when track is clear. There will be no track indication when any route is not set.

APPENDIX 'C'

Rules for Working of Anti-collision Device (RakshaKavach)

-NIL-

APPENDIX'D'**DUTIES TO BE PERFORMED BY THE STAFF:****1.0 STATION MASTER (IN CHARGE):**

- i) He is responsible for trains passing during his shift.
- ii) He is responsible for the general and satisfactory working of the station and for the efficient discharge of duties by staff working under him.
- iii) He shall keep all Rule books, Registers, Files and documents neat and up to date.
- iv) He shall ensure that all equipment, apparatus, and instruments including signaling and interlocking gears and fittings are kept clean and oiled by S&T officials.
- v) His special attention is drawn to Chapter-II of G&SR and GR 5.01 to 5.08 with relevant SRs and O.M. Chapter-2. He shall follow the instructions laid down in SR.3.68.01 (c) and (d) and SR 14.07.01 and B.W.M.2.09 (e).
- vi) He shall promptly attend to accidents and report them.
- vii) He shall supervise the work of safe working staff and conduct night inspections and report lapses of staff working under him.

2.0 STATION MASTER (Block/Log) & (Panel):

- i) He is responsible for trains passing during his shift.
- ii) He shall promptly bring to the notice of SM incharge all irregularities and accidents in course of his shift duties.
- iii) During the absence of SM I/C, the duties of the Station Master will devolve on him.
- iv) He shall follow SR 3.68.01(c) and (d) SR 14.07.1 and OM Chapter-2 (2.02)(d) & (e).
- v) His special attention is drawn to Chapter-2 of G&SR 1976 and GR 5.01 to 5.08 with relevant SRs.
- vi) As an assistant to SM I/C, he shall carry out the instructions given from time to time.

3.0 TRAFFIC POINTS MAN :

- i. He shall work under the orders SM on duty.
- ii. He shall couple and uncouple vehicles under the supervision of SM.
- iii. He shall watch and guard the packages and other Railway property lying in the

Station premises.

- iv. He shall report any irregularities coming to his notice.
- v. He shall do loading and unloading of parcels, smalls and Guard's boxes. He shall do piloting IN and OUT.
- vi. He shall deliver any official message to the proper person/office. He shall carry out any other duties entrusted to him by the SM on duty.
- vii. He shall follow OM Chapter-2(f).

4.0 TRAFFIC GATE MAN:

- i. He is responsible to operate L.C. Gate at his end.
- ii. He shall attend to the call of SM on duty and do the work entrusted by the SM on duty connected to gate operation.
- iii. He shall promptly report any abnormality to SM on duty.
- iv. He shall also protect the gate when required as given in gate working rules.
- v. He shall do all necessary functions related to gate working as stated in gate working rules.
- vi. He shall follow OM Chapter-2(g).

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

APPENDIX 'E'**ESSENTIAL EQUIPMENT**

List of essential equipment should be is given displayed at the station as per operating manual 11.15.

<u>Sl.No</u>	<u>Description</u>	<u>Station</u>
1	Detonators	20
2	LED based Tri Colour flashing torch.	5(2 Spare)
3	Hand Signal Flags	5(2 Spare)
4	Safety chains with Pad locks	18
5	Clamps with Padlocks	40
6	Skids	12
7	Wedges	4
8	Fire & Sand buckets	6
9	Fire Extinguishers	4
10	Line blocking collars	12
11	Motor trolley on line board	2
12	Block suspension board	4

APPENDIX 'F'

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

1.1 Working of DK station , IBS , IBH & Out Lying Siding

Nil

1.2 Working of Halts (Flag Station)

- i) Simhachalam passenger halt is situated between Gopalpatnam RRI cabin and Simhachalam North Station
- ii) A Number of passenger and express train are given with stoppage at the station for entraining and detain passengers.
- iii) The working guard & loco pilot of the trains (provided with stoppage at the station as per working time table) are responsible to stop and start the train as per schedule halt time ensuring safe entraining & detraining of passengers.

APPENDIX – ‘G’ TO STATION WORKING RULES OF SIMHACHALAM NORTH

Details of the working train on 25 KVAC traction of SCMN Station.