



WORK STUDY TO REVIEW THE
STAFF STRENGTH AT
SSE/ C&W/ MAQ
PGT - DIVISION

SOUTHERN RAILWAY

PLANNING BRANCH

(No. G.275/WSSR – 041920/2020-21)

WORK STUDY TO REVIEW THE
STAFF STRENGTH AT
SSE/ C&W/ MAQ
PGT – DIVISION

STUDIED BY

WORK STUDY TEAM

OF

PLANNING BRANCH

OCTOBER – 2020



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(i)

ACKNOWLEDGEMENT

The study team acknowledges the valuable guidance and co-operation rendered by DEn.HM/PGT, CDO/MAQ, and Supervisors & staff of SSE/ C&W/ MAQ Depot for completing the study in time.

(ii)

AUTHORITY

Annual Program of work studies for the year 2019-20.

(iii)

TERMS OF REFERENCE

To review the Mechanical staff strength at the SSE/C&W/MAQ Depot of PGT Division.

(iv)

METHODOLOGY

- a) Collection of data.
- b) Observation of the present system of working.
- c) Interaction with Divisional Officers, Supervisors of the concerned depot.
- d) Analysis of the data collected and assessment of manpower requirement as per yardstick / need basis.



(v)

SUMMARY OF RECOMMENDATIONS**Recommendation:**

The following posts are surplus to the requirement and this may be surrendered and credited to the vacancy bank.

Sl. No.	Category	Grade Pay	No. of posts
1	SSE	Rs.4600	01
2	Technician II (Carpenter)	Rs. 2400	02
3	Technician II (Welder))	Rs.2400	02
4	Helper (C&W)	Rs. 1800	31
TOTAL			36

(Total 36 posts)**Revised Recommendation :**

The following post is found surplus to the requirement and this may be surrendered and credited to the vacancy bank.

Sl. No.	Category	Grade Pay	Level	No. of posts
1	Helper (C&W)	Rs. 1800	1	10



1.0 INTRODUCTION**1.1 SALIENT FEATURES OF PALGHAT DIVISION**

Palakkad Division was formed in August 1956. Historically, the beginning of the Railways in the region started with the laying of the line from Podanur to Pattambi in 1860. The line was extended in phases to Mangalore by the year 1907.

When Trivandrum Division was formed in 1979, the Shoranur–Cochin Harbour Terminus section was handedover to Trivandrum Division. Before the formation of Trivandrum Division, Palakkad division had a route km of 1247.58. After formation of TVC Division, PGT Division had 1132.98 route km.

Palakkad Division is spread across the State of Kerala, a small portion of Tamil Nadu, Karnataka and the Union territory of Pudussey. The Division serves 8 Districts. Palghat Division commences from Podanur in the east and stretches up to Mangalore on the West Coast via Shoranur on the banks of Bharathapuzha River. The 306 km long, Shoranur–Mangalore section serves the important cities of Mangalore, Kozhikode, Kannur and Kasaragod along the west coast. The Shoranur–Nilambur branch line serves an area least served by other forms of transport. Palakkad Town–Pollachi–Kinattukadavu section was added to the Division on 01.11.2007.

1.2 Mangalore is one of the major cities of Karnataka and serves as the chief port of the state, handling a major portion of India's coffee, iron ore fertilizers and cashew. Mangalore is often used for sea journey along the Malabar coast. Mangalore is also the administrative headquarters of Dakshina Kannada district. This picturesque city Set along the cool blue Arabian sea, and flanked by the western ghat mountain ranges. Nature has blessed Mangalore with a pleasant climate all through the year, which attracts visitors from far and near.

1.3 Rail connectivity to MAQ was established in 1907. A metre gauge railway track was built through the western ghats connecting MAQ with Hassan via Shaklespur station. This metre gauge line was later converted to broad gauge and was opened to passenger traffic during December 2007.

- 1.4 Mangalore station has gained more importance after it is connected to Mumbai through Konkan railways there by Kerala state important cities like TVC, QLN, ERS, SRR, CLT,CAN are connected to Western India by a shorter route through the line laid along the western coast by Konkan Railways compared to the circuitous route of CBE,SA, KPD,RU, GTL.
- 1.5 SSE/C&W/ MAQ depot carries out maintaining of set of Trains with sick line facility and PF turn round attention of trains terminating / originating from MAQ, Rolling-in, Rolling-Out examination of pass through trains, Issues BPCs to trains, whenever required attends defects of en-route trains in its jurisdiction.

This C&W Depot/MAQ functions under the direct control of CDO /MAQ. He is assisted by 13 Senior Section Engineer, 10 JEs, 4 Clerical staff, 133 Technicians, 36 Helpers and 7 ancillary staff (as on 16.01.2020). The sanction and actual staff strength of this depot as on 16.01.2020 is given in **Annexure-I**. (Sanction from Sr.DPO/O/PGT statement and actual from the depot)

- 1.6 An attempt has been made to study the present system of working and the requirement of man power. In the process, benchmarking norms has been taken into due consideration, as desired by CDO/MAQ and their applicability or lack thereof has been dealt at length.
- 1.7 Discussions were held with CDO/MAQ (Coordinating Officer and Unit Head) SSE/C&W/MAQ (Coordinating Supervisor) and other supervisors & staff. The observations / suggestions made by them have also been taken into consideration in drafting the report

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2.0 PRESENT SCENARIO

- 2.1 The actual staff strength (Artisan and others) of SSE/ C&W/ MAQ Depot is 231 (including 4 ministerial staff) as against the sanctioned strength of 263 (including 5 ministerial staff) as on 16.01.2020.
- 2.2 The depot is carrying the Primary, Secondary and sick maintenance / repair activities, Pest control activities in the yard. The Platform activities like watering of some nominated trains are also performed here and also all the trains are examined for Rolling-in, rolling-out & turn round including pass through trains.

2.3 Activities of the depot AT YARD:

Trains Primary and Secondary maintenance are carried out in Three Pit lines in which Two are CAMTECH design with Cat walk facility to the capacity of 24 coaches and other one without catwalk facility to 18 coaches capacity. The normal activities are

- Under Gear Checking / attention.
- Brake Gear Checking / attention with air testing.
- Rolling Gear Checking / attention.
- Suspension Checking
- Couplers checking / attention.
- Schedule maintenance (A,B).
- Interior Cleaning.
- Amenity Attention
- Watering.
- Special exercise to prevent Rat, Cockroach, Bugs menace etc.

Primary maintenance

Depot Coach holding = 470

Actual staff strength as per roll including supervisory & clerical staff

Sl no	Designation	Scale Rs.	G. pay	Actual
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			Rs.	
1	SSE/C&W/MAQ	9800-34800	4600	13
2	JE/C&W/MAQ	9800-34800	4200	10
3	Sr. Technician	9800-34800	4200	24
4	Technician Gr. I	5200-20200	2800	36
5	Technician Gr. II	5200-20200	2400	37
6	Technician III	5200-20200	1900	36
7	Assistant/C&W	5200-20200	1800	64
8	Sr. Tech Carpenter	9800-34800	4200	01
9	Carpenter Gr. I	5200-20200	2800	02
10	Welder Gr. II	5200-20200	2800	03
11	Sr.Tech. Painter	9800-34800	4200	01
	Total			227

Ministerial Staff

1	Sr.Clerk	5200-20200	2800	2
2	Jr.clerk	5200-20200	1900	2
	Total			4

Brief outline of activities with reference to all the available sections

Mangalore is the only major coach maintenance depots of Palghat Division. Sixteen express trains and eight passenger trains are primarily maintained and Mangalore Santhragachi express train is secondarily maintained in this depot. There is one mini running room at Cheruvathur. Coach maintenance activities are confined to Mangalore station. ART special Class. B and ARMV special Scale 1 are located here. Coaching Depot Officer, Mangalore is the overall charge of the C&W activities. His jurisdiction is from Panambur to Kannur. Activities at coaching depots Mangalore are as follows.

a) Rake maintenance.

Sl. No	Train No.	Type	No. of Coaches per Rake	No. of Rakes	Type of Maint:	Maint: Pattern
1	16603	Exp	23	04	PM	Daily
2	22638	Exp	23	04	PM	Daily
3	16605	Exp	21	04	PM	Daily
4	56656	Pass	16	03	PM	Daily
5	56654	Pass	16	03	PM	Daily
6	16649	Exp	21	02	PM	Four Days in a week
7	22636	Exp	11	01	PM	Twice in a week
8	56640	Pass	16	01	PM	Twice in a week
9	56643	Pass	05	01	PM	Twice in a week
10	22852	Exp	23	01	SM	Once in a week
11	16687	Exp	13	01	PM	Once in a week

PFTR of 17 trains average per day with an average of 269 coaches per day.

Super Fast / Long distance, Express/Mail ,Passenger Trains:-

Sl. No	Train No.	Type of train	No. of Coaches	Service	coaches per DAY
1	16603	SF	23	Daily	23
2	22638	SF	23	Daily	23
3	16605	SF	21	Daily	21
4	16649	EXP	21	4 days in a week	12
5	22636	SF	11	2 days in a week	3.1
6	16687	LD	13	1 day in a week	1.7
7	56654	PASS	16	Daily	16
8	56656	PASS	16	Daily	16
9	56643	PASS	05	2 days in a week	1.4
10	56640	PASS	16	2 days in a week	4.6
			165		121.8
TOTAL					121.8

2.4 Secondary Maintenance

Sl.No	Train No.	Type	Coaches	Service	coaches per DAY
1	22852	SF	23	1 day in a week	3.3

- b) **Sick Line** – Average 04 coaches per day. SCT of all Off POH and Off IOH coaches.
- c) **IOH attention of coaches** – Presently 5 coaches average per month
- d) **Platform activities** – Terminating of average 25 trains per day and dispatching of average 25 trains per day.
- e) **M&P, ART/ARME** – Maintenance of Electrical Compressor, Diesel Compressor, Diesel welding plants -2 Nos. Fork lift other welding plants, all ART & ARME equipments like, HRD, HRE, Plasma Cutting equipments and all small machineries.
- e) **Schedule Batch** – 'A' & 'B' Schedule of coaches, Curtain changing of AC coaches.
- f) **Stores** – Collection of materials from MAS, TPJ, PGT etc. issue and Condemnation etc. Record keeping.
- g) **Bio toilet** – Managing and Supervision of AMOC of Bio toilets and, Record keeping of AMOC activities
- h) **OBHS** - Managing and Supervision of OBHS activities and Record keeping
- i) **Linen** - Managing and Supervision of Contract and Record keeping and checking of washed linens.
- j) **IMS** – Maintaining of all IMS records and ensuring all activities related to IMS.

Distribution of staff

Batch	SSE	JE	Sr. Tech	Tech-I	Tech-II	Tech-III	Helper	Welder	Painter	Carpenter	Total
Sick line	01	--	03	--	02	--	01	--	--	--	07
RM -I	01	01	02	02	04	01	--	--	--	--	11
RM -II	01	01	01	03	02	02	--	--	--	01	11
RM -III	01	01	02	03	03	--	--	--	--	01	11
RM -IV	01	--	01	02	06	--	--	--	--	--	10
RM -V	01	--	02	04	--	03	--	--	--	--	10
RM -VI	--	01	04	02	02	01	--	--	--	--	10
RM -VII	--	01	02	01	01	05	--	--	--	--	10

Pink Batch	01	01	04	06	--	05	--	--	--	--	17
Schedule	01	--	01	02	06	04	--	--	--	--	19
M&P		--	02	01	01	01	--	--	--	--	
Cleaning 56656 & 56654	--	--	--	--	--	--	15	--	--	--	15
Bio Toilet	03	--	--	--	01	--	02	--	--	--	14
SOI		--	--	01	--	--	01	--	--	--	
OBHS		--	--	--	--	--	02	--	--	--	
Linen		--	--	--	--	--	02	--	--	--	
IMS		--	--	--	--	--	01	--	--	--	
Contract		--	--	--	--	--	01	--	--	--	
Store	01	--	--	01	--	--	05	--	--	--	07
RSC	--	--	--	--	--	--	06	--	--	--	06
PF	--	03	--	03	06	06	03	--	--	--	21
PFTR	--	--	--	--	01	--	02	--	--	01	04
General	--	--	--	--	--	--	04(1-welder +03 Asst)	03	01	--	08
Line Duty CHV/PGT	--	--	--	01	--	--	01	--	--	--	02
RG/LR	--	01	--	04	02	08	18	--	--	--	33
Total	12	10	24	36	37	36	64	03	01	03	226

Details of Originating Trains

SI No.	Train No.	From-To	Type of service	Dep. time	No. of coaches	Frequency	Coaches per day
1	16649	MAQ-NCJ	Exp	05.00	21	Daily	21
2	56654	MAQ- CLT	Pass	05:10	16	Daily	16
3	56643	MAQ -KBPR	Pass	05.15	05	Daily	05
4	56640	MAQ - MAO	Pass	05.30	16	Daily	16
5	16513	SBC - KRWR	Exp	06.25	23	Weekly 4 times	13
6	16160	MAQ - MS	Exp	06.45	23	Daily	23
7	16605	MAQ-NCJ	Exp	07.20	21	Daily	21

8	56324	MAQ - CBE	Pass	07.40	17	Daily	17
9	22636	MAQ -MAO	Exp	08.15	11	Daily	11
10	16523	SBC - KRWR	Exp	09.00	14	Weekly 3 times	6
11	56647	MAQ- SBHR	Pass	10.00	05	Daily	05
12	22609	MAQ - CBE	Exp	11.45	21	Daily	21
13	12620	MAQ -LTT	Exp	12.50	23	Daily	21
14	12602	MAQ -MAS	Mail	13.25	23	Daily	23
15	16348	MAQ - TVC	Exp	14.20	23	Daily	23
16	70106	MAQ -MAO	DEMU	14.45	08	6 days in a week	6.8
17	12686	MAQ - MAS	Exp	16.15	21	Daily	21
18	56656	MAQ- CAN	Pass	16:35	16	Daily	16
19	16687	MAQ- SDVK	Exp	17:05	23	Once in a week	3.2
20	16858	MAQ –PDY	Exp	17.05	17	Once in a week	2.4
21	16856	MAQ –PDY	Exp	17.05	17	Once in a week	2.4
22	16603	MAQ- TVC	Exp	17:45	23	Daily	23
23	16630	MAQ - TVC	Exp	18.10	23	Daily	23
24	56645	MAQ -KBPR	Pass	18.15	05	Daily	05
25	16586	MAQ –YPR (Via SBHR)	Exp	19.00	14	Weekly 3 times	06
26	16566	MAQ–YPR (Via PGT)	Exp	20.15	18	Once in a week	2.5
27	17605	MAQ -KCG	Exp	20.15	18	Twice in a week	5.1
28	16524	KRWR -SBC	Exp	20.55	14	3 days in a week	06
29	16514	KRWR -SBC	Exp	20.55	23	4 days in a week	13.1
30	22638	MAQ – MAS	Exp	22:20	23	Daily	23
					525		400.5 say 400

No of passing trains : 04 Trains ETR

ART & BD Movement particulars for the last 2 years.

Details of ART movement

Sl. No	Date	Destination	Reason
1	06.03.18	MAQ-KGQ- MAQ	Trail Run
2	14.06.18	MAQ-KGQ- MAQ	Trail Run
3	17.06.18	MAQ- Nandikoor- MAQ	Loco WDG ₄ 12814, EC ₀ RBCNHLM1 33120953048 and SCR BCNHLM1 33091017466 derailed at Nandikoor.
4	18.09.18	MAQ-KGQ- MAQ	Trail Run
5	20.12.18	MAQ-KGQ- MAQ	Trail Run
6	03.06.19	MAQ-KGQ- MAQ	Trail Run
7	23.08.19	MAQ-KGQ- MAQ	Trail Run
8	15.10.19	MAQ yard	Derailment of SR SLR 11706 of 56324 at MAQ yard.
9	23.10.19	MAQ-KGQ- MAQ	Trail Run
10	02.01.20	MAQ-KGQ- MAQ	Trail Run

Details of ARME movement of the last 2 Years

Sl. No	Date	Destination	Reason
1	06.03.18	MAQ-KGQ- MAQ	Trail Run
2	14.06.18	MAQ-KGQ- MAQ	Trail Run
3	18.09.18	MAQ-KGQ- MAQ	Trail Run
4	20.12.18	MAQ-KGQ- MAQ	Trail Run
5	03.06.19	MAQ-KGQ- MAQ	Trail Run
6	23.08.19	MAQ-KGQ- MAQ	Trail Run
7	15.10.19	MAQ yard	Derailment of SR SLR 11706 of 56324 at MAQ yard.
8	23.10.19	MAQ-KGQ- MAQ	Trail Run
9	02.01.20	MAQ-KGQ- MAQ	Trail Run

ART/ARME maintenance for the last 2 years: ART/ARME trail runs are conducted one in 2 months and maintenance are usually conducted on the next day of trail run. The maintenance details of the last 2 years are furnished below.

Sl. No.	Date	No. of staff distributed	Remarks
1	8.3.18	12	A and B Maintenance schedules done.
2	14.6.18	13	A and B Maintenance schedules done.
3	18.9.18	11	A and B Maintenance schedules done.
4	21.12.18	12	A and B Maintenance schedules done.
5	17.3.19	13	A and B Maintenance schedules done
6	4.6.19	12	A and B Maintenance schedules done
7	25.8.19	13	A and B Maintenance schedules done
8	24.10.19	13	A and B Maintenance schedules done

Internal Cleaning and Washing for last two years

56656 and 56654 pass: cleaning and washing are carried out by departmental staff. On an average 15 staff are deputed daily for this purpose.

Cleaning and washing of all express trains and two passenger trains are carried out by contract staff.

PF attention particulars for the last 2 years

Average terminating examination of average 21 trains per day
Originating examination of average 21 trains per day

PFTR attention of average 19 trains per day

En-route attention particulars for the last two years

- a. Hot axle wheel change done at Payyannur on 24.09.2019
- b. Hot axle wheel change done at Kotikkulam on 12.05.2019

No of failures attended en-route for the last two years:

Mangalore central is a terminating station. Hence en route attention is not done.

Any failure noticed is attended in PFTR , Primary or Secondary Maintenance.

Details of outsourced activities

Sl. No.	Nature of work	Name of the Contractor	Contract period	Contract value in Rs
1	Mechanized cleaning and watering of primary/secondary maintained express trains of Mangalore Central, Cleaning and housekeeping of depot premises and On Board Housekeeping Services (OBHS) of Train Nos 12601/12602 & 22637/22638	Service Master Clean Ltd, A 28, 29 Okhala Phase-I, New Delhi-110020	01.11.2018 to 31.10.2022 4 Years	11,34,00,360
2	Cleaning and watering of coaches during turn round attention and changing of destination boards at Mangalore Central	Vasantham Agencies, 47/6, Niyafi complex, Denninson Road, Nagercoil, Tamilnadu-629001	29.01.2018 to 28.01.2020 2 Years	2,64,36,300
3	Collection, machine washing, loading/unloading transportation and distribution of bed rolls in trains originating from Mangalore Central	Tharu & Sons, Karipayi Road, Rajagiri (Post), South Kalamassery, Ernakulam (Dist.)	11.01.2019 to 10.01.2020 1 Year	3,15,49,337
4	On board housekeeping services for Train Nos.22609/22610 & 22635/22636	Tharu & Sons, Karipayi Road, Rajagiri (Post), South Kalamassery, Ernakulam (Dist.)	10.11.2017 to 09.11.2020 3 Years	81,41,325
5	On board housekeeping services for Train Nos.16605/16606 & 16649/16650	S.R.Enterpris es, No.4-7- 8/6/C,S.K.Co mplex, Istfloor, Opp. Indian Bank, Raghavendra Nagar, Nacharam, Hyderabad-500076	12.11.2017 to 11.11.2020 3 Years	1,23,15,859
6	On board housekeeping services for Train Nos.16603/16604 &16629/16630 between Mangalore Central and Shornur	Tharu & Sons, Karipayi Road, Rajagiri (Post), South Kalamassery, Ernakulam (Dist.)	13.06.2019 to 12.06.2021 2 Years	1,29,86,700
7	On board housekeeping services for Train Nos.16687/16688	Tharu & Sons, Karipayi Road, Rajagiri (Post), South Kalamassery, Ernakulam (Dist.)	08.04.2018 to 07.04.2021 3 Years	39,97,968

8	Pesrt and Rodent Control in Railway passenger coaches maintained at Mangalore Central	Truly Pest Solution Private Limited, Krishi Rasayan Building,29- Lala Lajpat Rai Sarani, Kolkata, West Bengal	15.02.2019 to 14.02.2022 3 Years	46,71,159
9	Hiring of road vehicle for the official use of CDO/MAQ	Ashraf P M, Palathinkara House, Pundoor, Nekraje, Kasargod, Kerala, PIN:671514	07.05.2018 to 06.05.2020 2 Years	10,89,600
10	CAMOC of Bio toilets	Hughes & Hughes Pvt.Ltd, IFFCO-TOKIO, Suit No. 205/206, II, Floor 40 – 41, Nehru place, New Delhi Pin - 110019	08.01.20 20 to 07.01.2024 24 months	2,88,50,768
Total contract value				24,31,39,376

No. of coaches under primary maintenance : 122 Coaches per day

No. of coaches under secondary maintenance : 23 Coaches per week

Sick line attention particulars:

Month	Wheel Defects	Bolster Spring	Axle Guide Spring	Brake Cylinder	Brake Gear	DV Defect	Train Pipe	Draw/Buffer Gear	Roof Leak	Water Tank	Carpentry Repairs	Dashboard Assembly	Equalizing Stay	Anchor Link	AxleBox Canted	RB Failure	Door Pivot	Centre Pivot	Others	Single car test	V belt	Other Electrical Sick	Total		
Jan 19	03	02	01			01		06				04							06	46	7	6	82		
Feb 19	05	02				05		03		02		04							01	58	4	7	91		
Mar 19	01	02	01	02	02		05	05		01										71	3	8	101		
April 19	02	01	01		01			03		01									17	29	10	6	71		
May19	06			01	01			03		01		08				01			15	33	8	12	89		
JUNE19		03	01					07	04	01	01	06							07	30	03	12	75		
JUL 19	03	01					01	04	10	01		04		01					14	57	07	08	111		
AUG-19	07	02		01	02	01	01	02	09	02		06							23	53	06	07	122		
SEPT19	08	06	01			01		04			01	16							18	62	07	07	130		
OCT-19	5	01	02			01		08	05	02	01	5				01			24	55	15	03	128		
NOV-19	1		02					01		04		08			01				14	48	9	06	94		
DEC-19	02	01		01				07		03		08							08	36	04	01	71		
																				578	83	83	1165		
																				Per day		1.6	0.22	0.22	
																				Total sick coaches(12 months)				1165	
																				Average sick coaches per day				3.19	

Machinery and stores particulars

SI NO	Description	Details
1	Total imprest items	195
2	Non imprest and non-stock items	124
3	M&P items	16
4	No of T&P items	
	(A) C&W general	365
	(B) ART	338
5	Cash Imprest Rs.	
	(A) General Imprest	100000
	(B) BD Imprest	25000
	(C) ADME Imprest	500
	(D) Hydrant Imprest	7000
6	Scrap Disposal in FY 19-20	
	(A) Ferrous	19.36 Tonnes
	(B) Non/Ferrous	43.31 Tonnes
	(C) DS 87 submitted for Auction 1.SR CZ 94647	22.5 Tonnes

Details of staff working in other areas

01 Helper at CHV for cleaning of RR/CHV and locking of 56659 Pass: 01 Tech- I at Control office PGT.

Details of other area staff working in our depot if any - Nil

Failure statistics chart/details:

The number of coaches marked sick for the last two years

Month	2018	2019
Jan	50	20
Feb	56	26
Mar	27	16
Apr	27	21

May	35	36
June	28	11
Jul	38	31
Aug	41	39
Sept	76	47
Oct	47	35
Nov	42	22
Dec	24	28
Total	491	332
AVG/DAY	1.345	0.9
AVG	1.12	

2.10 SICK LINE WORKS AT SSE/C&W/MAQ

The coaches which are marked sick from the trains for mechanical and electrical repairs are being rectified at sick line. It has 2 lines to the capacity of 9 coaches in total.

All electrical and mechanical sick are attended like wheel changing, dashpot, springs, under gear, couplers, brake gear, etc. and coach amenities like door, windows, water tanks, repairs etc. Welding and air testing facilities are also available.

Average per day release for sick line – 1.12 coach/day

In addition to 1.12 coaches release / day, as per CRSE/MAS instruction, the coaches turned out from POH, IOH & other divisions are specially tested with single car testing which is not covered under sick account (RS1).

The average single car testing conducted per day = 3.

Staff deployed for sick line = 07.

2.12 ADMINISTRATIVE WORK:

Dealing the staff matters, Attendances, leaves, Pass/PTO's, contract management, stores, maintaining details for trains, preparing statements as then and there requirements.

Sl. No.	Duty	No. of staff deployed
1	Sr. Clerk for Office	02

2	Jr. Clerk for Stores	02
3	Record keeping – technical staff utilized in stores	04

2.13 THE PLATFORM ACTIVITIES:

The MAQ platform is located in a dead end having 3 platforms with a Loco escape line. The trains received in platforms are to be turned out and dispatch out through the same reception line. Hence a single Rolling in/out point is provided.

The activities are rolling in, brake release, box feeling, through train attention, watering, dispatching and BPC issuing.

2.14 PFTR Trains attended by platform staff in 3 shifts:

The nominated trains turn round activities are deed at 4 stable lines. Their cleaning and watering work are executed through outsourcing. cursory examination of under gear and amenities are taken care by platform 3 batches in round the clock.

Present staff deployed = 25(21 PF & 4 PFTR)

3.0 CRITICAL ANALYSIS:

- 3.1** The actual staff strength of SSE/C&W/MAQ Depot is 231 against the sanctioned strength of 258 (as on 16-01-2020).
- 3.2** The Depot is carrying primary, secondary, sick line activities at yard. The amenities works like pest control, rodent control, linen management, interior cleaning, watering, boards for identification are also carried out for passenger convenient and comfort. In the platform Rolling In/out, releasing, dispatching, through train attention, turn round attention, watering are the activities regularly performed according to requirement and nomination.
- 3.3** Sick line is to the purpose of rectification of sick coaches for mechanical and electrical repairs with all facilities like lifting, welding, air testing, amenities repairs, etc.
- 3.4** The following registers maintained in MAQ/C&W depot in a unified, printed manner which makes the data recording into easy and convergent and perfect one.
- 3.4.1** The following Registers are maintained at Pit line:

- RS 1 - Sick marking / Release details
- RS 7A - Diary for coach maintenance details.
- RS 16 - Sick memo.
- Schedule A & B - Schedule maintenance details.
- Primary maintenance - components certification
- Interior Cleaning - Contractor certification
- Under frame / Hanging parts register.
- SLR - Brake application test register.
- Rake test register - Brake systems.
- Water filling register - Certification for contractor
- Disinfectation / fenthion / Boric register
- Coach History card
- POH/IOH – Marking sending register
- Curtains changing register

- 3.4.2** The following are the Registers maintained at platform:

- Details of reception, BPC issuing, Dispatch – Diary
- PFTR – trains maintenance, under gear / Interior register
- Interior cleaning – PFTR Through trains – certification for contractors
- Watering register – certification for contractor
- Brake Power certificate
- RS 5 – Remarks for incoming train from Loco pilots

3.5 *Indian Railway is the biggest transportation Service Industry owned by the Government of India which operation ratio is yet to reach appreciable manner. To achieve the maximum “economy in operation” and maximize the productivity rightsizing of man power is the prime tool since it itself took 43% of total earning.*

On the view of optimum utilization of man power the study team apply Railway Board’s “Bench marking norms for maintenance staff provision for coaching maintenance” (Railway Board letter no. 2000/m©/143/5, dt. 24/12/2001) for the core work like primary / secondary maintenance activities and apply need base requirement for the other areas after making a sample time study and scrutinize activities.

Railway Board letter no. E(MPP)2019/1/12 dated 30-09-2019

Maintenance	TYPE	Express Train
Primary	ICF/LHB STOCK	0.85 men/coach(ILCF/LHB) with interior amenity attention to be outsourced
Terminal attention under RPC-4	ICF/LHB STOCK	0.3 men/coach(ILCF/LHB)
PFTR	ICF/LHB	0.2 men/coach

3.6 Primary Maintenance:

Sl. No	Train No.	Type of train	No. of Coaches	Service in a week	Total coaches per week	PM coaches per DAY	Staff provision /coach	Total staff required
1	16603	SF	23	7	161	23	0.85	19.55
2	22638	SF	23	7	161	23	0.85	19.55
3	16605	SF	21	7	147	21	0.85	17.85
4	16649	EXP	21	4	84	12	0.85	10.2
5	22636	SF	11	2	22	3.1	0.85	2.635

6	16687	Exp	13	1	13	1.7	0.85	1.445
7	56654	PASS	16	7	112	16	0.85	13.6
8	56656	PASS	16	7	112	16	0.85	13.6
9	56643	PASS	05	2	10	1.4	0.85	1.19
10	56640	PASS	16	2	32	4.6	0.85	3.91
			165	46	854	121.8		103.53
TOTAL						121.8		Say104

The total contract value for the out sourced activities for 2/3 years is Rs. 24,31,39,376/-.

If we consider the man power cost of 30% it comes around Rs. 7,29,41,812. If we consider for 1 year it will be Rs. 2,43,13,937/-.

If we consider the average labour cost Rs. 600/ day, the above value is equal to 111 men per day.

Most of the activities like coach washing, bio toilet maintenance, linen maintenance etc., are outsourced. **Two more posts allowed and arrived staff strength of 106 staff is sufficient including RG.**

3.7 Secondary Maintenance:

Only one Train is nominated for secondary maintenance at MAQ Depot once in a week.

SL. NO	TRAIN NO	TRAIN TYPE	NO OF COACHES	SERVICE IN A WEEK	TOTAL COACHES PER WEEK	SM COACH PER DAY	STAFF PROVISION /COACH	TOTAL STAFF
1	22852	SF	23	1	23	3.28	0.3	0.98

Total man power requirement for Secondary maintenance is **1**.

Inclusive of RG is 2

3.8 SICK LINE ATTENTION:

In Sick line, the coaches detached from formation (mechanical & electrical) were attended to various repairs like lifting for side bearers repairs, under gear repairs, brake gear repairs, suspension, couplers and interior amenities repairs – like water tank, berths, doors, windows, panel repairs, etc. Necessary welding works also carried out, as required and air testing also conducted with single car test rig.

Sick line is working in day shift only in all the days in a week.

The sick release for the past 2 year is as under:

Year	No. of Coach Released	Avg. no. of coach released per day
2018	491	1.34
2019	332	0.90
Total Average		1.12

From the data of the year 2018 and

2019, the average coach release / day (including Electrical sick) = 1.12 coach only.

As per CRSE/MAS there are 1.6 coaches per day attended only for single car test rig. As it has no other attention required and not covered under sick account, the man power requirement is very meager to the maximum of **2 men on their work part of the day.**

Total man power requirement for Sick line maintenance on need base is

Sick line coaches per day $3.19 \times 0.12 \text{ men} = 0.38 \text{ men}$

Single car test = 2 men

Other assistance for electrical sick = 2 men

Total = 5 men

RG = 1 men

Total for sick line activities = 6 men

3.9 CLEANING AND COMPLETE WASHING

The Internal Cleaning and complete washing of primary, PFTR trains are outsourced except the following passenger trains (4primary maintenance & 1secondary maintenance).

The man power requirement for internal cleaning and washing by Departmental staff are under:

Sl. No.	Train No.	Type of Train	No. of coaches	No. of service in a week	Avg. no. of coach per day
1	56656	Passenger	16	7	16
2	56654	Passenger	16	7	16
Average					32

The Avg. departmental cleaning = 32 coach per day

The train no. 56643 PFTR activities being done in all days at MAQ and train no. 56640 PFTR is covered 5 days in a week apart train no. 56656 and 56654 are attended (dry sweeping and watering) at CHV, CAN and CLT. On observation the level of cleaning and washing for the above passenger trains are not much intensive. Hence on need base the man power is 12.

Total man power requirement for cleaning and washing maintenance on need base is **12** (Inclusive of RG).

3.10 EN-ROUTE TRAIN PASSING, TURN ROUND (PFTR), RECEPTION, DESPATCHING ATTENTION AT PLATFORM:

Sl. No.	Activity	Attended in a week	Attended in a day	Attended in a shift
1	Reception	165	23.5	7.8
2	Dispatch	168	24	8

For the rolling in / rolling out, releasing of DV, box feeling and dispatch on need base men required = 3 per shift + 1 supervisor.

PFTR attention at yard under platform supervisor supervision:

Sl.No.	TRAIN NO	TYPE	NO OF COACH	SERVICE IN A WEEK	NO.OF COACH PER DAY
1.	12602	SF	23	7	23
2.	16630	SF	23	7	23
3.	22609	SF	21	7	21
4.	12620	SF	23	7	23
5.	16348	SF	23	7	23
6.	12686	SF	21	7	21
7.	16856	EXP	16	1	2.3
8.	16858	EXP	17	1	2.4
9.	16160	EXP	23	7	23
10.	16566	EXP	18	1	2.5
11.	17605	EXP	20	2	5.7
12.	56324	PASS	17	7	17
13.	16523	Exp	14	3	6
14.	56647	Pass	05	7	5
15.	70106	DEMU	08	6	6.8
16.	56645	Pass	05	7	5
17.	16586	Exp	16	3	6.8
18.	16512	Exp	22	4	12.5
19.	22638	Exp	23	7	23
			338		252/day
	Total			98	
	Avg/day			14	

Through train attention at platform under platform supervisor supervision:

SL. NO	TRAIN NO	TYPE	NO OF COACH	SERVICE IN A WEEK
1	16517	EXP	21	7
2	16518	EXP	21	7
3	70106	DEMU	6	6
TOTAL				20

From the above data, PFTR attended in a day (98/7) = 14 trains

PFTR attended in a shift = **4.6 trains**

Through trains attended in a day (20/7) = 2.8 trains

Through trains attended in a shift = **0.9 train**

It was identified that 3 persons required in 1 hour for PFTR activity of a train. Maximum of 15 minutes required for a through train attention. Hence for attending 4.6 PFTR trains and 0.9 train of through train attention it is derived that 3 persons required for a shift. 3 more persons required for platform activities in a shift. Along with 1 supervisor, 7 persons needed in a shift(6 in night shift), together 20 persons will meet out the PF and PFTR activities.

Total man power requirement for Platform, PFTR and through train attentions on need base is **20** (Inclusive of RG)

3.11 MATERIAL STORAGE / ACCOUNTAL

The required materials are collected from General Stores depot and other divisions / railway according to the requirement and disposal of condemnation with relevant records are maintained at Stores Section.

ACTIVITIES

Total items in Store	=	195 plus
Imprest items	=	195
Non-imprest items	=	124
Local purchase	=	20 approx.
Average issue per day	=	50 approx.

On need bases, men power required for stores as detailed below.

1. Ministerial staff	=	1
2. Assistant for recording and issues	=	2
3. Material collection	=	5
Total	=	8

Total man power requirement for Stores maintenance on need base is **8** (Inclusive of RG)

3.12 MAINTENANCE OF M & P with BD:

There are 15 machineries / plant items are maintained in this depot including a transport vehicle. These items are a part of depot for smooth operation, which regular and break down maintenance is taken care by a team who are primarily maintaining the break down trains.

The BD Unit details:

COMPOSITION	No. of BD movement		
	2018	2019	2020
ART (3 coaches + 4 wagons)	5	4	1
MRV (3 coaches)	4	3	1

The average BD movement per month = 0.75

Man power required for BD and M & P maintenance = **6**

Total man power requirement for M & P with BD on need base is **6** (Inclusive of RG)

3.13 OTHER ACTIVITIES:

The man power requirement for other activities are furnished in detail (inclusive of RG & LR)

Sl. No.	Activity	Workload	Staff Requirement
1	Outstation	At CHV, Pass. Train attention.	1
2	En-route attention	MAQ to KPQ	1
3	Curtain room & dustbin checking	On demand	1
4	Bio-toilet maintenance	Contract	1
5	Roof leakage test	Check at monsoon time	1
6	Pest control	Contract	2
7	Linen management	Contract	2
8	Manufacturing of Boards	Need base	2
			11

3.14 ANCILLARY STAFF REQUIREMENT:

Pit line maintenance, PFTR and sick line activities are supported by Ancillary staff according to requirement. The present technological improvements in coaches like PU painting, modular toilets, high grade panels, molded type windows reduce the work load of ancillary staff.

Staff required on need base:

- | | | |
|--------------|---|---|
| 1. Carpenter | - | 3 |
| 2. Painter | - | 1 |
| 3. Welder | - | 3 |

3.15 MINISTERIAL STAFF REQUIREMENT:

- | | | |
|---------------------------------|---|---|
| 1. Overall in-charge for Office | - | 1 |
| 2. Time Section | - | 1 |
| 3. Contract works | - | 2 |

Total	-	4
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3.16 TOTAL STAFF REQUIREMENT FOR C&W ACTIVITIES AT MAQ DEPOT

Sl. No.	Activity	Staff Requirement
1	Primary maintenance	106
2	Secondary maintenance	2
3	Sick line activities	6
4	Cleaning and complete washing	12
5	Platform and PFTR activities	20
6	Material storage and accounting	8
7	Maintenance of M & P with BD	6
Sub-total		160
Add leave reserve 12.5 % (160×12.5/100)		20
8	Outstation	1
9	En-route attention	1
10	Curtain room & dustbin checking	1
11	Bio-toilet maintenance	1
12	Roof leakage test	1
13	Pest control	2
14	Linen management	2
15	Manufacturing of Boards	2
16	Carpenter	3
17	Painter	1
18	Welder	3
19	Ministerial Staff(1 staff included in stores)	4
20	Supervisors with RG & LR	20
Total		222

Total surplus = 258 – 222 = 36

Recommendation:

The following posts are surplus to the requirement and this may be surrendered and credited to the vacancy bank.

Sl. No.	Category	Grade Pay	No. of posts
1	SSE	Rs.4600	1
2	Technician II (Carpenter)	Rs. 2400	2
3	Technician II (Welder))	Rs.2400	2
4	Helper (C&W)	Rs. 1800	31
Total			36

(Total 36 posts)

4.0 PLANNING BRANCH'S REMARKS ON CO-ORDINATING OFFICER'S VIEWS: C.O. Views

3.6. PRIMARY MAINTENANCE:

"Primary Maintenance: The total contract value for the out sourced activities for 2/3 years is Rs. 24,31,39,376/-.

If we consider the man power cost of 30% it comes around Rs. 7,29,41,812. If we consider for 1 year it will be Rs. 2,43,13,937/-.

If we consider the average labour cost Rs. 600/ day, the above value is equal to 111 men per day. Since most of the activities like coach washing, bio toilet maintenance, linen maintenance etc., are outsourced, the arrived staff strength of 106 staff is sufficient including RG."

It is not right practice to add the contract values of all the contracts in the depot to arrive at a total value, since each contract is having different periods. Also even if it is added like that, the manpower cost of contract value is 70 %. Hence the above arrived figure of 111 men per day is not correct.

-The outsourced works such as coach washing, bio toilet maintenance, linen maintenance are not safety related works. The Under gear maintenance exclusively a safety related work and require more intensive attention to all the parts and components of the running gear, Schedule attention like A schedule, B schedule, maintaining standard dimensions of components of running gear, oiling various brake gear components, replacement of defective parts, air brake testing etc.

-As per latest RB circular No. E(MPP)2019/1/12 dated 30.09.2019 on Revision of yardsticks man power for PM is done with 0.85/coach after outsourcing interior amenity. At present interior amenity is not outsourced and is being done departmentally.

-As per above mentioned yard stick RG & LR can be provided in addition to above calculated strength.

MAN POWER CALCULATION

Bench marking norms for maintenance staff provision for coaching maintenance as per RB circular No. E(MPP)2019/1/12 dated 30.09.2019 Annexure to Railway Board's letter is followed for calculating manpower requirement.

Activity	Yard stick	Calculation for MAQ Depot	Total men required
Primary Maintenance	ICF/LHB STOCK 0.85/coach with interior amenity attention to be outsourced	122 Coaches per day. $122 \times 0.85 = 103.7$	104

Considering RG : $104 \times 16.6/100 = 17.2$ Therefore Total : $104 + 17 = 121$ Considering LR : $121 \times 12.5/100 = 15.125$ Cumulative total : $121 + 15 = 136$

Total for Primary Maintenance = 104 Staff+17 RG+15 LR (Including Supervisors)

Planning Branch's Remarks

Agreed to.

The staff arrived for Primary maintenance is 136 men.

C.O. Views

3.7. SECONDARY MAINTENANCE

Only one Train is nominated for secondary maintenance at MAQ Depot once in a week.

Total man power requirement for Secondary maintenance is 1.

Inclusive of RG is 2.

Planning Branch's Remarks

Agreed to

The staff arrived for Primary maintenance is 2 men.

C.O. Views

3.8 SICKLINE ACTIVITIES:

"From the data of the year 2019, the average coach release / day (including Electrical sick) = 1.12 coach only.

As per CRSE/MAS instructions, there are 1.6 coaches per day attended only for single car test rig. As it has no other attention required and not covered under sick account, the man power requirement is very meager to the maximum of 2 men on their work part of the day.

Total man power requirement for Sick line maintenance on need base is Sick line coaches per day $3.19 \times 0.12 \text{ men} = 0.38 \text{ men}$

Single car test = 2 men

Other assistance for electrical sick = 2 men Total = 5 men

RG = 1 men

Total for sick line activities = 6 men"

Sick line attention particulars:

Month	Wheel Defects	Bolster Spring	Axle Guide Spring	Brake Cylinder	Brake Gear	DV Defect	Train Pipe Draw/Buffer Gear	Roof Leak	Water Tank	Carpentry Repairs	Dash pot	Equalizing Stay	Anchor Link	Axle Box Canted	RB Failure	Door Pivot	Centre Pivot	Others	Single car test	V belt	Other Electrical Sick	Total
Jan 19	03	02	01			01	06				04							06	46	7	6	82
Feb 19	05	02				05	03		02		04							01	58	4	7	91
Mar 19	01	02	01	02	02	05	05		01										71	3	8	101
April 19	02	01	01		01		03		01									17	29	10	6	71
May19	06			01	01		03		01		08				01			15	33	8	12	89
JUNE19		03	01				07	04	01	01	06							07	30	03	12	75
JUL 19	03	01				01	04	10	01		04		01					14	57	07	08	111
AUG-19	07	02		01	02	01	02	09	02		06							23	53	06	07	122
SEPT19	08	06	01			01	04			01	16							18	62	07	07	130
OCT-19	5	01	02			01	08	05	02	01	5				01			24	55	15	03	128
NOV-19	1		02				01		04		08			01				14	48	9	06	94
DEC-19	02	01		01			07		03		08							08	36	04	01	71
																		GRAND TOTAL				1165

-From the data of the year 2019, the average coach release / day including Electrical sick and SCT is 3.19.

MAN POWER CALCULATION

Bench marking norms for maintenance staff provision for coaching maintenance as per RB circular No.E(MPP)2019/1/12 dated 30.09.2019 Annexure to Railway Board's letter is followed for calculating manpower requirement.

Activity	Yard stick	Calculation for MAQ Depot	Total men required
Sick line attention	0.12 /coach holding	$0.12 \times 435 = 52.2$	52 Including RG

-Sick marked coaches were placed in sick line for various repairs like side bearers & centre pivot defect **which necessitates lifting of coaches**, under gear repairs, brake gear repairs, spring replacements, couplers defects repairs and replacements of buffing gears and interior amenities repairs – like water tank(needs more man power), berths, doors, windows, panel repairs, welding works etc. being carried out. At least **5 men required for these activities as most of these works are strenuous in nature and involves risk and curtailing man power in such places is not advisable in safety point of view.**

- Air test to be carried out for all sick marked coaches.
 - Single Car Test (SCT) to be conducted for all coaches marked sick for brake gear related problems and all the off POH & off IOH Coaches and coaches received from other Railways.
 - Minimum **4 staff is required to conduct SCT** as about 25 parameters to be observed in this test and brake application and releasing of 4 brake cylinders to be observed simultaneously.
 - 2 men required for assisting Electrical works** where joint effort is required.
 - LR/RG : **3 men.**
 - As per the latest bench marking norms mentioned above, the man power requirement in Sick line including IOH works out to be **52.**
 - At present IOH activity is not being carried out at MAQ. So **38 men not taken into final tally.**
 - Therefore minimum man power requirement in Sickline is: **11 Staff (including RG) + 2**
- LR Including Supervisor**

Planning Branch's Remarks

The study report allowed 6 men without supervisor and 12.5 % LR is arrived separately at the end of the manpower requirement in the work study report para 3.16. with LR it will be around 7.

However, based on the remarks from the C.O, additionally 2 staff are allowed for sick line activities.

Hence the revised manpower requirement for sick line activities is 11 staff.

C. O. views

3.9 CLEANING & COMPLETE WASHING:

"56656 and 56654 are attended (dry sweeping and watering) at CHV, CAN and CLT. On observation the level of cleaning and washing for the above passenger trains are not much intensive. Hence on need base the man power is 12"

On daily basis MAQ Depot has cleaning requirement of 16+16 Coaches for the Rakes 56656 and 56654; which do not come under Contract cleaning.

Dry sweeping only done at terminating stations, and not at CHV; Train got dirty from subsequent trips. Also the formation reaches for Primary Maintenance only after 3 Days, which further require Interior intensive water washing and Mop cleaning, Toilet cleaning, Exterior Washing, and Watering at pit line. All these activities are accomplished by Departmental staff only.

MAN POWER CALCULATION

Bench marking norms for maintenance staff provision for coaching maintenance as per Annexure to Railway Board's letter No.2000/M(C)/143/5 dated 24.12.01 is followed for calculating manpower requirement.

Activity	Yard stick	Calculation for MAQ Depot	Total men required
Cleaning and complete washing	0.65/coach	$0.65 \times 32 = 20.8$	20.8

Hence Manpower Requirement

$-0.65 \times 32 = 20.8$ men say 21 men

$RG \ 21 \times 16.5 / 100 = 3.4$ say 3 men

$LR \ 24 \times 12.5 / 100 = 3$ men

Total for Cleaning activities- 21 staff + 3.0 RG + 3.0 LR = 27.0 Men

Planning Branch's Remarks

Train no. 56656 and 56654 are attended (dry sweeping and watering) at CAN and CLT. On observation the level of cleaning and washing for the above passenger trains are not much intensive. Hence on need base the man power is 12.

Moreover, after 2001, there were tremendous change in cleaning process and cleaning equipments, cleaning detergents/liquids which made cleaning process as user friendly. During field observation the cleaning efficiency of the gang is appreciable and the cleaning was very good.

Total man power requirement for cleaning and washing maintenance on need base is **12** (Inclusive of RG)

LR(1.5 post) is calculated separately in para 3.16 of work study report.

As it is reiterated by the C.O. the staff arrived for coach washing is modified to 17 men

C.O.Views

3.10 ENROUTE TRAIN PASSING,PFTR, RECEPTION & DESPATCH ATTENTION AT PLATFORM:

"For the rolling in / rolling out, releasing of DV, box feeling and dispatch on need base men required = 3 per shift + 1 supervisor.

It was identified that 3 persons required in 1 hour for PFTR activity of a train. Maximum of 15 minutes required for a through train attention. Hence for attending 4.6 PFTR trains and 0.9 train of through train attention it is derived that 3 persons required for a shift. 3 more persons required for platform activities in a shift. Along with 1

supervisor, 7 persons needed in a shift, together 20 persons will meet out the PF and PFTR activities.

Total man power requirement for Platform, PFTR and through train attentions on need base is 20 (Inclusive of RG)”

For the **Platform activities**, Minimum **2 Staff** to be deputed simultaneously for Axle Box feeling itself as the axle box feeling should be done within 20 minutes from the arrival as per existing safety guidelines. Record keeping of 22 different registers to be done by these staff.

In addition to this, staff required for Rolling In/Out Examinations of other trains, Releasing of brakes, attaching of loco and ensuring brake power and continuity of the outgoing trains, etc; as the timings of most of the Incoming/Outgoing trains falls within 20-30 min. As all these activities to be done simultaneously, a minimum of **4 staff** required per shift.

For **Turn Round trains**, cleaning activities, Board changing, Water filling, Amenities etc. to be ensured. For terminating trains Amenities check up, theft report, Door Locking, Shutter closing, etc are mandatory. This essentially needs **2 staff/Shift**.

Total **1 Supervisor + 8 staff (Including PF Carpenter)** is required/Shift.

RG - $27 \times 16.5 / 100 = 4.45 = 4.0 \text{ men}$

LR - $(27+4)12.5 / 100 = 3.8 = 4.0 \text{ men}$

Total = 4 Supervisor + 31 staff (Including RG & LR)

Planning Branch's Remarks

Already 7 persons allowed in the work study report and LR is calculated separately. Moreover, the average of the no. of trains attended in a shift of 8 hrs. is also very minimum

PFTR attended in a day (98/7) = 14 trains

PFTR attended in a shift = 4.6 trains

Through trains attended in a day (20/7) = 2.8 trains

Through trains attended in a shift = 0.9 train

It was identified that 3 persons required in 1 hour for PFTR activity of a train. Maximum of 15 minutes required for a through train attention. Hence for attending 4.6 PFTR trains and 0.9 train of through train attention it is derived that 3 persons required for a shift. 3 more persons required for platform activities in a shift.

LR(2.5 posts) is calculated separately in para 3.16 of work study report.

As it is reiterated by C.O. RG is allowed for the arrived staff strength of 20. I.e. 3.2 say 3 staff. Hence the man power arrived is revised as 20+ 3 RG+LR 2.8 is allowed.

Total requirement for PF activities is also revised to 35 men.

C.O.Views

3.11 MATERIAL STORAGE / ACCOUNTAL:

"The required materials are collected from General Stores depot and other divisions / railway according to the requirement and disposal of condemnation with relevant records are maintained at Stores Section.

ACTIVITIES

Total items in Store = 195 plus

Imprest items = 195

Non-Imprest items = 124

Local purchase = 20 approx.

Average issue per day = 50 approx.

On need bases, men power required for stores as detailed below.

Ministerial staff = 1

Assistant for recording and issues = 2

Material collection = 5

Total = 8 Total

Man power requirement for Stores maintenance on need base is 8 (Inclusive of RG)"

-Stores activities include procurement, stacking of materials, Daily Record keeping, Material Distribution, Scrap disposal, Non stock procurement and billing etc.

-General T&P management (385 Major headings and more than 2000 items under this) and Imprest cash management done by stores.

-Material collection is mainly done from GSD/PGT, GSD/MAS, and Workshop/PER, GOC, MSD/GOC and depots like TVC, SBC, BBQ, Local Procurement etc. Since these collection of materials which are heavy and bulky by design, occur simultaneously; at least **8 staff** required.

-For the accounting of Registers nearly 35 Nos. and Files of 30 Nos. besides the Daily transaction records, Scrap Disposal etc. **2 Ministerial staff** are required. Also the Receipt of Materials, stacking the same, Issues.

-Considering the commencement of LHB coach maintenance, Procurement of LHB Coaching components already started, which necessitates additional manpower. These activities need minimum **2 staff**.

Total- 1Supervisor+2 Ministerial+10 staff+1 RG+1 LR

Planning Branch's Remarks

Already 8 staff is allowed and LR is calculated separately. 5 men are separately allocated for material collection and 2 men for record keeping. 1 ministerial staff is also allowed for other stores related clerical works.

Scrap disposal, and material stacking and other works may be done by the material collection gang when there is no online for collection.

Hence the arrived manpower is revised as 9 men.

C.O.Views

3.12 MAINTANANCE OF M&P WITH BD:

"There are 15 machineries / plant items are maintained in this depot including a transport vehicle. These items are a part of depot for smooth operation, which regular and break down maintenance is taken care by a team who are primarily maintaining the break down trains.

The BD Unit details: ART (3 coaches + 4 wagons) ,MRV (3 coaches)

The average BD movement per month = 0.75

Man power required for BD and M & P maintenance = 6

Total man power requirement for M & P with BD on need base is 6 (Inclusive of RG)"

-There are **approx 250** items in the BD T&P. Most of the items require periodical attention.

-BD activities include Daily, Weekly, monthly and Quarterly schedules, which includes operation and maintenance of Hydraulic jacks, Hydraulic Re-Railing Equipments, Hydraulic Rescue devices, Plasma cutters, Trepans, Power saws, Gas cutting equipments, etc. in view of safety measure. For this 6 staff is essential.

M&P activities includes daily monitoring of Electrical and Diesel compressors, Whiting jacks, Fork Lift, Trucks, High pressure jet, Test rigs, etc. which needs **3 staff** minimum.

$$9 \times 16.5 / 100 - 1.5$$

RG - 1 staff.

$$LR (9+1)12.5 / 100 - 1.25 -$$

Total - 1 Supervisor+9staff+1 RG+1 LR

Planning Branch's Remarks

Already 6 staff (4 men for BD activities + 2 men for M&P activities)is allowed in the work study report excluding LR and Supervisor. Moreover the electrical related machineries will be taken care by electrical staff .

The BD movement is also found very minimum of less than 1 per mon

Considering the views of C.O.the arrived manpower is revised as 9 men

C.O.Views

3.13 OTHER ACTIVITIES:

The man power requirement for other activities are furnished in detail (inclusive of RG & LR)

<i>Sl. No</i>	<i>Activity</i>	<i>Workload</i>	<i>Staff Requirement</i>
1	Outstation	At CHV, Pass. Train attention.	1
2	En-route attention	MAQ to KPQ	1
3	Curtain room & dustbin checking	On demand	1
4	Bio-toilet maintenance	Contract	1
5	Roof leakage test	Check at monsoon time	1
6	Pest control	Contract	2
7	Linen management	Contract	2
8	Manufacturing of Name Boards	Need base	2

3.13(3).

CURTAIN ROOM:

Curtain Room activities involves curtain stitching, Fixing of curtains and curtain rods in Coaches, Routine replacements etc needs 3staff.

Total - 3 staff

3.13(4).(6).(7) Bio-Toilet Maintenance, Pest Control, OBHS, Linen Management, IMS, Contract Management

The above mentioned Bio-Toilet, Pest Control, OBHS, Linen Management, IMS, Contract Management, etc are coordinated through 3 supervisors, which is insufficient.

BIO-TOILET activities alone needs 1 Supervisor, to maintain 200 plus coaches daily. It dealt the proper functioning of 800 Bio-Toilets, Modifications, Contract management, Bills, Record keeping etc. which needs **3 staff** also.

Total - 1 Supervisor+3 staff+1 RG.

PEST CONTROL & OBHS activities needs to maintain for 200 plus coaches daily, where **1staff/shift** required, for the field monitoring and reporting. It also involves up keeping of records per shift along with allocation of duties to contract employees. Total **3staff/Day.**

OBHS activities includes Staff/Material verification, Quantity Ensuring, Attendance Register/Biometric Punching, Passenger complaints Records, Feedback scoring,

RCI Calculation etc. 1 Supervisor is essential to ensure the Quality, standard of service prescribed and procedures. These Record keeping activities need at least **2staff/Day**.

Total - 1 Supervisor+5 staff (Including RG).

LINEN MANAGEMENT & IMS: Linen Management activities need **1 staff/shift**. The activities include Linen washing, quality checking, load accounting, travelling authority issuing and preparation of CRIS report, etc on daily basis with recording of the same. In addition to this handling of passenger complaints, bill preparation also to be done, total **3 staff/day** required..

For **IMS** activities like Sick analysis, complaint analysis, Injury Report analysis, updating of procedures and work instructions, Co ordination with external authorities, Staff Training, 1 Supervisor is essential to ensure the Quality and standard of service prescribed. This Further needs maintain of 28 records. Additionally IMS activities needs at least **1 staff/Day**.

Total - 1 Supervisor+ 4 staff (Including RG).

CONTRACT MANAGEMENT activities involves **10 different contracts** in Depot, which is to be monitored, for Quality of materials used, contract labour deployment, Machine utilization, Contract Bills, Maintenance of various Registers.etc. This require at least 1 supervisor, 2 Ministerial and 2 staff.

Total - 1 Supervisor+2 Ministerial staff+2 staff (Including RG).

Planning Branch's Remarks

Stitching of curtains, fixing of curtain rods is not a daily / shift based activities. These activities are carried out whenever the necessity arises.

Since most of the activities are done by contract, the necessity of more staff is reduced and the supervision part will be done by the senior most staff or by the Supervisor.

Already 11 staff is allowed in the work study for other 8 activities carried out .

One supervisor may be exclusively nominated for contract management with a gang of 2 staff to monitor the contract activities. Moreover, since issue of linens in AC coaches is withdrawn in view of the Covid-19 pandemic, hence the staff for linen management can also be utilized for contract Management

If more staff needed, the staff allotted for roof leakage test and name board manufacturing may be utilized.

C.O. Views

3.14 ANCILLARY STAFF REQUIREMENTS

ANCILLARY STAFF REQUIREMENT:

Pit line maintenance, PFTR and sick line activities are supported by Ancillary staff according to requirement. The present technological improvements in coaches like PU painting, modular toilets, high grade panels, molded type windows reduce the work load of ancillary staff.

Staff required on need base:

- | | | |
|--------------|---|---|
| 1. Carpenter | - | 3 |
| 2. Painter | - | 1 |
| 3. Welder | - | 3 |

3.14(1)CARPENTER:

-Interior amenity works are presently not out sourced.

- Carpenter Duty is essential for every primary maintained rakes and Secondary maintained Rakes and PFTR trains as passenger amenity fittings needs to be intact in all means. MAQ depot needs 1 carpenter / shift for **Pit line Maintenance**.

So **3 Carpenters /Day** required. The shift duty carpenter being utilized for Sick line activities also.

Platform duty needs 1 carpenter / shift. So **3 Carpenters /Day** required to accomplish the work.

Total - 6 Carpenters + 1 RG.

3.14 (3). Welder:

Welder is required for every primary maintained rakes and Secondary maintained Rakes. MAQ depot needs **1 Welder / shift** for Pit line Maintenance.

Additionally So **1 Welder /Day** required for the Sick line and other welding works in M&P and BD maintenance activities.

Total- 4 Welder +1 RG.

Planning Branch's Remarks

Carpenter

The workload for carpenters is reduced more due to modern panels and latest LHB coaches which requires less maintenance.

In platform duty, the timing available for maintenance is very minimum, and the need for carpenter is very less.

Welders

As it is reiterated by the Coordinating Officer **one more welder** is allowed.

C.O. Views

3.15. MINISTERIAL STAFF:

Ministerial staffs requirement

1. Overall In-charge -1
2. Time Office- 1
3. Contract -2
4. Stores -2
- Total -6

GENERAL & RSC:

-Other duties like Records keeping of Primary, Secondary maintenance, schedule activities, History cards of coaches and Other coordination activities related to Traffic, Electrical etc needs 3 staff.

-CMMS, PCDO, other Office related activities need 2 staff/Day.

Total - 5 staff/Day

Planning Branch's Remarks

Ministerial staff

No surrender of post is recommended in this category and the sanctioned post of ministerial staff of 5 is allowed.

General & RSC – there is no separate man power provided in the revision of Yard sticks prescribed by the Railway Board vide letter No. E(MPP)2019/1/12 Dated 30-09-2019

C.O. Views

Recommendation of Work study:

The following posts are surplus to the requirement and this may be surrendered and credited to the vacancy bank.

Sl. No.	Category	Grade Pay	No. of posts
1	SSE	Rs.4600	1
2	Technician II(Carpenter)	Rs. 2400	2
3	Technician II (Welder)	Rs.2400	2
4	Helper (C&W)	Rs. 1800	31

Based on the requirements of the MAQ Depot, there are shortages in various grades which are mentioned as shown:

Sl. No.	Category	Grade Pay	Sanction	Actual	Requirement	Shortfall of posts
1	SSE	Rs.4600	14	13	17	4
2	JE	Rs.4200	10	10	9	-1
3	Ch. OS	Rs.4600	1	nil	1	1
4	OS	Rs.4200	2	nil	1	1
5	Sr. Clerk	Rs.2800	1	2	2	0
6	Jr. Clerk	Rs.1900	1	2	2	0

7	Sr. Tech	Rs.4200	22	24	28	4
8	Technician I	Rs.2800	78	36	75	39
9	Technician II	Rs.2400	4	37	35	-2
10	Technician III	Rs.1900	20	36	35	-1
11	Technician (Carpenter)	Rs. 2400	5	3	7	4
12	Technician (Welder)	Rs.2400	5	3	5	2
13	Technician (Painter)	Rs.2400	1	1	1	1
14	Helper (C&W)	Rs. 1800	100	64	72	8
Total			264	231	290	60

Therefore the surrendering of the Posts is not advisable, as the depot is under shortages for the same, and the Manpower needs to be enhanced as per the requirement details furnished, so as to maintain the Safety in Workplaces, and execute the standardized procedures in various work practices.

Planning Branch's Remarks

REVISED STAFF REQUIREMENT FOR C&W ACTIVITIES AT MAQ DEPOT

Sl. No.	Activity	Posts requirement assessed by C.O.	Posts allowed in final report	RG	LR	Total
1	Primary maintenance	104+17RG+15LR (incl. Sup)	92+12 Sup	17	15	136
2	Secondary maintenance	2	2	-	-	2
3	Sick line activities	11(Incl.RG)+2LR (incl.Sup)	8+1 Sup	1	1	11
	Cleaning and complete washing	21+3RG+3LR	12+1up	2	2	17
5	Platform and PFTR activities	4 Sup+31 (incl.RG&LR)	23+4 Sup	4	4	35
6	Material storage and accounting	1 Sup+2 Minist+10+1 RG+1LR	7+1 minst +1 Sup	1	1	11
7	Maintenance of M & P with BD	1Sup+9 +1RG+1LR	6+1 Sup	1	1	9
8	Outstation	1	1	-	-	1
9	En-route attention	1	1	-	-	1
10	Curtain room & dustbin checking	3	1	-	-	1
11	Bio-toilet maintenance	1Sup+3 +1RG	1	-	-	1
12	Roof leakage test	1	1	-	-	1
13	Pest control	1Sup+5 (incl.RG)	2	-	-	2
14	Linen management & IMS	1Sup+4(incl.RG)	2	-	-	2
15	Manufacturing of Boards	2	2	-	-	2

16	Contract Management	1Sup+2 minist+ 2(incl. RG)	2	-	-	2
17	Carpenter	6+1RG	3	-	-	3
18	Painter	1	1	-	-	1
19	Welder	4+1RG	4	-	-	4
20	Ministerial Staff(1 staff included in STR)	2	4	-	-	4
21	General &RSC	5	-	-	-	0
22	BT, Pest, Linen, contract		1 Sup	-	-	1
23	Depot in-charge	1	1Sup	-	-	1
Total		-	-	-	-	248

Sanction vs Requirement

Sanction	Requirement	surplus
258	248	10

Revised Recommendation :

The following post is found surplus to the requirement and this may be surrendered and credited to the vacancy bank.

Sl. No.	Category	Grade Pay	Level	No. of posts
1	Helper (C&W)	Rs. 1800	1	10

5.0 FINANCIAL SAVINGS:-

If the recommendation of the study report is implemented, the annual **recurring** financial savings will be as under:-

Sl. No.	Category	Grade pay (Rs.)	No. of posts	Gross Pay (Rs.)	Annual Financial savings (Rs.)
1	Helper (C&W)	Rs. 1800	10	43817	5258040
TOTAL			10		
Total Savings per year					5258040

SOUTHERN RAILWAY

No.J/P.535/V/C&W

Divisional Office,
Personnel Branch
Palghat,
Dt.09-01-2020

Dy.Chief Planning Officer/HQ/MAS ✓

Sub: Work study to review the staff strength at SSE/C&W/MAQ-PGT Division.

Ref: SDGM Lr.No.G.275/WSSR-041920/2019-20 dt 07/09-01-2020.

The "S.A.V.E" (Sanction, Actual, and Vacancy & Excess) statement of various category of post at SSE/C&WMAQ, of this Division are furnished below.

Sl.No.	Category	Sanction	Actual	Vacancy	Excess	Remarks
1	SSE/C&W	14	14	0		
2	JE/C&W	12	10	2		
3	Sr.Tech/C&W	22	26	-4	4	
4	Tech.I/C&W	78	35	43		
5	Tech.II/C&W	4	37	-33	33	
6	Tech.III/C&W	20	38	-17	17	
7	Assistant/C&W	92	65	27		
8	Ch.OS	1	1	0		
9	OS	2	0	2		
10	Sr.Clerk	1	2	-1	1	
11	Jr.Clerk	1	2	-1	1	

For kind information.

(एस. के. इंदुशेखर/S.K.INDUSEKAR)
सकाधि/या/APO/T,
कृते वमंकाधि/पालक्काड/for Sr.DPO/PGT.

1. Sanction, Actual, vacancy and Excess statement for SSE/C&W/MAQ are given below.

Sl no	Designation	Sanction	Actual	Vacancy	Excess
1	SSE/C&W/MAQ	14	13	01	Nil
2	JE/C&W/MAQ	10	10	Nil	Nil
3	Sr. Technician	22	24	Nil	02
4	Technician Gr I	78	36	42	Nil
5	Technician Gr II	04	37	Nil	33
6	Technician III	20	36	Nil	16
7	Assistant/C&W	100	64	36	Nil
Ancillary Staff					
8	Carpenter	5	3	2	Nil
9	Welder	5	3	2	Nil
10	Painter	1	1	Nil	Nil
	Total	259	227	83	51

Ministerial Staff

1	Ch.OS	1	Nil	01	NIL
2	OS	2	Nil	02	NIL
3	Sr.Clerk	1	2	NIL	1
4	Jr.clerk	1	2	Nil	1
	Total	5	4	03	2

2. Actual staff strength as per roll including supervisory & clerical staff

Sl no	Designation	Scale	G.pay	Actual
1	SSE/C&W/MAQ	9800-34800	4600	13
2	JE/C&W/MAQ	9800-34800	4200	10
3	Sr. Technician	9800-34800	4200	24
4	Technician Gr I	5200-20200	2800	36
5	Technician Gr II	5200-20200	2400	37
6	Technician III	5200-20200	1900	36
7	Assistant/C&W	5200-20200	1800	64
9	Sr. Tech Carpenter	9800-34800	4200	01
10	Carpenter I	5200-20200	2800	2
11	Welder Gr II	5200-20200	2800	3
12	Sr.Tech.Painter	9800-34800	4200	01
	Total			227

Ministerial Staff

1.

1	Sr.Clerk	5200-20200	2800	2
2	Jr.clerk	5200-20200	1900	2
	Total			4

3. Brief outline of activities with reference to all the available sections

Mangalore is the only major coach maintenance depots of Palghat Division. Sixteen express trains and eight passenger trains are primarily maintained and Mangalore Santhragachi express train is secondarily maintained in this depot. There is one mini running room at Cheruvathur. Coach maintenance activities are confined to Mangalore station. ART special Class. B and ARMV special Scale 1 are located here. Coaching Depot Officer, Mangalore is the overall charge of the C&W activities. His jurisdiction is from Panambur to Kannur. Activities at coaching depots Mangalore are as follows.

a) Rake maintenance.

Sl. No	Train No.	Type	No. of Coaches per Rake	No. Of Rakes	Type of Maint:	Maint: Pattern
1	16603	Exp:	23	04	PM	Daily
2	22638	Exp:	23	04	PM	Daily
3	16605	Exp:	21	04	PM	Daily
4	56656	Pass:	16	03	PM	Daily
5	56654	Pass:	16	03	PM	Daily
6	16649	Exp:	21	02	PM	Four Days in a week
7	22636	Exp:	11	01	PM	Twice in a week
8	56640	Pass:	16	01	PM	Twice in a week
9	56643	Pass:	05	01	PM	Twice in a week
10	22852	Exp:	23	01	SM	Once in a week
11	16687	Exp:	13	01	PM	Once in a week

PFTR of 17 trains average per day with an average of 269 coaches per day.

b) Sick Line – Average 04 coaches per day. SCT of all Off POH and Off IOH coaches.

c) IOH attention of coaches – Presently 5 coaches average per month

d) Platform activities – Terminating of average 25 trains per day and dispatching of average 25 trains per day.

e) M&P, ART/ARME – Maintenance of Electrical Compressor, Diesel Compressor, Diesel welding plants -2 Nos. Fork lift other welding plants, all ART & ARME equipments like, HRD, HRE, Plasma Cutting equipments and all small machineries.

f) Schedule Batch – ‘A’ & ‘B’ Schedule of coaches, Curtain changing of AC coaches.

g) Stores – Collection of materials from MAS, TPJ, PGT etc. issue and Condemnation etc. Record keeping.

h) Bio toilet – Managing and Supervision of AMOC of Bio toilets and, Record keeping of AMOC activities

i) OBHS - Managing and Supervision of OBHS activities and Record keeping

j) Linen - Managing and Supervision of Contract and Record keeping and checking of washed linens.

k) IMS – Maintaining of all IMS records and ensuring all activities related to IMS.

4. Distribution of staff

Batch	SSE	JE	Sr.Tech	Tech.I	Tech.II	Tech.III	Helper	Welder	Painter	Carpenter	Total
Sick line	01	--	03	--	02	--	01	--	--	--	07
RM -I	01	01	02	02	04	01	--	--	--	--	11
RM -II	01	01	01	03	02	02	--	--	--	01	11
RM -III	01	01	02	03	03	--	--	--	--	01	11
RM -IV	01	--	01	02	06	--	--	--	--	--	10
RM -V	01	--	02	04	--	03	--	--	--	--	10
RM -VI	--	01	04	02	02	01	--	--	--	--	10
RM -VII	--	01	02	01	01	05	--	--	--	--	10
Pink Batch	01	01	04	06	--	05	--	--	--	--	17
Schedule	01	--	01	02	06	04	--	--	--	--	18

M&P		--	02	01	01	01	--	--	--	--	
Cleaning 56656 & 56654	--	--	--	--	--	--	15	--	--	--	15
Bio Toilet	03	--	--	--	01	--	02	--	--	--	14
SOI		--	--	01	--	--	01	--	--	--	
OBHS		--	--	--	--	--	02	--	--	--	
Linen		--	--	--	--	--	02	--	--	--	
IMS		--	--	--	--	--	01	--	--	--	
Contract		--	--	--	--	--	01	--	--	--	
Store	01	--	--	01	--	--	05	--	--	--	07
RSC	--	--	--	--	--	--	06	--	--	--	06
PF	--	03	--	03	06	06	03	--	--	--	21
PFTR	--	--	--	--	01	--	02	--	--	01	04
General	--	--	--	--	--	--	04 (1-welder) + 03 Asst:	03	01	--	08
Line Duty CHV/PGT	--	--	--	01	--	--	01	--	--	--	02
RG/LR	--	01	--	04	02	08	18	--	--	--	33
Total	12	10	24	36	37	36	64	03	01	03	226

Details of Originating Trains

Sl No.	Train No.	From-To	Type of service.	Dep. time	Frequency
1	16649	MAQ-NCJ	Exp:	05.00	Daily
2	56654	MAQ- CLT	Pass:	05:10	Daily
3	56643	MAQ -KBPR	Pass:	05.15	Daily
4	56640	MAQ - MAO	Pass:	05.30	Daily
5	16513	SBC - KRWR	Express	06.25	Weekly 4 times
6	16160	MAQ - MS	Express	06.45	Daily
7	16605	MAQ-NCJ	Exp:	07.20	Daily
8	56324	MAQ - CBE	Pass:	07.40	Daily
9	22636	MAQ -MAO	Express	08.15	Daily
10	16523	SBC - KRWR	Express	09.00	Weekly 3 times
11	56647	MAQ- SBHR	Pass:	10.00	Daily
12	22609	MAQ - CBE	Express	11.45	Daily
13	12620	MAQ -LTT	Express	12.50	Daily
14	12602	MAQ -MAS	Mail	13.25	Daily
15	16348	MAQ - TVC	Express	14.20	Daily
16	70106	MAQ -MAO	DEMU	14.45	6 days in a week
17	12686	MAQ - MAS	Express	16.15	Daily
18	56656	MAQ- CAN	Pass:	16:35	Daily
19	16687	MAQ- SDVK	Express	17:05	Once in a week
20	16858	MAQ -PDY	Express	17.05	Once in a week
21	16856	MAQ -PDY	Express	17.05	Once in a week
22	16603	MAQ- TVC	Express	17:45	Daily
23	16630	MAQ - TVC	Express	18.10	Daily

24	56645	MAQ -KBPR	Pass:	18.15	Daily
25	16586	MAQ –YPR (Via SBHR)	Express	19.00	Weekly 3 times
26	16566	MAQ –YPR (Via PGT)	Express	20.15	Once in a week
27	17605	MAQ -KCG	Express	20.15	Twice in a week
28	16524	KRWR -SBC	Express	20.55	3 days in a week
29	16514	KRWR -SBC	Express	20.55	4 days in a week
30	22638	MAQ – MAS	Express	22:20	Daily

5. **No of passing trains :** 04 Trains ETR

6. **ART & BD Movement particulars for the last 2 years.**

Details of ART movement

Sl. No	Date	Destination	Reason
1	06.03.18	MAQ-KGQ- MAQ	Trail Run
2	14.06.18	MAQ-KGQ- MAQ	Trail Run
3	17.06.18	MAQ- Nandikoor-MAQ	Loco WDG ₄ 12814, EC ₀ RBCNHLMI 33120953048 and SCR BCNHLMI 33091017466 derailed at Nandikoor.
4	18.09.18	MAQ-KGQ- MAQ	Trail Run
5	20.12.18	MAQ-KGQ- MAQ	Trail Run
6	03.06.19	MAQ-KGQ- MAQ	Trail Run
7	23.08.19	MAQ-KGQ- MAQ	Trail Run
8	15.10.19	MAQ yard	Derailed of SR SLR 11706 of 56324 at MAQ yard.
9	23.10.19	MAQ-KGQ- MAQ	Trail Run
10	02.01.20	MAQ-KGQ- MAQ	Trail Run

Details of ARME movement of the last 2 Years

Sl. No	Date	Destination	Reason
1	06.03.18	MAQ-KGQ- MAQ	Trail Run
2	14.06.18	MAQ-KGQ- MAQ	Trail Run
3	18.09.18	MAQ-KGQ- MAQ	Trail Run
4	20.12.18	MAQ-KGQ- MAQ	Trail Run
5	03.06.19	MAQ-KGQ- MAQ	Trail Run
6	23.08.19	MAQ-KGQ- MAQ	Trail Run
7	15.10.19	MAQ yard	Derailed of SR SLR 11706 of 56324 at MAQ yard.
8	23.10.19	MAQ-KGQ- MAQ	Trail Run
9	02.01.20	MAQ-KGQ- MAQ	Trail Run

7. **ART/ARME maintenance for the last 2 years:** ART/ARME trail runs are conducted one in 2 months and maintenance are usually conducted on the next day of trail run. The maintenance details of the last 2 years are furnished below.

Sl. No.	Date	No. of staff distributed	Remarks
1	8.3.18	12	A and B Maintenance schedules done.
2	14.6.18	13	A and B Maintenance schedules done.

3	18.9.18	11	A and B Maintenance schedules done.
4	21.12.18	12	A and B Maintenance schedules done.
5	17.3.19	13	A and B Maintenance schedules done
6	4.6.19	12	A and B Maintenance schedules done
7	25.8.19	13	A and B Maintenance schedules done
8	24.10.19	13	A and B Maintenance schedules done

8. Internal Cleaning and Washing for last two years

56656 and 56654 pass: cleaning and washing are carried out by departmental staff. On an average 15 staff are deputed daily for this purpose.

Cleaning and washing of all express trains and two passenger trains are carried out by contract staff.

9. PF attention particulars for the last 2 years

Average terminating examination of average 21 trains per day
Originating examination of average 21 trains per day

PFTR attention of average 19 trains per day

10. Enroute attention particulars for the last two years

a. Hot axle wheel change done at Payyannur on 24.09.2019

b. Hot axle wheel change done at Kotikkulam on 12.05.2019

11. Yardstick for man power calculation if any

Bench marking norms for maintenance staff provision for coaching maintenance as per Annexure to Railway Board's letter No.2000/M(C)/143/5 dated 24.12.01 is followed for calculating manpower requirement.

Sl No	Activity	Yard stick	Calculation for MAQ Depot	Total men required
1	Primary Maintenance	Men/primary coach handled per day Superfast/Long distance trains: 1.1 Mail/Express trains: 0.9 Passenger Trains: 0.75	Superfast/Long distance trains coaches: $28 \times 1.1 = 30.8$ Mail/Express trains coaches: $56 \times 0.9 = 50.4$ Passenger Trains coaches: $38 \times 0.75 = 28.5$	109.7
2	Secondary maintenance	Men/secondary coach handled per day Superfast/Long distance trains: 0.55 Mail/Express trains: 0.45 Passenger Trains: 0.36	Superfast/Long distance trains coaches: $3.29 \times 0.55 = 1.8$	1.8
3	Enroute train, passing, Turn round attention, Terminating/ Originating (inclusive of cleaning and examination at platform but excluding interior dry cleaning of turn round trains)	Men/ coach examined per day Superfast/Long distance trains: 0.26 Mail/Express trains: 0.23 Passenger Trains: 0.18	Superfast/Long distance train coaches: $94.85 \times 0.26 = 24.7$ Mail/Express train coaches: $142.57 \times 0.23 = 32.8$ Passenger Train coaches: $48.8 \times 0.18 = 8.8$	66.3
4	Sick line attention	0.15 /coach held	$0.15 \times 470 = 70.5$	70.5

5	Cleaning and complete washing	0.65/coach	0.65x32=20.8	20.8
6	Material storage/accountal	26 men(for depots with holding more than 150 coaches)	26	26
7	Statistical work	8 men(for depots with holding more than 150 coaches)	8	8
Grand Total				303

For activities other than sick line, Leave Reserve also may be provided. LR for 233 staff is 29.

Hence total manpower calculation is 303+29=**332**

12. No of failures attended enroute for the last two years:

Mangalore central is a terminating station. Hence en route attention is not done. Any failure noticed is attended in PFTR , Primary or Secondary Maintenance.

13. Details of outsourced activities

Sl. No.	Nature of work	Name of the Contractor	Contract period
1	Mechanized cleaning and watering of primary/secondary maintained express trains of Mangalore Central, Cleaning and housekeeping of depot premises and On Board Housekeeping Services (OBHS) of Train Nos 12601/12602 & 22637/22638	Service Master Clean Ltd, A 28, 29 Okhala Phase-I, New Delhi-110020	01.11.2018 to 31.10.2022 4 Years
2	Cleaning and watering of coaches during turn round attention and changing of destination boards at Mangalore Central	Vasantham Agencies, 47/6, Niyafi complex, Denninson Road, Nagercoil, Tamilnadu-629001	29.01.2018 to 28.01.2020 2 Years
3	Collection, machine washing, loading/unloading transportation and distribution of bed rolls in trains originating from Mangalore Central	Tharu & Sons, Karipayi Road, Rajagiri (Post), South Kalamassery, Ernakulam (Dist.)	11.01.2019 to 10.01.2020 1 Year
4	On board housekeeping services for Train Nos.22609/22610 & 22635/22636	Tharu & Sons, Karipayi Road, Rajagiri (Post), South Kalamassery, Ernakulam (Dist.)	10.11.2017 to 09.11.2020 3 Years
5	On board housekeeping services for Train Nos.16605/16606 & 16649/16650	S.R.Enterprises, No.4-7-18/6/C, S.K.Complex, Ist floor, Opp. Indian Bank, Raghavendra Nagar, Nacharam, Hyderabad-500076	12.11.2017 to 11.11.2020 3 Years
6	On board housekeeping services for Train Nos.16603/16604 & 16629/16630 between Mangalore Central and Shornur	Tharu & Sons, Karipayi Road, Rajagiri (Post), South Kalamassery, Ernakulam (Dist.)	13.06.2019 to 12.06.2021 2 Years
7	On board housekeeping services for Train Nos.16687/16688	Tharu & Sons, Karipayi Road, Rajagiri (Post), South Kalamassery, Ernakulam (Dist.)	08.04.2018 to 07.04.2021 3 Years

8	Pesrt and Rodent Control in Railway passenger coaches maintained at Mangalore Central	Truly Pest Solution Private Limited, Krishi Rasayan Building,29- Lala Lajpat Rai Sarani, Kolkata, West Bengal	15.02.2019 to 14.02.2022 3 Years
9	Hiring of road vehicle for the official use of CDO/MAQ	Ashraf P M, Palathinkara House, Pundoor, Nekraje, Kasargod, Kerala, PIN:671514	07.05.2018 to 06.05.2020 2 Years
10	CAMOC of Bio toilets	Hughes & Hughes Pvt.Ltd, IFFCO- TOKIO, Suit No. 205/206, II, Floor 40 – 41, Nehru place, New Delhi Pin - 110019	08.01.20 20 to 07.01.2024 24 months

14. No. of coaches under primary maintenance : 122 Coaches per day

15. No. of coaches under secondary maintenance : 23 Coaches per week

16. Sick line attention particulars:

Month	Wheel Defects	Bolster Spring	Axle Guide Spring	Brake Cylinder	Brake Gear	DV Defect	Train Pipe	Draw/Buffer Gear	Roof Leak	Water Tank	Carpentry Repairs	Dash pot Assembly	Equalizing Stay	Anchor Link	Axle Box Canted	RB Failure	Door Pivot	Centre Pivot	Others	Single car test	V belt	Other Electrical Sick	Total
Jan 19	03	02	01			01		06				04							06	46	7	6	82
Feb 19	05	02				05		03		02		04							01	58	4	7	91
Mar 19	01	02	01	02	02		05		01											71	3	8	101
April 19	02	01	01		01			03		01									17	29	10	6	71
May19	06			01	01			03		01		08				01			15	33	8	12	89
JUNE19		03	01					07	04	01	01	06							07	30	03	12	75
JUL 19	03	01					01	04	10	01		04		01					14	57	07	08	111
AUG-19	07	02		01	02	01	01	02	09	02		06							23	53	06	07	122
SEPT19	08	06	01			01		04			01	16							18	62	07	07	130
OCT-19	5	01	02			01		08	05	02	01	5				01			24	55	15	03	128
NOV-19	1		02					01		04		08			01				14	48	9	06	94
DEC-19	02	01		01				07		03		08							08	36	04	01	71

17. Machinery and stores particulars

<u>Sl NO</u>	<u>Description</u>	<u>Details</u>
1	Total imprest items	195
2	Non imprest and non-stock items	124
3	M&P items	16
4	No of T&P items	
	(A) C&W general	365
	(B) ART	338
5	Cash Imprest	
	(A) General Imprest	100000
	(B) BD Imprest	25000
	(C) ADME Imprest	500
	(D) Hydrant Imprest	7000
6	Scrap Disposal in FY 19-20	
	(A) Ferrous	19.36 Tonnes
	(B) Non/Ferrous	43.31 Tonnes

	(C) DS 87 submitted for Auction 1.SR CZ 94647	22.5 Tonnes
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18. Details of staff working in other areas:

01 Helper at CHV for cleaning of RR/CHV and locking of 56659 Pass: 01 Tech.Gr.I at Control office PGT.

19. Details of other area staff working in our depot if any: Nil**20. Failure statistics chart/details:**

The number of coaches marked sick for the last two years

	2018	2019
Jan	50	20
Feb	56	26
Mar	27	16
Apr	27	21
May	35	36
June	28	11
Jul	38	31
Aug	41	39
Sept	76	47
Oct	47	35
Nov	42	22
Dec	24	28
Total	491	332

21. Man power requirement for the depot:

As calculated by the yardstick given by railway board, the manpower requirement for the depot comes to 332. \

Also the following outsourced activities also require manpower on need basis. For linen quality checking: 3

For monitoring OBHS activities: 3

For monitoring AMOC of Bio toilets: 3

For monitoring Pest control: 2

Total: 11

Hence the total manpower requirement comes to **332+11=343**

The actual strength of the depot is only **227**.

22. Latest circulars/instructions regarding maintenance if any: Nil**23. Proposal for extension of trains/Service:**

16603 Exp: will be linked with Kerala Express 12625 Exp: and PM at MAQ. The existing ICF rake will be changed to LHB.

24. Yard and coach condemnation details for the last two years:

a. Condemnation approval for SR CN 93231 & SR GS 92454 ON 06.02.18

b. Condemnation approval for SR RS 85705, SR RE 83702 & SR GS 90715 on

06.03.18

c. Condemnation approval for SR CZ 94647 on 12.09.19 (Waiting for disposal)

25. Misc.Activities

Old condemned RA 3611 placed near to SSE/C&W office for converting to meeting cum training hall.

Fabrication work related to maintenance activities Stores activities, Installation of compressor.

26. Any other information related to work study.

IOH activities will be started at MAQ with in short period. Already IOH of 19 coaches done at MAQ. Full fledged IOH activities will be requiring more manpower.

The non core activities like Linen Management, OBHS, Bio toilet AMOC, IMS etc introduced. It is not possible to manage these activities with the existing staff strength.

The track toward sick line is using for the stabling of rakes. Any other movement of coaches to sick line is not possible during day time. Additional track required to sick line.

Presently materials are collecting from PGT Store and transporting to SRR by lorry of SRR depot and then again shifting all materials to the Off IOH coaches and transporting to MAQ. This causes the deployment of more manpower for material collection.

**SOUTHERN
RAILWAY**

Office of the Coaching Depot Officer
Carriage & Wagon Depot/MAQ
Date: 15.09.2020

J/M 226/12

Dy. CPLO/MAS

Sub: Remarks on the Work study Review report on staff strength at SSE/C&W/O/MAQ submitted by
Work study Inspector/Dy.CPLO/O/MAS Reg:-

Ref:

1. Work study Review report of Work study Inspector/Dy.CPLO/O/MAS (No. G.275/WSSR — 041920-2019-20) dated 09.01.2020
2. Your letter no. . G.275/WSSR — 041920-2019-20) dated 05.08.2020

Gone through the work study report submitted by fanning Brach/NAS in detail. In the report it is

recommended to surrender some of the post which is not acceptable due to the reasons mentioned in detail overleaf. Category wise shortfall of posts which is essentially to be retained in view of the present workload shown below.

Sl. No.	Category	Grade Pay	Shortfall of posts
1	ssE	Rs.4600	4
2	3E	Rs.4200	-1
3	Sr.Clerk		2
4	Sr.Tech	Bs.4200	4
5	Technician I	Rs.2800	39
6	Technician II	Rs.2400	-2
7	Technician III	Rs.1900	-1
8	Technician (Carpenter)	Rs. 2400	4
9	Technician (Welder)	Rs.2400	2
10	Helper(C&W)	Rs.1800	8
Total			59

Therefore the surrendering of the Posts is not advisable and the Manpower needs to be enhanced as per the requirement details furnished, so as to maintain the Safety in Workplaces, and execute the standardized procedures in various work practices. Our analysis is enclosed for your perusal.

कोचिंग डिप्टी
द. रे., मंगलूरु
Coaching Depot Office
Rly., Mangaluru 575 001

OBSERVATIONS ON WORK STUDY REPORT OF PLANNING DEPT AND JUSTIFICATION

3.6.PRIMARY MAINTENANCE:

“Primary Maintenance: The total contract value for the out sourced activities for 2/3 years is Rs. 24,31,39,376/-.

If we consider the man power cost of 30% it comes around Rs. 7,29,41,812. If we consider for 1 year it will be Rs. 2,43,13,937/-.

If we consider the average labour cost Rs. 600/ day, the above value is equal to 111 men per day. Since most of the activities like coach washing, bio toilet maintenance, linen maintenance etc., are outsourced, the arrived staff strength of 106 staff is sufficient including RG.”

It is not right practice to add the contract values of all the contracts in the depot to arrive at a total value, since each contract is having different periods. Also even if it is added like that, the manpower cost of contract value is **70 %**. Hence the above arrived figure of 111 men per day is not correct.

-The outsourced works such as coach washing, bio toilet maintenance, linen maintenance are not safety related works. The Under gear maintenance exclusively a safety related work and require more intensive attention to all the parts and components of the running gear, Schedule attention like A schedule, B schedule, maintaining standard dimensions of components of running gear, oiling various brake gear components, replacement of defective parts, air brake testing etc.

-As per latest RB circular No. E(MPP)2019/1/12 dated 30.09.2019 on Revision of yardsticks man power for PM is done with 0.85/coach after outsourcing interior amenity. At present interior amenity is not outsourced and is being done departmentally.

-As per above mentioned yard stick RG & LR can be provided in addition to above calculated strength.

MAN POWER CALCULATION

Bench marking norms for maintenance staff provision for coaching maintenance as per RB circular No.E(MPP)2019/1/12 dated 30.09.2019 Annexure to Railway Board's letter is followed for calculating manpower requirement.

SI No	Activity	Yard stick	Calculation for MAQ Depot	Total men required
1	Primary Maintenance	ICF/LHB STOCK 0.85/coach with interior amenity attention to be outsourced	122 Coaches per day. 122 X 0.85 = 103.7	104

Considering **RG** : $104 \times 16.6/100 = 17.2$

Therefore Total : $104 + 17 = 121$ Considering **LR** :

$121 \times 12.5/100 = 15.125$ **Cumulative total : 121 +**

15 = 136

Total for Primary Maintenance = 104 Staff+17 RG+15 LR (Including Supervisors)

3.7. SECONDARY MAINTENANCE

Only one Train is nominated for secondary maintenance at MAQ Depot once in a week.

Total man power requirement for Secondary maintenance is 1.
Inclusive of RG is 2.

3.10 SICKLINE ACTIVITIES:

“From the data of the year 2019, the average coach release / day (including Electrical sick) = 1.12 coach only.

As per CRSE/MAS instructions, there are 1.6 coaches per day attended only for single car test rig. As it has no other attention required and not covered under sick account, the man power requirement is very meager to the maximum of 2 men on their work part of the day.

Total man power requirement for Sick line maintenance on need base is Sick line coaches per day 3.19×0.12 men = 0.38 men

Single car test = 2 men

Other assistance for electrical sick = 2 men

Total = 5 men

RG = 1 men

Total for sick line activities = 6 men”

Sick line attention particulars:

Month	Wheel Defects	Bolster Spring	Axle Guide Spring	Brake Cylinder	Brake Gear	DV Defect	Train Pipe	Draw/Buffer Gear	Roof Leak	Water Tank	Carpentry Repairs	Dash pot Assembly	Equalizing Stay	Anchor Link	Axle Box Canted	RB Failure	Door Pivot	Centre Pivot	Others	Single car test	V belt	Other Electrical Sick	Total
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Mar 19	01	02	01	02	02		05	05		01										71	3	8	101
April 19	02	01	01		01			03		01									17	29	10	6	71
May19	06			01	01			03		01		08				01			15	33	8	12	89
JUNE19		03	01					07	04	01	01	06							07	30	03	12	75
JUL 19	03	01					01	04	10	01		04		01					14	57	07	08	111
AUG-19	07	02		01	02	01	01	02	09	02		06							23	53	06	07	122
SEPT19	08	06	01			01		04			01	16							18	62	07	07	130
OCT-19	5	01	02			01		08	05	02	01	5				01			24	55	15	03	128
NOV-19	1		02					01		04		08			01				14	48	9	06	94
DEC-19	02	01		01				07		03		08							08	36	04	01	71
																			GRAND TOTAL				1165

-From the data of the year 2019, the average coach release / day including Electrical sick and SCT is

3.19.

MAN POWER CALCULATION

Bench marking norms for maintenance staff provision for coaching maintenance as per RB circular No.E(MPP)2019/1/12 dated 30.09.2019 Annexure to Railway Board's letter is followed for calculating manpower requirement.

Sl No	Activity	Yard stick	Calculation for MAQ Depot	Total men required
1	Sick line attention	0.12 /coach holding	$0.12 \times 435 = 52.2$	52 Including RG

-Sick marked coaches were placed in sick line for various repairs like side bearers & centre pivot defect **which necessitates lifting of coaches**, under gear repairs, brake gear repairs, spring replacements, couplers defects repairs and replacements of buffing gears and interior amenities repairs – like water tank(needs more man power), berths, doors, windows, panel repairs, welding works etc. being carried out. At least **5 men required for these activities as most of these works are strenuous in nature and involves risk and curtailing man power in such places is not advisable in safety point of view.**

-Air test to be carried out for all sick marked coaches.

- Single Car Test (SCT) to be conducted for all coaches marked sick for brake gear related problems and all the off POH & off IOH Coaches and coaches received from other Railways.

-Minimum **4 staff is required to conduct SCT** as about 25 parameters to be observed in this test and brake application and releasing of 4 brake cylinders to be observed simultaneously.

-**2 men required for assisting Electrical works** where joint effort is required.

-LR/RG : 3 men.

-As per the latest bench marking norms mentioned above, the man power requirement in Sickline including IOH works outs to be 52.

-At present IOH activity is not being carried out at MAQ. So **38 men not taken into final tally.**

-Therefore minimum man power requirement in Sickline is: **11 Staff (including RG) + 2 LR Including Supervisor**

3.11 CLEANING & COMPLETE WASHING:

“56656 and 56654 are attended (dry sweeping and watering) at CHV, CAN and CLT. On observation the level of cleaning and washing for the above passenger trains are not much intensive. Hence on need base the man power is 12”

-

- On daily basis MAQ Depot has cleaning requirement of 16+16 Coaches for the Rakes 56656 and 56654; which do not come under Contract cleaning.

- Dry sweeping only done at terminating stations, and not at CHV; Train got dirty from subsequent trips. Also the formation reaches for Primary Maintenance only after 3 Days, which further require Interior intensive water washing and Mop cleaning, Toilet cleaning, Exterior Washing, and Watering at pit line. All these activities are accomplished by Departmental staff only.

MAN POWER CALCULATION

Bench marking norms for maintenance staff provision for coaching maintenance as per Annexure to Railway Board's letter No.2000/M(C)/143/5 dated 24.12.01 is followed for calculating manpower requirement.

Sl No	Activity	Yard stick	Calculation for MAQ Depot	Total men required
1	Cleaning and complete washing	0.65/coach	$0.65 \times 32 = 20.8$	20.8

Hence Manpower Requirement

- $0.65 \times 32 = 20.8$ men

	-	21.0 men	
RG	-	$21 \times 16.5/100 = 3.4$	= 3 men
LR	-	$(21+3)12.5/100 = 3.0$ men	
<u>Total for Cleaning activities</u>		<u>- 21 staff + 3.0 RG + 3.0 LR = 27.0 Men</u>	

3.10. ENROUTE TRAIN PASSING, PFTR, RECEPTION & DESPATCH ATTENTION AT PLATFORM:

“For the rolling in / rolling out, releasing of DV, box feeling and dispatch on need base men required = 3 per shift + 1 supervisor.

It was identified that 3 persons required in 1 hour for PFTR activity of a train. Maximum of 15 minutes required for a through train attention. Hence for attending 4.6 PFTR trains and 0.9 train of through train attention it is derived that 3 persons required for a shift. 3 more persons required for platform activities in a shift. Along with 1 supervisor, 7 persons needed in a shift, together 20 persons will meet out the PF and PFTR activities.

Total man power requirement for Platform, PFTR and through train attentions on need base is 20 (Inclusive of RG)”

- For the **Platform activities**, Minimum **2 Staff** to be deputed simultaneously for Axle Box feeling itself as the axle box feeling should be done within 20 minutes from the arrival as per existing safety guidelines. Record keeping of 22 different registers to be done by these staff.

- In addition to this, staff required for Rolling In/Out Examinations of other trains, Releasing of brakes, attaching of loco and ensuring brake power and continuity of the outgoing trains, etc; as the timings of most of the Incoming/Outgoing trains falls within 20-30 min. As all these activities to be done simultaneously, a minimum of **4 staff** required per shift.

- For **Turn Round trains**, cleaning activities, Board changing, Water filling, Amenities etc. to be ensured. For terminating trains Amenities check up, theft report, Door Locking, Shutter closing, etc are mandatory. This essentially needs **2 staff/Shift**.

-Total **1Supervisor + 8 staff (Including PF Carpenter)** is required/Shift. RG -

$$27 \times 16.5/100 = 4.45 \quad = 4.0 \text{ men}$$

$$\text{LR} \quad - \quad (27+4)12.5/100 \quad = 3.8 = 4.0 \text{ men}$$

Total = 4 Supervisor + 31 staff (Including RG & LR)

3.11. MATERIAL STORAGE / ACCOUNTAL:

“The required materials are collected from General Stores depot and other divisions / railway according to the requirement and disposal of condemnation with relevant records are maintained at Stores Section.

ACTIVITIES

Total items in Store = 195 plus

Imprest items = 195

Non-Imprest items = 124 Local

purchase = 20 approx.

Average issue per day = 50 approx.

On need bases, men power required for stores as detailed below.

1. Ministerial staff = 1
2. Assistant for recording and issues = 2
3. Material collection = 5
- Total = 8 Total

Man power requirement for Stores maintenance on need base is 8 (Inclusive of RG)”

-Stores activities includes procurement, stacking of materials, Daily Record keeping, Material Distribution, Scrap disposal, Non stock procurement and billing etc.

-General T&P management (385 Major headings and more than 2000 items under this) and Imprest cash management done by stores.

-Material collection is mainly done from GSD/PGT, GSD/MAS, and Workshop/PER, GOC, MSD/GOC and depots like TVC, SBC, BBQ, Local Procurement etc. Since these collection of materials which are heavy and bulky by design, occur simultaneously; at least **8 staff** required.

-For the accounting of Registers nearly 35 Nos, Files of 30 Nos, besides the Daily transaction records, Scrap Disposal etc. **2 Ministerial staff** are required. Also the Receipt of Materials, stacking the same, Issues.

-Considering the commencement of LHB coach maintenance, Procurement of LHB Coaching components already started, which necessitate additional manpower. These activities need minimum **2 staff**.

Total - **1Supervisor+2 Ministerial+10 staff+1 RG+1 LR**

3.12. MAINTANANCE OF M&P WITH BD:

“There are 15 machineries / plant items are maintained in this depot including a transport vehicle. These items are a part of depot for smooth operation, which regular and break down maintenance is taken care by a team who are primarily maintaining the break down trains.

The BD Unit details: ART (3 coaches + 4 wagons) ,MRV (3 coaches) The

average BD movement per month = 0.75

Man power required for BD and M & P maintenance = 6

Total man power requirement for M & P with BD on need base is 6 (Inclusive of RG)”

-There are **approx 250** items in the BD T&P. Most of the items requires periodical attention.

-BD activities include Daily, Weekly, monthly and Quarterly schedules, which includes operation and maintenance of Hydraulic jacks, Hydraulic Re-Railing Equipments, Hydraulic Rescue devices, Plasma cutters, Trepanos, Power saws, Gas cutting equipments, etc. in view of safety measure. For this 6 staff are essential.

M&P activities includes daily monitoring of Electrical and Diesel compressors, Whiting jacks, Fork Lift, Trucks, High pressure jet, Test rigs, etc. which needs **3 staff** minimum.

9*16.5/100 - 1.5

RG - 1 staff.

LR (9+1)12.5/100 -1.25 -

Total - **1 Supervisor+9staff+1 RG+1 LR**

3.13. OTHER ACTIVITIES:

The man power requirement for other activities are furnished in detail(inclusive of RG & LR)

<i>Sl. No.</i>	<i>Activity</i>	<i>Workload</i>	<i>Staff Requirement</i>
<i>1</i>	<i>Outstation</i>	<i>At CHV, Pass. Train attention.</i>	<i>1</i>
<i>2</i>	<i>En-route attention</i>	<i>MAQ to KPQ</i>	<i>1</i>
<i>3</i>	<i>Curtain room & dustbin checking</i>	<i>On demand</i>	<i>1</i>
<i>4</i>	<i>Bio-toilet maintenance</i>	<i>Contract</i>	<i>1</i>
<i>5</i>	<i>Roof leakage test</i>	<i>Check at monsoon time</i>	<i>1</i>
<i>6</i>	<i>Pest control</i>	<i>Contract</i>	<i>2</i>
<i>7</i>	<i>Linen management</i>	<i>Contract</i>	<i>2</i>
<i>8</i>	<i>Manufacturing of Boards</i>	<i>Need base</i>	<i>2</i>

3.13(3).

CURTAIN ROOM:

Curtain Room activities involves curtain stitching, Fixing of curtains and curtain rods in Coaches, Routine replacements etc needs 3staff.

Total - **3 staff**

3.13(4).(6).(7) Bio-Toilet Maintanance, Pest Control,OBHS, Linen Management,IMS, Contract Management

The above mentioned Bio-Toilet, Pest Control, OBHS, Linen Management, IMS, Contract Management, etc are coordinated through 3 supervisors, which is insufficient.

BIO-TOILET activities alone needs 1 Supervisor, to maintain 200 plus coaches daily. It dealt the proper functioning of 800 Bio-Toilets, Modifications, Contract management, Bills, Record keeping etc. which needs **3 staff** also.

Total - **1 Supervisor+3 staff+1 RG.**

PEST CONTROL & OBHS activities needs to maintain for 200 plus coaches daily, where **1staff/shift** required, for the field monitoring and reporting. It also involves up keeping of records per shift along with allocation of duties to contract employees. Total **3staff/Day**.

OBHS activities includes Staff/Material verification, Quantity Ensuring, Attendance Register/Biometric Punching, Passenger complaints Records, Feedback scoring, RCI Calculation etc. 1 Supervisor is essential to ensure the Quality, standard of service prescribed and procedures. These Record keeping activities need atleast **2staff/Day**.

Total - 1 Supervisor+5 staff (Including RG).

LINEN MANAGEMENT & IMS: Linen Management activities need **1staff/shift**. The activities include Linen washing, quality checking, load accounting, travelling authority issuing and preparation of CRIS report, etc on daily basis with recording of the same. In addition to this handling of passenger complaints, bill preparation also to be done, total **3 staff/day** required..

For **IMS** activities like Sick analysis, complaint analysis, Injury Report analysis, updation of procedures and work instructions, Co ordination with external authorities, Staff Training,1 Supervisor is essential to ensure the Quality and standard of service prescribed. This Further needs maintain of 28 records. Additionally IMS activities needs atleast **1 staff/Day**.

Total - **1 Supervisor+ 4 staff (Including RG).**

CONTRACT MANAGEMENT activities involves **10 different contracts** in Depot, which is to be monitored, for Quality of materials used, contract labour deployment, Machine utilization, Contract Bills, Maintenance of various Registers.etc.

This require atleast 1 supervisor, 2 Ministerial and 2 staff.

Total - 1 Supervisor+2 Ministerial staff+2 staff (Including RG).

3.14 ANCILLARY STAFF REQUIREMENTS

ANCILLARY STAFF REQUIREMENT:

Pit line maintenance, PFTR and sick line activities are supported by Ancillary staff according to requirement. The present technological improvements in coaches like PU painting, modular toilets, high grade panels, molded type windows reduce the work load of ancillary staff.

Staff required on need base:

- | | | |
|--------------|---|---|
| 1. Carpenter | - | 3 |
| 2. Painter | - | 1 |
| 3. Welder | - | 3 |

3.14(1)CARPENTER:

- Interior amenity works Are presently not out sourced.
- Carpenter Duty is essential for every primary maintained rakes and Secondary maintained Rakes and PFTR trains as passenger amenity fittings needs to be intact in all means.
- MAQ depot needs 1 carpenter / shift for **Pitline Maintenance**. So **3 Carpenters /Day** required. The shift duty carpenter being utilized for Sickline activities also.
- Platform duty** needs 1 carpenter / shift. So **3 Carpenters /Day** required to accomplish the work.

Total - 6 Carpenters +1 RG.

3.14 (3). Welder:

-Welder is required for every primary maintained rakes and Secondary maintained Rakes. MAQ depot needs **1 Welder / shift** for Pitline Maintenance.

-Additionally So **1 Welder /Day** required for the Sickline and other welding works in M&P and BD maintenance activities.

Total - 4 Welder +1 RG.

3.15. MINISTERIAL STAFF:

Ministerial staffs requirement

- | | |
|-----------------------|---|
| 5. Overall Incharge - | 1 |
| 6. Time Office - | 1 |

3. Contract	-	2	
4. Stores	-	2	
Total	=	6	

GENERAL & RSC:

-Other duties like Records keeping of Primary, Secondary maintenance, schedule activities, History cards of coaches and Other coordination activities related to Traffic, Electrical etc needs **3 staff**.

-CMMS, PCDO, other Office related activities need **2 staff/Day**.

Total - 5 staff/Day

TOTAL STAFF REQUIREMENT FOR C&W ACTIVITIES AT MAO DEPOT/PGT DIVISION MAY BE AS UNDER:

Activity	Requirement	RG	LR
Primary	104	17	15
Secondary	2		
Sick line	11		2
Cleaning & Washing	21	3	3
PF/ Enroute/PFTR	27	4	4
Materials/ Store	13	1	1
M&P /BD	10	1	1
Outstation	1		
En-route attention	1		
Curtain Room	3		
BT	4	1	
Roof Leak	1		
Pest Control/OBHS	6		
Linen	5		
Contract	5		
Manufacture of	2		
Carpenter	6	1	
Painter	1		
Welder	4	1	
Ministerial(General)	2		
General+RSC	5		
Total	234	29	26
Grand Total			289

Sl.No	Description	Actual			Requirement(including RG and LR)		
		Staff	Sup	Ministerial	Staff	Sup	Ministerial
1.	Depot Incharge		1			1	
2.	Primary Maintenance	83	12		124	12	0
3.	Secondary				2	0	0
4.	Sick line	6	1		12	1	0
5.	Cleaning & Washing	15			25	2	0
6.	PF/PFTR	21	3		31	4	0
7.	Materials/ Store	6	1	1	12	1	2
8.	M&P /BD	5	1		11	1	0
9.	Outstation	2			1	0	0
10.	Enroute attention	-			1	0	0
11.	Curtain Room	3			3	0	0
12.	BT	3	1		4	1	0
13.	Roof Leak	1			1	0	0
14.	Pest Control/OBHS	4	1		5	1	0
15.	Linen Management/IMS	3	1		4	1	0
16.	Contract	1		1	2	1	2
17.	Manufacture of Boards	2			2	0	0
18.	Carpenter	3			7	0	0
19.	Painter	1			1	0	0
20.	Welder	4			5	0	0
21.	Ministerial(General)			2	0	0	2
22.	General+RSC	9			5	0	0
23.	RG/LR	32	1		-	-	-
	Total	204	23	4	258	26	6
	Grand total	231			290		
		206 Staff, 23 Supervisor, 4 Ministerial staff			258 Staff, 26 Supervisor, 6 Ministerial staff		

Recommendation of Work study:

The following posts are surplus to the requirement and this may be surrendered and credited to the vacancy bank.

<i>Sl. No.</i>	<i>Category</i>	<i>Grade Pay</i>	<i>No. of posts</i>
<i>1</i>	<i>SSE</i>	<i>Rs.4600</i>	<i>1</i>
<i>2</i>	<i>Technician II(Carpenter)</i>	<i>Rs. 2400</i>	<i>2</i>
<i>3</i>	<i>Technician II (Welder)</i>	<i>Rs.2400</i>	<i>2</i>
<i>4</i>	<i>Helper (C&W)</i>	<i>Rs. 1800</i>	<i>31</i>

Based on the requirements of the MAQ Depot, there are shortages in various grades which are mentioned as shown:

Sl. No.	Category	Grade Pay	Sanction	Actual	Requirement	Shortfall of posts
1	SSE	Rs.4600	14	13	17	4
2	JE	Rs.4200	10	10	9	-1
3	Ch. OS	Rs.4600	1	nil	1	1
4	OS	Rs.4200	2	nil	1	1
5	Sr. Clerk	Rs.2800	1	2	2	0
6	Jr. Clerk	Rs.1900	1	2	2	0
7	Sr. Tech	Rs.4200	22	24	28	4
8	Technician I	Rs.2800	78	36	75	39
9	Technician II	Rs.2400	4	37	35	-2
10	Technician III	Rs.1900	20	36	35	-1
11	Technician (Carpenter)	Rs. 2400	5	3	7	4
12	Technician (Welder)	Rs.2400	5	3	5	2
13	Technician (Painter)	Rs.2400	1	1	1	1
14	Helper (C&W)	Rs. 1800	100	64	72	8
Total			264	231	290	60

Therefore the surrendering of the Posts is not advisable, as the depot is under shortages for the same, and the Manpower needs to be enhanced as per the requirement details furnished, so as to maintain the Safety in Workplaces, and execute the standardized procedures in various work practices.