

# SIGNALLING AND TELECOMMUNICATION

## 1.1 Signalling

Route	Section	Route Km	No. of Stations	Block working	RRI/ PANEL	EI	Standard of interlocking	Interlocked Gates
A	AGC-PWL	137.40	16 + 47RHs/LSC	Automatic	1+2	14 stns + 12 LSCs	4-R	40
	AGC-DHO	53	4 + 4IBH	IBH	1	3 + 3 LCs	3-R	15
B	AF-BKI	148.5	17	Absolute	14	3	2-R	24
D Spl	JAB-TDL	20.36	04	Absolute	0	4	2-R	02
	MTJ-AH	35.0	03	Absolute	3	0	2-R	03
D	IDH-BXN	107.18	07	Absolute	7	0	2-R	15
E	MTJ-AWR	123.35	14	Absolute	0	14	2-R	10
	JAB-RKM	4.30	01	Absolute	0	1	2-R	0
	BHA-ETW	114.7	04	Absolute	1	3	2-R	0
	Total	743.79	70 Stns + 51RHs/LSC/IBH		29	42 stns + 12 LSC + 3 LCs		109

## 1.2 LC Gates

Route	Section	No. of Gates	
		Interlocked	Traffic / Engg
A	AGC – PWL	40	11/29
	AGC-DHO	15	7/8
B	AF – BKI	24	15/9
D Spl	JAB – TDL	02	1/1
	MTJ – AH	03	3/0
D	IDH – BXN	15	8/7
E	MTJ – AWR	10	9/1
	BHA-UDMR	00	-
	JAB-RKM	00	-

	<b>NG</b>	<b>00</b>	<b>-</b>
	<b>Total</b>	<b>109</b>	<b>109</b>

## **2.1 TELECOMMUNICATION**

### **2.1.1 Control Circuits**

<b>S. No.</b>	<b>Section</b>	<b>Media</b>
1	DHO-AGC	OFC
2	AGC-FAR	OFC
3	IDH-BXN	OFC
4	BHA-UDMR	OFC
5	MTJ-FAR	OFC
6	MTJ-PWL	OFC
7	MTJ-AWR	OFC
8	MTJ-AH	OFC

### **2.1.2 TELEPHONE EXCHANGES**

<b>Sr. No.</b>	<b>Station</b>	<b>Year of Installation</b>	<b>Type of Exchange</b>	<b>Capacity</b>	<b>Total No. in use</b>
1.	AGC	2016	CORAL 4000	2000	1200
2.	AGC	2006	Ericsson BP 250 Intercom	256	124
3.	DHO	2004	C-DOT/ITI	256	56
4.	AF	2006	SIGMA INDX 2000(BPL)	480	60
5.	AH	2018	CORAL	128	40
6.	BAD	2017	CLIXXO	512	70
7.	MTJ	2006	IRIS IVDX	1024	330
8.	KSV	2018	CORAL DX 2000	256	45
9.	IDH	2018	CORAL	128	50
10.	NDLS	2010	NIFTY (Intercom)	28+4	10
11.	BINR	2018	CORAL DX2000	256	30

### 2.1.3 PASSENGER AMENITIES

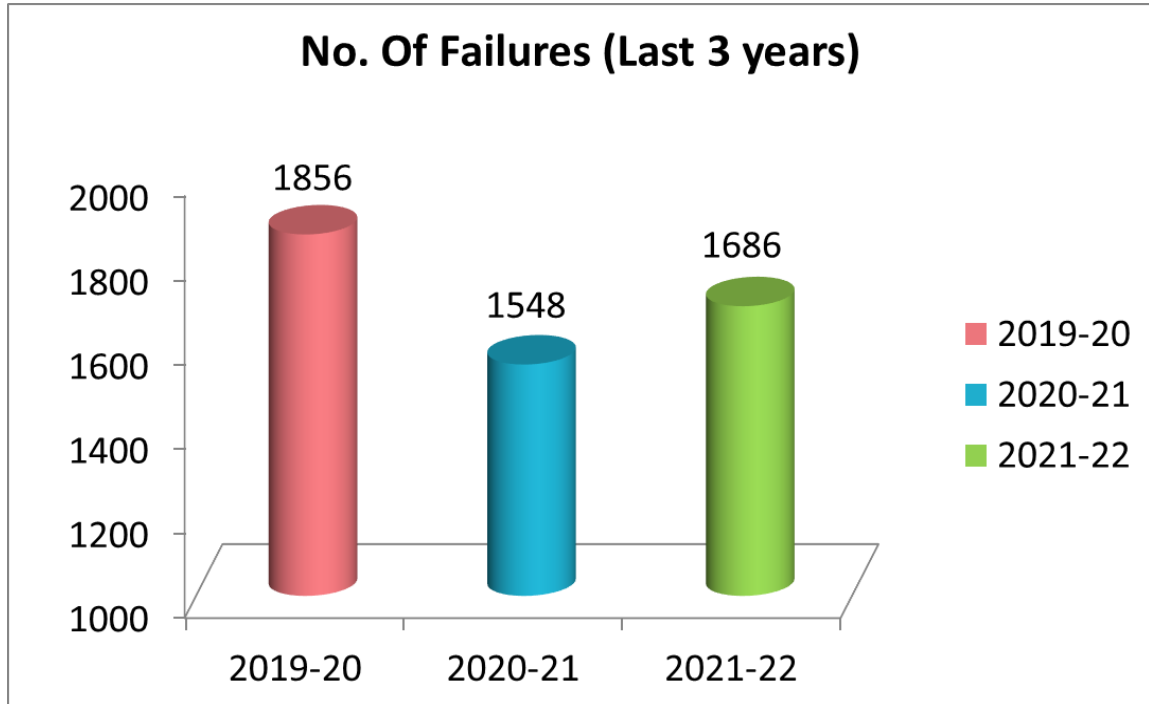
Sr. No.	Description of Amenities	Section	Total No. of stations	Name of Station
1	Computerized PA System	DHO-PWL	17	DHO, BHA, MIA, JJ, BFP, RNKA, FAR, BAD, VRBD, CHJ, SHLK, HDL, AGC, RKM, MTJ, BTSR, RDE
		TDL-BKI	4	AF, IDH, AH, NBI
		IDH-BXN	2	FTS, KLB
2	Coach guidance system	DHO-PWL	4	DHO, AGC, MTJ, RKM
		TDL-BKI	1	AF
3	Conventional PA System	DHO-PWL	21	All stations, and BDB
		IDH-BXN	7	All stations
		MTJ-AH	2	BSA, PRK
		MTJ-AWR	14	All stations
		TDL-BKI	21	All stations, and AGA
		BHA-ETW	4	All stations
		DHO-SRMT	4	All Stations
4	CCTV		5	RKM, AGC, MTJ, KSV, AF
5	Digital clocks/Clocks	DIVISION	73	All Stations
6	LCD Train information display boards	DHO-PWL	2	AGC, MTJ
7	Train Display board	DHO-PWL	4	DHO, AGC, RKM, MTJ
		TDL-BKI	1	AF
8	PRS/UTS	DIVISION	70	All stations except BARS, MHF, and SHGN
10	WiFi System	DIVISION	66	All stations except BARS, SHGN, BDB, BARI, SRMT, TPO

### 3.0 Proposals for Creation of Posts

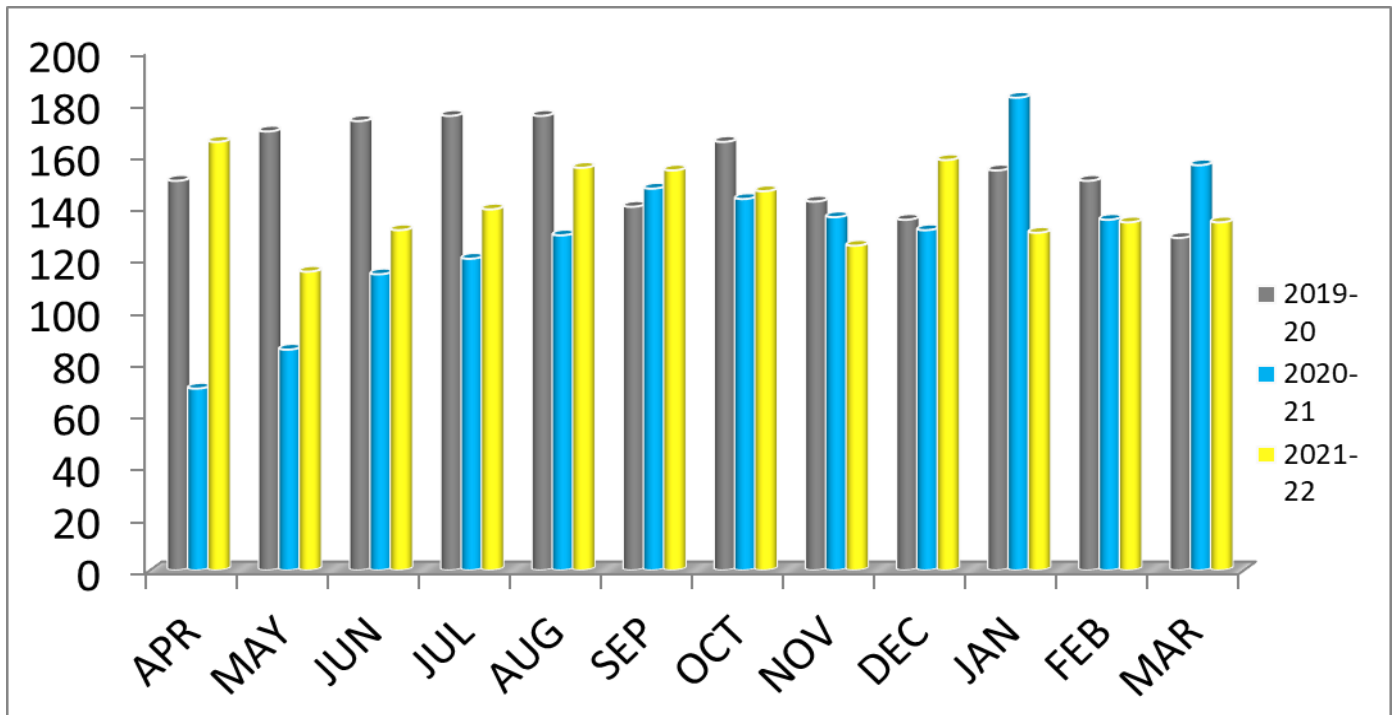
Sr. No.	Description of Proposal	Ref vide which proposal sent to HQ	No. of Posts
<b>(A)</b>	<b>Against newly created assets</b>		
1.	For 3 <sup>rd</sup> line in PWL – BTSR section	Agra/N/103/S&T/Creation of posts dated 18.06.2008	123
2.	MTJ-PWL 4 <sup>th</sup> line	P/Agra/EG/-17 dt. 22.12.2017	151
3.	For SSI in Agra Cantt.	Agra/S&T/P/Srijan/23/15 dt. 02.02.2015	23
	<b>Total (A)</b>		<b>297</b>
<b>(B)</b>	<b>As per New yardstick</b>		
1.	For maintenance of 165 signalling gears in MTJ-AWR section as per Rly board 's New Yard Stick dt. 16/18.08.2010	P/Agra/EG/S&T/Srijan/13 dt. 17.10.2013	138
2.	For maintenance of 165 signalling gears	P/Agra/EG/Srijan/S&T -729/12 dt.	729

	as per Rly board 's New Yard Stick dt. 16/18.08.2010	21.03.2012	
3.	For maintenance of Telecom gears	Agra/N/103/S&T/Creation of posts dated 19.12.2007	90
<b>Total (B)</b>			<b>957</b>

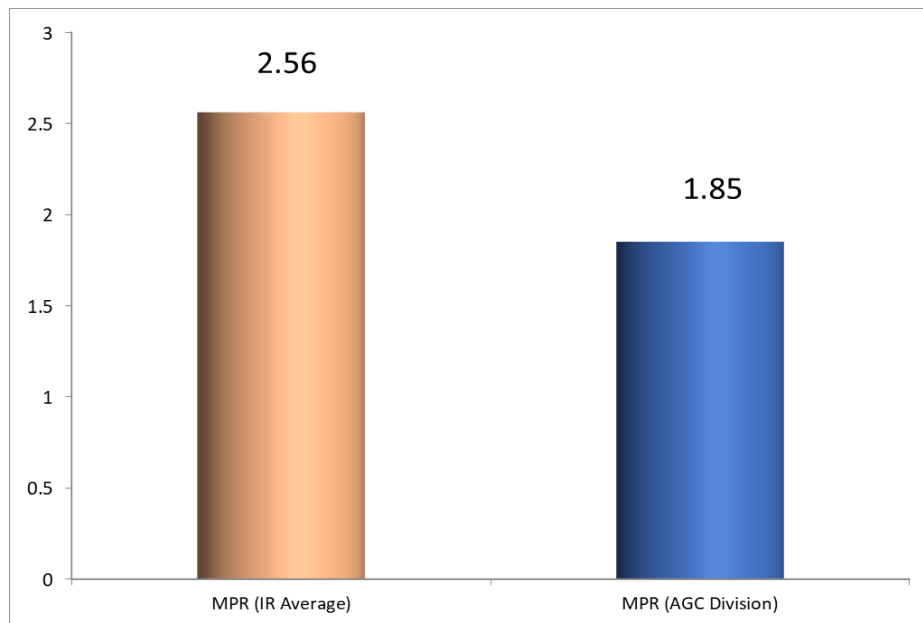
#### 4.1 SIGNAL FAILURES



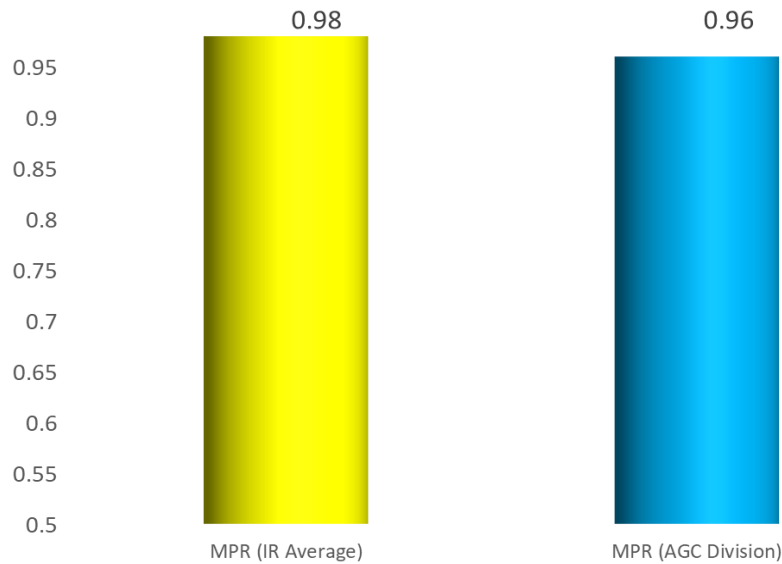
#### 4.2 MONTH WISE FAILURES COMPARISON (3 years)



**5.1 MPR (MAN POWER RATIO PER DESU)**



**5.2 MPR (MAN POWER RATIO PER DETU)**



### Innovations:

1. Two Mobile based Applications have been implemented for monitoring of Telecom gears, Real Time Monitoring & evaluation of S&T gears and safety related unusual incidences in train operations. Railways Depot Inventory Management System (RDIMS) with RF-ID facility is also implemented in Five (5) SSE depots. These mobile apps and implementation of RDIMS are step towards digitalization of routine maintenance and further a step towards Railway staff saving.
2. Huge saving of railway revenue by In-house logic alteration at SSDT, FAB and HAB stations during block panel work.

### 6.0 Assistance Required

Due to increase in number of signalling gears as a result of completion works such as doubling in JAB - TDL, Up gradation work in MTJ-AWR section, 3rd line work in B TSR-PWL, Auto signalling in AGC-MTJ, EI at AGC and interlocking of LC gates and ongoing works like 4th line in MTJ-PWL, 3rd line in MTJ-DHO and EI at MTJ, it is becoming difficult to carry out statutory schedule of maintenance and inspections with the existing strength, hence sanction is required for creation of posts to meet the requirement as per norms.