



**WORK STUDY TO REVIEW THE**  
**STAFF STRENGTH AT**  
**SSE/C&W/NCJ -**  
**TVC DIVISION**

**SOUTHERN RAILWAY**

**PLANNING BRANCH**

**G.275/WSSR-431819/2019-20**

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**STAFF STRENGTH AT**  
**SSE/C&W/NCJ -**  
**TVC DIVISION**

**STUDIED BY**

**WORK STUDY TEAM  
OF  
PLANNING BRANCH**

**JUNE 2019**



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**(i)**  
**ACKNOWLEDGEMENT**

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**(ii)**  
**AUTHORITY**

Annual programme of work studies for the year 2018-19 approved by SDGM.

**(iii)**  
**TERMS OF REFERENCE**

To review the staff strength at SSE/C&W/NCJ of Thiruvananthapuram Division.

**(iv)**  
**METHODOLOGY**

The following methodology has been adopted while conducting the study.

1. Collection of data.
2. Observation of activities at site.
3. Interaction with Sr.DME/TVC, ADME/NCJ, SSE/C&W/NCJ, other Supervisors and staff.
4. Application of relevant yardstick, benchmark and ground realities.
5. Effect of modern technologies equipments likely to be changed in the near future in the quantum of activities and improvements.

*ssss.*

(v)  
**SUMMARY OF RECOMMENDATIONS**

**RECOMMENDATION NO.1**

**One** OS post (Grade pay Rs.4200/-) sanctioned excess to the requirement may be surrendered and credited to the bank of surplus post.

**(1 Post)**

**RECOMMENDATION NO.2**

**Ten** posts of Helper (Grade pay Rs.1800/-) sanctioned excess to the requirement may be surrendered and credited to the bank of surplus post.

**(10 Posts)**

**(TOTAL - 11 POSTS)**



**CHAPTER – I****1.0 INTRODUCTION**

- 1.1 Mechanical Branch is the body of the transportation system of Railways connected with the production, maintenance and repairs of the Rolling Stock – viz., Locos, Carriages and Wagons.
- 1.2 The C&W Wing is mainly responsible for maintenance and repair of rolling stock which is carried out under prescribed schedules and procedure.
- 1.3 Standardisation and inspection is also an important aspect for smooth functioning of the system. Timely supply of Quality Stores is another important factor.
- 1.4 The improvements in the rolling stock have not only resulted higher speeds and safety but also easy maintenance. The role of Electrical Branch is increasing after electrification of traction, introduction of EMUS / MEMUs and computer applications in loco as well as in maintenance practices.
- 1.5 The outsourcing of some activities is also a factor while reviewing the staff strength. The overall productivity is increased not only by more production but also by qualitative training and effective manpower utilisation through rightsizing.

**THIRUVANANTHAPURAM DIVISION:**

- 1.6 Thiruvananthapuram Division is one of six divisions in Southern Railway and TVC is Headquarters of TVC division. Sr.DME/ TVC is the administrative head of the Mechanical department of TVC division. He is assisted with DME, ADMEs, Senior Section Engineers, other supervisors and staff for day to day activities.

**NAGERCOIL C & W DEPOT**

- 1.7. Nagercoil C&W depot is one the Coaching Depot in TVC division and is situated adjacent to the Nagercoil Jn. The Coaching maintenance activities

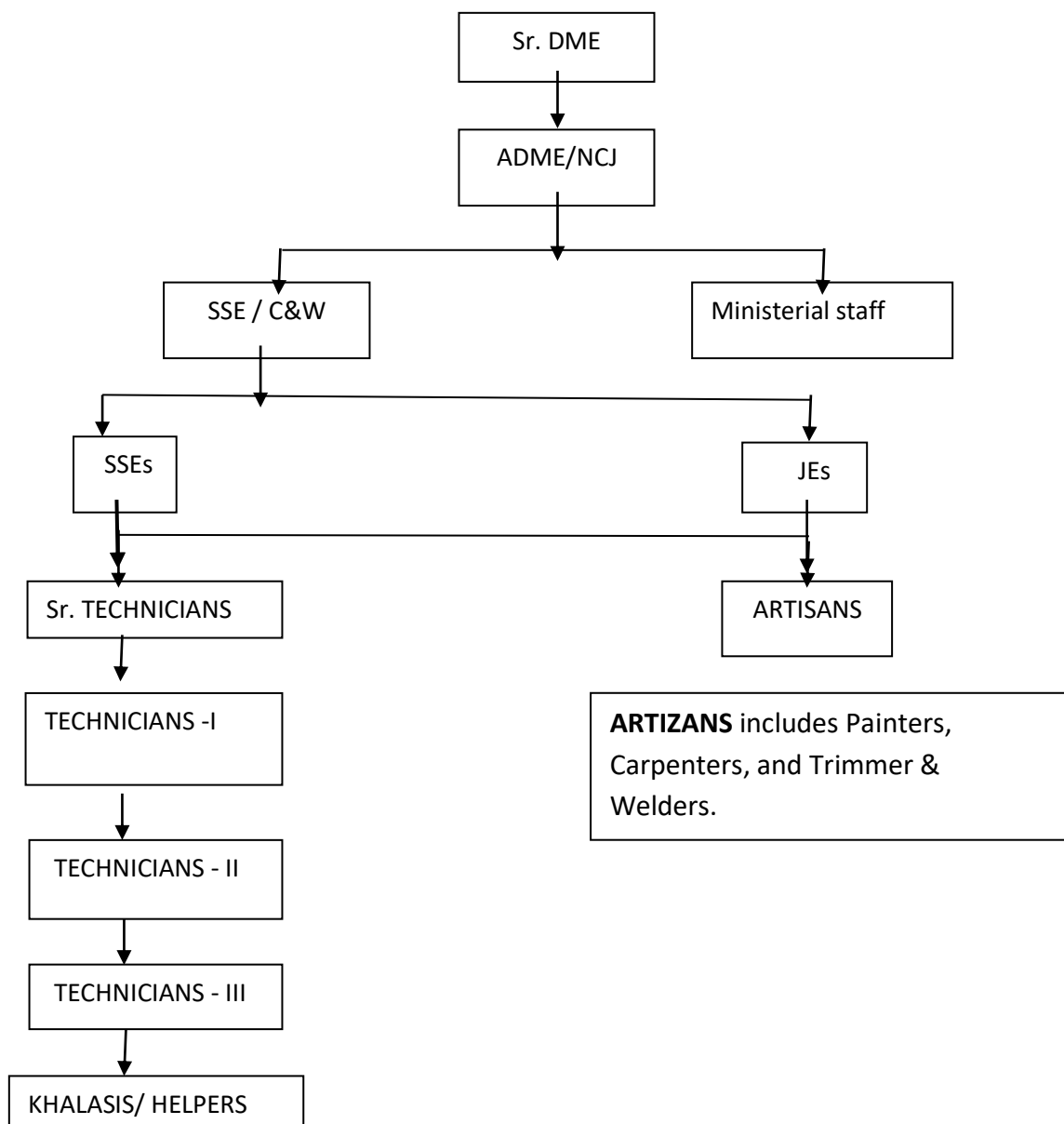
at NCJ coaching depot can be broadly classified, as Primary / Secondary maintenance of coaches, sick line maintenance activities, time section, Platform activities like Roll-in-Roll-out Examination, Axle box feeling, BPC collection and RS-5 acknowledgement, releasing formation, joint check of WCB for OEA trains etc., checking of FP & BP, taking yard coach position, feeding yard position in computer, maintaining of Bio-toilet retro fitment register and Pest control activities are being carried out at this depot.

- 1.8 This C&W Depot/NCJ is functioning under the direct control of ADME/NCJ and he is assisted with 10 Senior Section Engineers, 7 Junior Engineers, one Sr.Clerk and 196 Group 'C' and 'D' staff which includes JE/Technician apprentices also. The sanction strength of the depot is 260 of which 42 posts are operated in excess over stipulated sanction and 88 posts are kept as vacant posts. The net vacancy after deducting the excess posts is 46. As on 07.02.2019, the sanction, actual, excess and vacancy position at this depot is enclosed as **Annexure-I**.
- 1.9 An attempt has been made to study the present system of working and the requirement of man power is arrived at the following chapters.



**CHAPTER-II****2.0 PRESENT SCENARIO**

2.1 The Nagercoil C&W Depot is situated near Kanniyakumari which is the last station in south India. Two lines are takeoff from this station of which one line goes to Tirunelveli and other one terminated at Kanniyakumari. Apart from the trains terminated/started from Nagercoil, some of the trains are terminated/started at Kannniyakumari also given Primary/secondary maintenance at this depot.

**2.1 ORGANISATIONAL SET UP**



## 2.2 **THE STAFF STRENGTH AT SSE/C&W/NCJ**

The details staff, categories is given in the scale check in Annexure-I. As per the Sr.DPO/TVC, the sanctioned strength is shown as 254 whereas the actual staff working is shown as 222 leaving 32 posts as net vacancies. But, the statement obtained from SSE/C&W/NCJ shows that the sanctioned strength is 260 and the actual staff working are 214, showing 87 posts as vacant, 41 posts as excess and shows the net vacancies as 46.

## 2.3 **The variation in all categories is as follows:**

Sl. No.	Category	Sanction		Actual	
		Sr.DPO/TVC as on 13.06.2018	SSE/C&W/ NCJ as on 07.02.2019	Sr.DPO/TVC as on 13.06.2018	SSE/C&W/ NCJ as on 07.02.2019
1.	SSE	11	11	9	10
2.	JE	8	9	9	7
3.	Sr.Technician (GP Rs.4200)	29	29	14	13
4.	Technician-I (GP Rs.2800)	70	70	14	16
5.	Technician-II (GP Rs.2800)	2	2	9	14
6.	Technician-III (GP Rs.1900)	30	30	68	58
7.	Helper/Khalasi (GP Rs.1800)	96	96	94	86
8.	Welder	2	2	3	3
9.	Carpenter	3	3	1	3
10.	Painter	2	2	1	2

11.	Trimmer	1	1	0	1
12	PB clerks	0	5	0	1
<b>TOTAL</b>		<b>254</b>	<b>260</b>	<b>222</b>	<b>214</b>
<b>APPRENTICE</b>					
TECHNICIAN		0	0	0	1
<b>GRAND TOTAL</b>		<b>254</b>	<b>260</b>	<b>222</b>	<b>215</b>

## 2.4 **BRIEF OUTLINE OF ACTIVITIES**

### **PLATFORM ACTIVITIES**

- a. Rollin-in Examination
- b. Axle box feeling
- c. BPC collection and RS-5 acknowledgement
- d. Placing Danger Boards
- e. Releasing the formation.
- f. Attending any deficiency noticed in under gear & internal of coach
- g. Reversing Destination board.
- h. Joint check of WCB for OEA trains
- i. Removal of danger board after completion of work.
- j. Action to be taken if any remarks in RS-5
- k. Continuity check and issue BPC
- l. Rolling in & out Examination.

## 2.5 **ACTIVITIES FOR UP TRAINS**

### **TO KEEP FORMATION READY:** (Total permissible time: 10 minutes.)

- Place danger board both end and should attend formation immediately after placing in Platform.

- Rear most SLR both COAC should be in closed position and both BP & FP hoses should be positioned in suspension Hook.
- Ensure proper connection of all BP & FP hoses and secured with Binding wire.
- All COAC are in open condition except rear SLR.
- All fall plates are in open condition.
- All counter weight is secured properly.
- Ensure proper release of SLR hand brake.

## **2.6 CHARGING OF FP & BP**

- Ensure MR pressure 7.5 Kg/Cm<sup>2</sup> in Loco.
- Obtain permission from LP to charge the FP
- Ensure continuity of FP pipe line by ensuring immediate deflection of FP gauge in Rear most SLR.
- Ensure gradual increase of FP pressure gauge and it should charge from 4 to 5 Kg/cm<sup>2</sup> pressure within 4 minutes.
- During charging of FP leak test should be conducted from both sides.
- Both staff should walk upto middle and return back .
- After charging FP 4.5 Kg/cm<sup>2</sup> then BP can be charged.
- Ensure that BP pipe get charge within 6 to 7 minutes.
- If any Leakage in COAC tries to adjust the handle to rectify if not entire set to be replaced.
- If leakage in palm ends connection drain both end COAC. Non loco side COAC should be closed first and change MU washer.
- If drain out cock not in proper position, reposition it.
- If ICV leaking- Re-set if not possible isolate.
- If any abnormal leakage matter may be brought to the knowledge of Supervisor.

## **2.7 MAINTENANCE ACTIVITIES IN PIT LINE:**

- Obtain T-431 from Traffic department
- Isolate the line by putting pad lock and danger board

- Releasing of AR tank and fitment of gauges at rear SLR rear portion FP, BP hoses.
- If any defect/deficiencies noticed, issue Sick Memo ( RS-18)
- Examination of Under gear system
- Examination of Air brake system
- During this examination if any defect noticed, issue sick Memo.
- Inspection of Amenity fitting and repair/replacement of items.
- Inspection of Outsource activities

## **2.8 SICK LINE ACTIVITIES :**

- Unloading and loading of bogies from RS received from GOC shop.
- IOH activities
- Sick activities as per sick memo
- POH extension
- Assisting Electrical dept for Alternator defect, V belt change etc.
- Attending window glass change at Pit line.
- Attending sick coaches at pit line for want of coaches to avoid short of compo.
- Attention of coaches after Tyre turning.

## **2.9 TIME SECTION**

- Maintenance of muster roll
- Preparation of salary bill including NDA, NHA etc.,
- All correspondence
- DAR correspondence
- Issuing of pass/PTO
- Maintaining leave records
- Daily posting of staff attendance
- Detailing /Maintaining Refresher course register.
- Maintaining scale check
- Monthly summary preparation on staff details/posting in/out, discharge and long absentees.

- Issuing Sick memo and maintaining sick details of staff

## **2.10 ROLLING STOCK SECTION:**

- Taking Yard coach position
- Feeding Yard position in computer and sending message to CW control TVC.
- Maintaining following registers
  1. Certification Register
  2. Pit Occupation Register
  3. IOH Register (Diary)
  4. Sick line TXR Diary
  5. IOH Out turn records
  6. Single car test register
  7. BMBC Testing gadget register
  8. Air Hose register
  9. Analysis register
  10. Tyre turning register
  11. Placement of coaches in sick line register
  12. 100 days failure register
  13. Daily position register
  14. En-route detachment/ LTM register
  15. POH/OFF POH register
  16. Special Drive register
  17. USF register
  18. Incoming/out going Message book.
    - Preparing monthly PCDO
    - Maintaining daily census on coaches
    - Any Rolling stock correspondence to HQ/TVC
    - Bio-toilet retro fitment register
    - Communicate placement of sick coaches and removal of fit coaches from Sick line to Traffic dept.
    - Maintaining RS-1 register

## **2.11 CONTRACT SECTION:**

- Issue of Grade sheet for regular cleaning of coaches - Daily
- Maintaining grade sheets received from Maintenance office - Daily
- Preparation of monthly summary of all contractors. Checking coach number with rake wise & train wise for any attachment or detachment coach.
- Bill passing – checking the bill, scrutinizing marks with grade sheet, total no of coaches, man power distribution, less man detailed, deducting penalty amount from the bill if imposed earlier.
- Reply to Public complaint.
- Pest and Rodent chemical receipt and issue daily.
- Maintaining consumption register of Pest & Rodent control.
- Monitoring of centralized Gas connection testing activity daily.
- Maintaining register for replaced components in pantry wise.
- Fire extinguisher servicing/Bill passing register maintained.
- Maintenance of penalty register.
- Maintenance of Public complaint registers month wise /nature of complaint wise.
- Contractor correspondence letter.
- AMC of Bio- toilet bill passing – checking date wise, train wise, type of maintenance, penalty if for skipping of service, defect etc.
- Linen management & bill passing
- Preparation of pest treatment programme monthly/Quarterly.
- Daily taking attendance of Pit & yard contract staff.
- Imposing penalty to contractors as per inspection by SSE/G/CW/NCJ and ADME/NCJ.
- Assisting SSE/G/CW/NCJ & ADME/NCJ during Inspection.
- Bill for Retro fitment of Bio-toilets – monitoring, collection of inspection certificate, preparation bill

## **2.12 STORE SECTION:**

- DBR (Daily Book Receipt) Maintenance
- DBI ( Daily Book Issue) maintenance
- Tally card up-dation
- Preparing Indent S- 1302
- Preparing Indent S – 1830
- Preparing Indent S- 1313
- Preparing Indent – 1539
- Repair & Retune reparation
- Bill passing
- Daily tools issue
- Daily Materials Issue
- Updating Imprest cash
- Booking old bogies to GOC shop
- Issuing staff items ( Clothing, Soap, rain coat, Boot)
- M&P record up-dating.

## **2.13 PRESENT ENGAGEMENT OF STAFF FOR PRIMARY MAINTENANCE – (24 COACHES).**

Primary Maintenance is to be undertaken on all running coaches at Primary Depot and shall include all periodical schedules as also trip schedules.

Periodical Schedules are:

- Schedule A : Every month (grace period 3 days).  
 Schedule B : Every Quarter (grace period 7 days).  
 Schedule C : Every six months (grace period 15 days).

22 activities are listed under Schedule-A including trip schedule, cleaning washing, testing, checking, oiling, lubrication, inspection etc. This can be done without detaching the coaches normally. Nine activities are listed under Schedule-B apart from all the activities under Schedule-A. Here also, detaching is not required normally.

14 activities are listed under Schedule C apart from the activities shown under Schedule B and detaching of coaches is required for attendance on sick lines.

#### **2.14 Trip Schedule:**

Nine activities are listed under this head with many activities having sub-activities. All the coaches of long distance trains having 3500 kms run and Mail/Exp trains are given trip schedule at the end of the trip.

#### **2.15 Washing and Cleaning of Coaches :**

- a) External cleaning and washing
- b) Cleaning of buffers and screw coupling side under and end body.
- c) Interior cleaning of AC coaches, second class coaches.
- d) Interior cleaning of parcel, luggage and brake vans
- e) Cleaning of lavatories

Minimum infrastructure is to be provided at the platform itself where trains are returned without secondary maintenance.

#### **2.16 Distribution of staff:**

Staff distribution at NCJ as on 09.02.2019						
	Sr.Tech	Tech-I	Tech-II	Tech-III	Helper	Total
Sick Line + IOH	1	4	1+1*	6	12	25
Store	2			1	5	8
Contract		2		2		4
Pest & Rodent Control						0
Welder		3		1		4
OBHS				1	2	3
Bio-toilet AMOC	1			1	3	5
Fire Extinguisher					1	1
Linen Management					3	3
M&P				1	2	3
Coaching Cell	1	1		1	3	6
Time Section		1		1	1	3



Bogie collection at GOC					2	2
Pit wheel Lathe			1+1*		2	4
Special Gang / Any other					2	2
Pitline /Gang-1 (A)	2	1+1*	2	5	2	13
Pitline /Gang-2 (A1)	1	1	2	5	5	14
Pitline /Gang-3 (B)	1	1	2	4	6	14
Pitline /Gang-4 (B1)	2	1	2	4	5	14
Pitline /Gang-5 (C)	1	1	1+2*	5	5	15
Pitline /Gang-6 (C1)	2			7	4	13
Pitline /Gang-7 (RG)	1		1	4	5	11
Platform		2	2	10	13	27
Long Absentees					2	2
Total	15	19	18	59	85	196

## 2.17 **PRIMARY MAINTENANCE :**

### **PRIMARY MAINTENANCE COACHES WITH TRAIN NO AT NCJ DEPOT**

Depot	Train No.& Name	Coach Type	Age Group in years						
			0-5	6-10	11-15	16-20	21-25	< 25	Total
NCJ	16340	SLR			1	1			2
	Rake:I	GS	1	2	1				4
		SCN	2		2	2	5		11
		ACCN	1			1	1		3
		ACCW			1				1
		WCB	1						1
		SLRD							
		<b>TOTAL</b>	<b>5</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>22</b>
NCJ	16340	SLR				1			1
	Rake:II	GS	1	2	1				4
		SCN	3			4	4		11
		ACCN	1		1	1			3
		ACCW				1			1
		WCB			1				1
		SLRD			1				1
		<b>TOTAL</b>	<b>5</b>	<b>2</b>	<b>4</b>	<b>7</b>	<b>4</b>		<b>22</b>

NCJ	16340	SLR							
	Rake:III	GS	2	2					4
		SCN	2	1	2	2	4		11
		ACCN				1	2		3
		ACCW				1			1
		WCB					1		1
		SLRD	2						2
		<b>TOTAL</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>7</b>		<b>22</b>
NCJ	16340	SLR					1		1
	Rake:IV	GS	1	1			2		4
		SCN	1	4	1	2	3		11
		ACCN		1		1	1		3
		ACCW					1		1
		WCB				1			1
		SLRD			1				1
		<b>TOTAL</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>4</b>	<b>8</b>		<b>22</b>
NCJ	16340	SLR			1	1			2
	Rake:V	GS	2			2			4
		SCN	2	2	2	3	2		11
		ACCN		1	1	1			3
		ACCW					1		1
		WCB	1						1
		SLRD							
		<b>TOTAL</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>3</b>		<b>22</b>
NCJ	16382	SLR			1				1
	Rake:I	GS		1		1			2
		SCN		3	1	3	3		10
		ACCN				1			1
		ACCW	1						1
		WCB					1		1
		SLRD			1				1
		<b>TOTAL</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>4</b>		<b>17</b>
NCJ	16382	SLR					1		1
	Rake:II	GS	1	1					2
		SCN	3	2	1	2	2		10
		ACCN				1			1

		ACCW					1		1
		WCB	1						1
		SLRD			1				1
		<b>TOTAL</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>4</b>		<b>17</b>
NCJ	16382	GS	1	1					2
	Rake:III	SCN	3	2		3	2		10
		ACCN				1			1
		ACCW					1		1
		WCB			1				1
		SLRD				1	1		2
		<b>TOTAL</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>4</b>		<b>17</b>
NCJ	16382	SLR					2		2
	Rake:IV	GS		1	1				2
		SCN	1	2	2	4	1		10
		ACCN				1			1
		ACCW					1		1
		WCB				1			1
		<b>TOTAL</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>4</b>		<b>17</b>
NCJ	16382	GS		1	1				2
	Rake:V	SCN	3		1	4	2		10
		ACCN					1		1
		ACCW				1			1
		WCB					1		1
		SLRD		2					2
		<b>TOTAL</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>4</b>		<b>17</b>
NCJ	12659	SLR			1				1
		GS		3					3
		SCN	2	1	1	2	2		8
		ACCN					1		1
		ACCW					1		1
		SLRD	1						1
		<b>TOTAL</b>	<b>3</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>4</b>		<b>15</b>

NCJ	16317	SLR					1		1
		GS					2		2
		SCN	1		2	2	1		6
		ACCN	1			1			2
		WCB				1			1
		<b>TOTAL</b>	<b>2</b>		<b>2</b>	<b>4</b>	<b>4</b>		<b>12</b>
NCJ	12641	SLR				1	1		2
	Rake:I	GS	1	2		1			4
		SCN		3	1	3	1		8
		ACCN		1		1	1		3
		ACCW				1	1		2
		WCB					1		1
		<b>TOTAL</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>7</b>	<b>5</b>		<b>20</b>
NCJ	12641	SLR				1			1
	Rake:II	GS		3		1			4
		SCN		1	2	4	1		8
		ACCN				2	1		3
		ACCW				2			2
		WCB					1		1
		SLRD			1				1
		<b>TOTAL</b>		<b>4</b>	<b>3</b>	<b>10</b>	<b>3</b>		<b>20</b>
NCJ	16336	GS	1	1	1				3
		SCN	2	3	2	2	4		13
		ACCN		1	2				3
		ACCW		1					1
		WCB					1		1
		SLRD			2				2
		<b>TOTAL</b>	<b>3</b>	<b>6</b>	<b>7</b>	<b>2</b>	<b>5</b>		<b>23</b>
NCJ	56318	SLR							
	Rake:I	GS	1	5	1	4	2		13
		SLRD	2						2
		<b>TOTAL</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>2</b>		<b>15</b>

NCJ	56318	SLR				1			1
	Rake:II	GS	1	6	1	3			11
		CZ	1						1
		<b>TOTAL</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>0</b>		<b>13</b>
NCJ	56318	SLR							
	Rake:III	GS	1	4	3	3	2		13
		SLRD	1						1
		GSRD		1					1
		<b>TOTAL</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>2</b>		<b>15</b>
NCJ	56318	SLR							
	Rake:IV	GS	1	3	4	1	2		11
		SLRD		1					1
		GSRD		1					1
		<b>TOTAL</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>13</b>
NCJ	56310	SLR					1		1
	Rake:I	GS	1	4	1	4	3		13
		SLRD					1		1
		<b>TOTAL</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>5</b>		<b>15</b>
NCJ	56310	SLR					1		1
	Rake:II	GS	1	6	2	4	1		14
		SLRD		1					1
		GSRD							
		<b>TOTAL</b>	<b>1</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>2</b>		<b>16</b>
NCJ	56310	SLR				1			1
	Rake:III	GS	1	4	2	2	5		14
		SLRD			1				1
		<b>TOTAL</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>5</b>		<b>16</b>
NCJ	56310	SLR				1			1
	Rake:IV	GS	1	3	3	2	3		12
		SLRD			1				1
		<b>TOTAL</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>3</b>		<b>14</b>

NCJ	56319	SLR			1			1
	Rake:I	GS	1	3	1		7	12
		CZ		1				1
		GSRD		1				<b>1</b>
		<b>TOTAL</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>15</b>
NCJ	56319	SLR					1	1
	Rake:II	GS	2	8		2	3	15
		<b>TOTAL</b>	<b>2</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>16</b>
NCJ	56319	SLR				1	1	2
	Rake:III	GS	1	7	1	4	1	14
		CZ		1				1
		<b>TOTAL</b>	<b>1</b>	<b>8</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>17</b>
NCJ	56319	SLR					1	1
	Rake:IV	GS	3	3	1	4	2	13
		SLRD			1			1
		<b>TOTAL</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>15</b>
NCJ	Spare/	SLR				2		2
	Sick	GS		4	2	1		7
	Coaches	SCN	1		1			2
		ACCW	1					1
		<b>TOTAL</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>3</b>		<b>12</b>

## 2.18 **SUMMARY OF PM/SM COACHES MAINTAINED PER WEEK AT NCJ**

PM Exp - per week	20 trains per week	390 Coaches per week
PM Pass "	14 trains "	217 coaches "
<b>Total</b>	<b>34 trains "</b>	<b>607 Coaches "</b>
SM Exp – per week	1 train (15906/15905)	23 coaches
SM Pass	NIL	NIL

## 2.19 **PRIMARY & SECONDARY MAINTAINED SPECIAL TRAINS AT NCJ FOR YEAR 2016 TO 2018.**

Year	Maintenance PM/SM/OEA	No of trains	No of coaches
2016	PM	26	556
	SM (IRCTC)	13	194
	OEA	1	15
2017	PM	18	396
	SM (IRCTC)	12	182
	OEA	1	15
2018	PM	14	308
	SM (IRCTC)	7	105
	OEA	35	560

## 2.20 **DETAILS OF PFTR TRAINS :**

1	16723	MS	TVC	DAILY	22	PT	DAILY
2	16724	TVC	MS	DAILY	22	PT	DAILY
3	16128	GUV	MS	DAILY	18	PT	DAILY
4	16127	MS	GUV	DAILY	18	PT	DAILY
5	56701	QLN	MDU	DAILY	18	PT	DAILY
6	56700	MDU	QLN	DAILY	18	PT	DAILY
7	16381	CSTM	CAPE	DAILY	17	PT	DAILY
8	16382	CAPE	CSTM	DAILY	17	PT	DAILY
9	16526	SBC	CAPE	DAILY	23	PT	DAILY
10	16525	CAPE	SBC	DAILY	23	PT	DAILY
11	12633	MS	CAPE	DAILY	23	PT	DAILY
12	12634	CAPE	MS	DAILY	23	PT	DAILY
13	16318	JAT	CAPE	1/WEEK	12	PT	FRI
14	16317	CAPE	JAT	1/WEEK	12	PT	FRI
15	12666	CAPE	HWH	1/WEEK	22	PT	SAT
16	12665	HWH	CAPE	1/WEEK	22	PT	WED
17	12641	CAPE	NZM	2/WEEK	22	PT	WED & FRI
18	12642	NZM	CAPE	2/WEEK	22	PT	MON & WED
19	22621	RMM	CAPE	3/WEEK	14	PT	SUN,TUE,FRI

20	22622	CAPE	RMM	3/WEEK	14	PT	SUN,TUE,FRI
21	15906	DBRG	CAPE	1/WEEK	23	PT	WED
22	15905	CAPE	DBRG	1/WEEK	23	PT	SAT
23	16861	PDY	CAPE	1/WEEK	16	PT	FRI
24	16862	CAPE	PDY	1/WEEK	16	PT	FRI
25	56717	CAPE	TEN	DAILY	9	PT	DAILY
26	56716	CAPE	PUU	DAILY	9	PT	DAILY
27	66304 Memu	QLN	CAPE	6/WEEK	-	PT	Except FRI
28	66305 Memu	CAPE	QLN	6/WEEK	-	PT	Except FRI

## 2.21 **PLATFORM ATTENTION ACTIVITIES :**

a) **PASS THROUGH TRAINS** – Rolling in and rolling out examination, axle box feeling and carriage watering (which is outsourced).

b) **STARTING TRAINS**

Air-continuity test, spraying of deodorant, issue of BPC and rolling out examination.

c) **PFTR** – Rolling in examination, axle box feeling, release of brakes, safety checks, interior check for amenities, carpentry, water service, repair attention etc.

d) **TERMINATING TRAINS :**

Rolling-in-examination, axle box feeling, releasing of brakes, safety check, interior check for amenities, carpentry, water service, repair attention, dry sweeping, lavatory cleaning and closing of doors and shutters.

e) **LOCO CHANGE / TURN ROUND :**

Rolling in and rolling out examination, axle box feeling, releasing of brakes, safety check, air continuity check and handing over of BPC.

f) **MISCELLANEOUS ACTIVITIES :**

Disinfestations

Roof leakage



Bacon treatment

PF Jet washing

M&P / BD

Bio toilet checking

g) **DETAILS OF OUTSOURCED ACTIVITIES:**

**ON GOING CONTRACT AT NCJ AS ON 08.02.2019**

SL No	Contractor Name	Nature of work	Value	Currency Period	
				From	To
<b>1</b>	M/s.Chennai Gas Services, New No.11,Aziz mulk 2nd Street, Thousand Lights, Chennai-600006, Mob. No. 9840237707	Maintenance of Centralised Gas connection system in Pantry Cars at NCJ depot	Rs.14,44,029/-	11.8.17	10.8.20
<b>2</b>	M/s.Hughes & Hughes Chem. Limited,Plot No.5-R-10, Nehru Enclave, New Delhi-110 019. Ph: 98105 60018	Pest & Rodent control in Rly. Passr.coaches at NCJ coaching depot and Rodent control at NCJ coaching depot yard and premises	Rs. 70,89,858	01.09.16	31.08.19
<b>3</b>	M/S Orion Enterprises, 15/3550,Opposite Post Office,Tirur Road,Down Hill,Mallapuram, Kerala,India- 676519	Linen management in Trains-BOOT	Rs. 57,27,63,475	01.07.15	30.06.25
<b>4</b>	M/s.Hughes & Hughes Chem. Limited,Plot No.5-R-10, Nehru Enclave, New Delhi-110 019. Ph: 98105 60018	1. Comprehensive AMOC of Bio toilet (under warranty) 2. Comprehensive AMOC of Bio toilet (Outside Warranty) 3. Replacement of ball valve with free fitment.	Rs. 6,04,17,950 (TVC Divn)	01.06.18	31.05.19

<b>5</b>	M/s.Hughes & Hughes Chem. Limited,Plot No.5-R-10, Nehru Enclave, New Delhi-110 019. Ph: 98105 60018	1. Comprehensive AMOC of Bio toilet (under warranty) 2. Comprehensive AMOC of Bio toilet (Outside Warranty) 3. Replacement of ball valve with free fitment.	Rs. 6,04,17,950 (TVC Divn)	01.06.18	31.05.19
<b>6</b>	M/s Kalailangovan	Reg. cleaning of Train no 16381/82 & 16354/53	Rs. 1,22,81,817/-	28.10.17	27.10.20
<b>7</b>	M/s Dynamic Services, 139, Dakshinari Road, Kolkatta, West Bengal -700 048	OBHS	Rs. 4,35,61,200	05.05.17	04.05.19
<b>8</b>	M/s VASANTHAM AGENCIES	Regular cleaning of coaches of Mail/Exp trains 16317/18, 12659/60,16335/3 6, 12642/41 & Spl	85,50,922/-	16.10.17	15.10.20
<b>9</b>	M/s..NPM Agencies, 242,Venkatasamy Road, Near Ayyappan Kalyana Mandapam, New Sidhapudure, Coimbatore,Pin – 641044.	Buffing of Stainless Steel	51,64,261	18.07.17	17.01.19
<b>10</b>	M/s Karnal Technicians	Removal & fitment of pipe lines for retrofitment	Rs.3000 per coach +GST	01.08.17	02.06.18

11	M/s Faizhal Traders Pvt Ltd Door No.21/XVI Brothers Tower, Alathur, Palakad Dist Pin – 678541	Regular cleaning of coaches of passenger /Mail/Exp trains 56313/318, 56320/319, 15905/906	Rs.3,06,60,000	23.10.18	22.10.22
12		SWT 56311/304,56317/316, 56312/25,12689/90, 12667/68, 22668/56310, 56315/22667, 16605/06,17235/36, 16649/50 AT NCJ. 16861/62,22621/622, 12633/12634, 16526/16525, 56715/321,56325/716 AT CAPE	Rs.6,60,50,400/-	06.10.18	05.10.22
13		OBHS in train no 16354/16353	Rs.32,63,104	06.11.18	05.11.22
14		Pit & Yard cleaning at NCJ	Rs.96,03,150/-	21.12.18	20.12.22
15		Mechanized cleaning of Train no 16339/40, 16351/52 12665/66	Rs.1,22,13,630/-	26.01.19	25.01.23

## 2.22 **PAYMENT DETAILS TO CONTRACTORS :**

Coach cleaning at Pit line for the last Two years

Vasantham Agencies Passenger trains & 15905 Exp

MONTH	No. of coaches	Rate Rs.	Total Amount Rs.	Penalty based on grading Rs.	Other penalty Rs.	Amount clamied -Rs.
Apr'16	1463	249/-	364287	89154	1300	273833
May'16	1455	249/-	362295	137821	3400	221074

Jun'16	1441	249/-	358809	117765	700	240344
Jul' 16	1508	249/-	375492	86291	3250	285951
Aug'16	1504	249/-	374496	141232	4100	229164
Sep'16	1526	249/-	379974	13,646	1050	365278
Oct'16	1544	249/-	384456	120043	450	263963
Nov'16	1467	249/-	365283	126194	1800	237289
Dec'16	1580	249/-	393420	148142	4650	240628
Jan'17	1439	249/-	358311	135519	22950	199842
Feb'17	1300	249/-	323700	107630	4650	211420
Mar'17	1489	249/-	370761	135107	5200	230454
Apr'17	1417	249/-	352833	132780	150	219903
May'17	1437	249/-	357813	139329	4200	214284
Jun'17	1387	249/-	345363	141295	2400	201668
Jul'17	1427	249/-	355323	140710	1650	212963
Aug'17	1502	249/-	373998	107792	4250	261956
Sep'17	1481	249/-	368769	123529	4800	240440
Oct'17	1533	249/-	381717	130563	10300	240854
Nov'17	1489	249/-	370761	140062	14600	216099
Dec'17	1495	249/-	372255	126069	6350	239836
Jan'18	1495	249/-	372255	130800	2550	238905
Feb'18	1359	249/-	338391	102849	2600	232942
Mar'18	912	249/-	227088	76568	1650	148870
	630	249/-	156870	41086		115784
Apr'18	1384	249/-	344616	128969	3150	212497
May'18	1503	249/-	374247	149637	2400	222210
Jun'18	1442	249/-	359058	168698	6650	183710
Jul'18	1468	249/-	365532	170229	4050	191253
Aug'18	1075	249/-	267675	103597	3050	161028
Sep'18	1041	249/-	259209	99501	4350	155358
Oct'18	767	249/-	190983	89726	4050	97207

## 2.23 Train no 16381/82 &12642/16354

MONTH	No. of coaches	Rate Rs.	Total Amount Rs.	Penalty based on grading Rs.	Other penalty Rs.	Amount clamied Rs.	GST	Total
Apr'16	589	117	68913	27454	9650	31809		
May'16	624	117	73008	29455	11050	32503		
Jun'16	590	117	69030	30321	12750	25959		
Jul' 16	607	117	71019	26296	5300	39423		
Aug'16	606	117	70902	29648	10600	30654		

Sep'16	590	117	69030	30794	6150	32086		
Oct'16	624	117	73008	38271	24500	10237		
Nov'16	588	117	68796	32146	13100	23550		
Dec'16	604	117	70668	27097	12400	31171		
Jan'17	604	117	70668	27811	9700	33157		
Feb'17	532	117	62244	27559	2550	32135		
Mar'17	590	117	69030	27150	2550	39330		
Apr'17	580	117	67860	27372	4800	35688		
MAY'17	693	117	81081	37,200	24200	19681		
Jun' & Jul'17	1086	249	270414	3360	2000	265054		
Jul & Aug	676	475	321100	11400	0	309700		
Sep'17	521	475	247475	12825	14800	219850		
Oct'17	589	553	325964	6000	6200	313764		313764
	68	480	32640	960	1200	30480	5875	36355
Nov'17	591	480	283680	5840	0	277840	51062	328902
Dec'17	606	480	290880	2880	13600	274400	52358	326758
Jan'18	627	480	300960	6240	6000	288720	54173	342893
Feb'18	550	480	264000	1920	3000	259080	47520	306600
Mar'18	608	480	291840	3360	2000	286480	52531	339011
	<b>14343</b>	<b>-</b>	<b>3614210</b>	<b>473359</b>	<b>198100</b>	<b>2942751</b>	<b>263519</b>	<b>3206270</b>

## 2.24 COACH CLEANING AT PIT LINE FOR THE LAST TWO YEARS REGULAR CLEANING OF COACHES OF MAIL/EXP & SPL. TRAINS NCJ

(Train nos.16339/16340, 16351/16352, 12665/12666, 16317/16318,

16335/16336, 12659/12660, 12641/12642, & Spl.trains

MONTH	No. of coaches	Rate Rs.	Total Amount Rs.	Penalty based on grading Rs.	Other penalty Rs.	Amount clamied Rs.	GST	TOTAL
Apr'16	1122	175	196350	56988	13800	125562		
May'16	1179	175	206325	65843	28650	111832		
Jun'16	1135	175	198625	53401	21500	123724		
Jul' 16	1121	175	196175	38089	4200	153886		
Aug'16	1098	175	192150	45307	1900	144943		
Sep'16	1169	175	204575	47293	12150	145132		
Oct'16	1218	175	213150	56612	2250	154288		
Nov'16	1152	175	201600	50871	11600	139129		

Dec'16	1050	175	183750	42682	19550	121518		
Jan'17	1169	175	204575	47965	6350	150260		
Feb'17	995	175	174125	38386	0	135739		
Mar'17	1155	175	202125	50380	2350	149395		
Apr'17	1191	175	208425	60243	11600	136582		
MAY'17	1152	175	201600	58,729	10400	132471		
Jun'17	1152	175	201600			201600		
Jul'17	1086	249	270414	85793	10850	173771		
Aug'17	1081	249	269169	70891	5400	192878		
Sep'17	893	249	222357	69845	7200	145312		
Oct'17	1104	450	496800	53200	2400	441200	89424	530624
Nov'17								
Dec'17	990	490	485100	13800	16800	454500	87318	541818
Jan'18	715	490	350350	4990	4800	340560	63063	403623
Jan'18	132	607	80162	19672	0	60490	14429	74919
Feb'18	615	607	373483	63401	2000	308082	67227	375309
Mar'18	676	607	410528	67895	8400	334233	73895	408128
Apr'18	657	607	398989	63340	3000	332649	71818	404467
May'18	682	607	414171	71053		343118	74551	417669
Jun'18	657	607	398989	64433	2000	332556	71818	404374
Jul'18	675	607	409920	61883	1000	347037	73785	420822
Aug'18	665	607	403847	61002	29000	313845	72692	386537
Sep'18	659	607	400204	56144	0	344060	72037	416097
Oct'18	675	607	409920	58695	43617	307608	73786	381394
Nov'18	654	607	397167	62399	12217	322551	71490	394041
Dec'18	682	607	414171	62642	8217	343312	74551	417863

2.25 **SICK COACHES ATTENDED FOR THE PERIOD FROM JULY 2017 TO APRIL 2018.**

Month/Year	Mechanical	Electrical	Month/Year	Mechl	Electl
July 2016	66	14	July 2017	53	4
Aug 2016	50	10	Aug 2017	50	9
Sep 2016	40	13	Sep 2017	53	8
Oct 2016	66	9	Oct 2017	45	6
Nov 2016	45	10	Nov 2017	47	7
Dec 2016	40	12	Dec 2017	53	13
Jan 2017	33	8	Jan 2018	48	14

Feb 2017	41	2	Feb 2018	49	5
Mar 2017	64	3	Mar 2018	53	12
Apr 2017	62	9	Apr 2018	67	5
MAY 2017	53	3	<b>Total</b>	<b>518</b>	<b>83</b>
Jun 2017	79	10			
<b>Total</b>	<b>639</b>	<b>103</b>			
Avg.Per Month	53.25	8.58	Avg.Per Month	51.8	8.3
<b>Avg.per day</b>	<b>1.77</b>	<b>0.28</b>	<b>Avg.per day</b>	<b>1.72</b>	<b>0.27</b>

## 2.26 AVG.SICK COACHES ATTENDED PER DAY

### (A) From July 2016 to Apr 2017

Mechanical : 1.77  
 Electrical : 0.28  
**Avg.Coaches per day : 2.05**

### (B) From July 2017 to Apr 2018

Mechanical : 1.72  
 Electrical : 0.27  
**Avg.Coaches per day : 1.99**

**Avg. daily sick coaches attended : Two**

## 2.27 MACHINERY AND PLANTS AVAILABLE AT C & W DEPOT NCJ

Sl . No	Detail of M&P	Date of commission	Any Warranty/AMC	Present condition
1	Electrical compressor	21.04.2012	No	Working
2	Diesel Compressor	1.12.2017	Under warranty	Working
3	Compressor in sick line	29.06.2009	No	Working
4	Compressor in Pit wheel lathe	15.07.2016		Working
5	Pit wheel lathe	07.07.2015	AMC	Working
6	Rake Test Rig	29.02.2004	-	Working
7	Single car test rig	10.12.16	-	Working
8	Fork Lifter	01.02.2016		Working
9	Lifting Jack	19.05.2005		Working

10	Platform Truck	17.01.2017		Working
11	Grinding machine in pit line	07.02.1981		Working
12	Grinding machine in sick line	15.01.1990		Working
13	Drilling machine	21.02.1989		Working
14	HP jet in Platform	19.05.2014	AMC	Working
15	HP jet in pit line	11.01.2016	AMC under process	Working
16	Water purifying plant	17.05.2017	Under warranty	Working.

## **2.28 ENROUTE FAILURES ATTENDED AT C & W DEPOT NCJ FOR THE PERIOD FROM 25.08.2016 TO 03.06.2018**

25.08.16	Joint check of coach 99399 of train no 16526	CAPE
11.09.16	Vibration obsevation in ACCN 12102 of train no 12641	TEN
29.09.16	TO EXAMINE THE TRAIN 12634	CAPE
18.10.16	TO ATTEND SLR 05717 OF RMM TRAIN	CAPE
22.10.16	TO OBSERVE A1 COACH IN TRAIN NO 16526	CAPE
25.10.16	TO CHECK THE COACH OF 56717 CAPE -PUU PASS	CAPE
26.10.16	TO ISSUE BPC TO BOBBY AT AAY STN	AAY
12.11.16	WINDOW GLASS ATTENTION AC COACH	CAPE
15.11.16	TO OBSERVE UNUSAL NOISE IN AC COACH OF 16526	CAPE
20.11.16	TO ATTEND WATER PIPE LEAK IN SWR 12371	CAPE
23.11.16	TO ATTEND SWR CN 95286	CAPE
11.12.16	TO ATTEND SWR 12105 OF 16526	CAPE
01.01.17	TO ATTEND WATER LEAK INSR 13144 OF 22621	CAPE
04.01.17	TO ATTEND SEAT REPAIR OF COACH NOS3 OF 16526	CAPE
12.01.17	BRAKE BINDING IN TRAIN NO 16526	CAPE
13.01.17	TO ATTEND WASH BASIN REPAIR OF H1 COACH OF 12634	CAPE
22.01.17	B2 AC DOOR REPAIR OF 16526	CAPE
03.02.17	WATER LEAKING ATTENTION OF TRAIN NO22622	CAPE
12.02.17	TO ATTEND AIR LEAKAGE IN SWR04108 &16026 OF 16525 TRAIN	CAPE
24.02.17	TO ATTEND BRAKE BLOCK CHANGE OF 56715 PASS	CAPE
16.03.17	TO ATTEND BROKEN DOOR IN SWR 00919 OF TRAIN NO 16525	CAPE
23.03.17	TO ATTEND WAGON	AAY
25.03.17	TO CONDUCT CONTINUITY TEST OD BR.SYSTEM	CAPE
27.03.17	TO ATTEND BOBYN WAGON	ERL
28.03.17	TO ATTEND BOBYN WAGON	AAY
05.04.17	TO ATTEND ATTACH COACH	CAPE
22.04.17	EXAMINATION OF COACH NO 06044 OF T.NO 12633	CAPE



29.4.17	TO ATTEND BOBYN WAGON	ERL
22.05.17	TO ATTEND A2 COACH OF 12634	CAPE
04.06.17	TO ATTEND TRAIN NO 12633/16525	CAPE
21.06.17	TO ATTEND ALL COACH R2 ENDORSEMENT	CAPE
03.07.17	TO ATTEND UNUSAL SOUND IN TRAIN NO 12633	CAPE
07.07.17	TO ATTEND SLR DOOR DEFECT	CAPE
25.07.17	TO ATTACH CRSE.MAS SALOON	CAPE
27.07.17	TO ATTEND THE TRAIN 12633	CAPE
01.08.17	TO ATTEND GLASS CHANGE IN B3 COACH OF 16526	CAPE
05.08.17	TO ATTEND GM/ICF SALOON	CAPE
20.08.17	TO ATTEND SWR SLRD 11724 OF TRAIN NO 12633	CAPE
23.08.17	TO ATTEND SWR 05203 OF 12633	CAPE
30.08.17	TO ATTEND WATER LEAK IN A1 COACH OF 12633	CAPE
30.08.17	TO ATTEND 56717 PASS	CAPE
01.09.17	TO ATTEND DETACHED COACH 99270 OF TRAIN NO 12633	CAPE
02.09.17	TO ATTEND SR CN 99270	CAPE
08.09.17	TO ATTEND LUGGAGE DOOR DEFECT IN SLR 04715 OF 16526	CAPE
10.09.17	TO ATTEND LAV.DOOR OF A1 COACH IN 16525	CAPE
13.09.17	TO ATTEND FERRULE JOINT FAILURE OF TRAIN NO 16525	CAPE
19.09.17	TO ATTEND FO FAILURE IN TRAIN NO 16526	CAPE
09.10.17	TO ATTEND DERAILMENT OF LOCO AT AAY	AAY
11.10.17	TO MONITOR SR SLR 15754 ABNORMAL TEMP.IN WHEEL	TEN
05.11.17	TO ATTEND DOOR REPAIR B1 COACH SWR 04101 OF 16526	CAPE
16.11.17	TO ATTEND S-7 LAV. DOOR REPAIR OF TRAIN NO 12634	CAPE
20.11.17	TO ATTEND S-2 TOILET DOOR	CAPE
07.12.17	TO ATTEND REPAIR IN COACH NO 96387 OF 16526(S-5 SEAT NO 53)	CAPE

28.12.17	TO ATTEND LAV.DOOR REPAIR OF 16525	CAPE
09.01.18	TO ATTEND TOILET LEAKING IN TRAIN NO 16526	CAPE
14.01.18	TO ATTEND WATER LEAKAGE IN TRAIN NO.126330	CAPE
25.01.17	TO ATTEND B1 DOOR GLASS BROKEN IN TRAIN NO 12633	CAPE
29.01.18	TO ATTEND S-9 SEAT NO 27 SUN MICA BROKEN IN TRAIN NO 16525	CAPE
10.02.18	B1 & B2 LAV.DOOR BROKEN AND WATER LEAKING IN 16526	CAPE
27.02.18	PROPER RELEASING OF COACHES OF ETR TRAINS	CAPE
05.03.18	TO ATTEND BOBY	AAY
11.05.18	ENDORSEMENT OF RA COACHES	CAPE
15.05.18	TO ATTEND ACCN 13112 OF 16723	ERL
30.05.18	BRAKE BLOCK CHANGE IN COACH 13438 OF TRAIN NO 56715	CAPE
30.05.18	TO ATTEND B2 CABIN GLASS BROKEN	CAPE
03.06.18	TO ATTEND WATER LEAKAGE IN B1 COACH OF 16525	CAPE

## **2.29 INTERMEDIATE OVERHAULING ACTIVITIES (IOH)**

1. Initial and final measurements including wheel and tyre on arrival and after IOH recording of Roller bearing details and register maintenance as per ISO and tool room management instructions.
2. Coach positioning, jack setting, coach lifting, placement of trustles shifting of bogie to dismantling bay, bogie dissembling, bolster dismantling, cleaning of bogie and components with high pressure jet, reassembly and lowering.
3. Brake gear components examination, dismantling, cleaning, renewal of damaged components and refitting.
4. Centre pivot cleaning, examination, dye penetrant testing equalising stays and anchor links dismantling and refitting.
5. Axle box safety strap removal and refitting, dashpot assembly and side bear examination and attention crown clearance adjustment to wheel dia.

6. Deflecting testing of coil springs, grouping and colour coding and painting of the same, dye penetration test, grouping and examination of BSS hanger blocks and pins.
7. Buffer gear dismantling, adjustment of buffer projection and plunger stroke, examination of shock absorber; draw gear, replacement and painting.
8. Air brake testing, painting, dirt collector cleaning, single car testing, ICV testing and replacement
9. Bogie scraping, dusting, cleaning and painting with primer and bituminous, painting of foot board.
10. Under frame examination for corrosion, scratching, dusting and painting with red oxide and then with bituminous black.
11. Re-examination, cleaning and ultrasonic testing of roller bearing of 4 wheels, cleaning of axle box with H.P. jet, dye penetrant testing, regressing and assembling, painting of axle, axle box, re-profiling of wheels.
12. Intensive cleaning of IOH coach and exterior washing
13. Hoist and whiting jack operators.
14. Welding and cutting works in bogie frame, underframe pipe lines etc
15. Carpentry attention
16. Minor painting works, stencilling application of putty etc
17. Minor turning of axle box front cover, plate cutting with shearing machine.,
18. Blacksmithy works as required
19. IOH shed cleaning and upkeeping
20. Material collection and jurisdiction works.

### **2.30 REGISTERS KEPT AT IOH DEPOT:**

1. IOH dimensional check register
2. Check list for bogie details
3. Check list for Buffing gear, draw gears, underframe register
4. Checklist for Air brake Register
5. Single check Register
6. Amenities / Check Register

7. Ultrasonic testing of Axle Register
8. Roller bearing related registers
9. Daily released coaches register
10. Daily road occupation register
11. Job distribution register
12. 17 hours position register
13. Calibration history register
14. Customer complaint register
15. Corrective action register

In addition to the above, a quality manual, quality procedure and a work instruction booklet are also available here.

### **2.31 PITLINE MAINTENANCE REGISTER :**

1. Duty diary register – RS-17/A
2. Trip schedule maintenance
3. "A" schedule maintenance
4. "B" schedule maintenance
5. Air Brake Testing
6. Fire Extinguisher
7. Disinfection
8. Bacon Treatment
9. Intensive coach cleaning
10. Coach attendance
11. DRS Card Register - RS 59

### **2.32 PLATFORM REGISTER :**

1. TXR diary - RS 7
2. TXR handbook – RS 5
3. Axle box feeling register

4. Staff sign ON and OFF
5. Carriage watering complaints
6. Special occurrence
7. Component failure
8. Spare coach register
9. Incoming LP remarks RS-5
10. Brake power certificate RS-6 Goods & Coaching
11. Theft Report Register - RS-18
12. Sick memo - RS-16
13. Fit Memo - RS.17
14. Memo Book
15. Thermal Hunter
16. Inspection Light
17. Goods yard attention.

### **2.33 OFFICE REGISTERS :**

Registers which are related to attendance, leave, Pass/PTO/EDP/DCP, PME, training, imprest cash, quarters, movement, computers etc.

### **2.34 WORKING HOURS AND DUTY ROSTER:**

The working hours of maintenance sheds including IOH shed is 07.30 to 12.30 hours and 13.30 to 16.30 hours. The staffs at the station for rolling in and rolling out examination etc are working round the clock.

### **2.35 SUMMARY OF PAYMENT OF OVER TIME PARTICULARS PAID FROM JULY 2018 TO JAN 2019 AT C & W DEPOT/NCJ :**

S.NO	MONTH	NO.OF STAFF		TOTAL AMOUNT IN Rs.
		5000 & ABOVE	BELOW 5000	
1	JULY '18	6	10	85,349
2	AUG' 18	7	10	1,03896

3	SEP'18	6	7	80,383
4	OCT'18	3	8	44,923
5	NOV'18	6	6	68,559
6	DEC'18	5	5	54,218
7	JAN'19	8	2	67,837
<b>TOTAL</b>				<b>5,05,165</b>

**3.0 CRITICAL ANALYSIS**

- 3.1** The periodical maintenance of coaching stock is a very important requirement for ensuring safety, punctuality and customer service. The regular attendance at platform and at the end of rake link at the base stations, secondary depots and at notified junction stations in the rake link is also of paramount importance. Watering, cleaning, attendance of amenities is also part of these activities.
- 3.2** There are some additional factors to be taken into consideration while arriving at the right size of man power required for each activity. They are late running trains, detention on account of other departments, different timings during monsoon trains, running of special trains, extra coaches, weather related issues etc. The timely supply of stores, running of departmental and freight trains, the obligation under inter change quotas with other division / zone, disasters etc also affect the coaching operations.
- 3.3** However there is an urgent need to minimise manpower utilisation because it is the main factor in arriving of productivity. The overall shortage of earnings from expenditure, operating ratio, and performance efficiency index (PEI) etc of Southern Railway calls for prudent steps in this direction. Given the high share of passenger operations, there is very little chance of cross sub-situations from freight traffic earnings in Southern Railway.
- 3.4** The following improvements have an impact on the efforts required for maintenance activities.
- a) Improved fittings like couplings, springs, break blocks, braking system, bearings etc.
  - b) All steel bodied, anti telescopic, anti climbing coaches
  - c) Reduction in attachment / detachments, slip coaches and shunting operations.
  - d) Advanced technology and equipments for inspection, checking, maintenance, attendance etc.

- e) Better training facilities and induction of technically better qualified staff for modernisation of ART, SPART, MRV, Cranes there of etc.
- f) Outsourcing activities like watering, cleaning etc.
- g) Computerisation for records maintenance, stores works etc
- h) Possibilities for multi skilling under changed pattern of working
- i) The requirement for each activity is calculated based on the inputs from SSE/C&W, yardsticks and ground realities.

### 3.5 **THE REQUIREMENT OF STAFF FOR PRIMARY AND SECONDARY MAINTENANCE OF COACHES IS CALCULATED AS FOLLOW:**

#### (A) **PRIMARY MAINTENANCE :**

In this depot, there are 15 Superfast/Long distance rakes are given primary maintenance which consist of 297 coaches and an average of daily coaches given primary maintenance is 56.67 (Details in annexure- II). Two passenger trains consist of 8 rakes with 124 coaches are given primary maintenance and an average of daily passenger coaches given for primary maintenance is 31. (Details in Annexure- II).

One train consist of 2 rakes with 22 coaches given secondary maintenance and an average of coaches given secondary maintenance is 3.14. (Details in Annexure- II).

Based on the above details and by applying Railway Board Bench Mark norms, the requirement of staff for primary maintenance activities is arrived as follows:

### 3.6 **FOR SUPERFAST/LONG DISTANCE MAIL/EXPRESS TRAINS:**

a)	Total No. of rakes	-	15
b)	Total No. of coaches	-	297
c)	Average coaches per day	-	56.67
d)	Railway Board Bench mark norms	-	1.1men/coach
e)	<b>Requirement of staff ( 56.6 x 1.1)</b>	<b>-</b>	<b>62.33</b>



**3.7 FOR PASSENGER TRAINS:**

a)	Total No. of rakes	-	23
b)	Total No. of coaches	-	124
c)	Average coaches per day	-	31
d)	Railway Board Bench mark norms	-	0.75men/coach
<b>e)</b>	<b>Requirement of staff ( 31 x 0.75)</b>	<b>-</b>	<b>23.25</b>

**(B) FOR SECONDARY MAINTENANCE OF SUPER FAST/LONG DISTANCE MAIL/EXPRESS TRAINS:**

a)	Total No. of rakes	-	2
b)	Total No. of coaches	-	22
c)	Average coaches per day	-	3.14
d)	Railway Board Bench mark norms	-	0.45men/coach
<b>e)</b>	<b>Requirement of staff ( 3.14 x 0.45)</b>	<b>-</b>	<b>1.41</b>

**3.8 TOTAL REQUIRMENT OF STAFF FOR PRIMARY AND SECONDARY MAINTENANCE OF COACHES:**

➤	For Superfast/Long distance Mail/Express trains	:	62.33
➤	For Passenger Trains:	:	23.25
➤	For Secondary maintenance coaches	:	1.41

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Total Requirement of staff : 86.99staf  
(say 87)

**3.9 THE REQUIREMENT OF STAFF FOR PLATFORM ACTIVIES ARE AS FOLLOW:****(A) For Originating/Terminating Superfast/Long distance Trains**

a)	Total No. of Express/passenger trains	-	18
b)	Average coaches per day	-	153.1
c)	Railway Board Bench mark norms	-	0.26 men/coach
d)	Requirement of staff ( 153.1x 0.26)	-	39.80

**(B) For other Mail/Express/ Trains**

- a) Total No. of Express/passenger trains - 12
- b) Average coaches per day - 163.4
- c) Railway Board Bench mark norms - 0.23 men/coach
- d) Requirement of staff ( 163.4x 0.23) - 37.58 staff

**For Passenger Trains**

- a) Total No. of Express/passenger trains - 8
- e) Average coaches per day - 111
- f) Railway Board Bench mark norms - 0.18 men/coach
- g) Requirement of staff ( 111x 0.18) - 19.98 staff

**3.10 TOTAL REQUIRMENT OF STAFF FOR PLATFORM ACTIVITIES:**

➤ For Superfast/Long distance Mail/Express trains	:	39.80
➤ For other Mail /Express trains	:	37.58
➤ For Passenger Trains:	:	19.98
		-----
Total Requirement of staff	:	97.36 staff
		<b>( say 97 )</b>

As per the bench mark norms the requirement of staff for Platform activities are 97. But, on direct observation, the utilisation of staff for platform activities is 9 per shift at NCJ.

As per the utilisation, the requirement of staff is arrived as follows:

- 1. No. of staff per shift : 9
- 2. No. of shift per day : 3
- 3. Requirement of staff per day :  $9 \times 3 = 27$  staff
- Add : LR/RG ( I batch is allowed) : 9 staff

Total	:	<u>36 staff for NCJ</u>
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- For OEA activities at NCJ : 6 staff
- For CAPE PF activities : 8 staff
- Add : LR 14 x 12.5 : 1.75 staff

Add : RG 15.75 x 16.66	:	2.61 staff
<b>Grand Total</b>	:	<b>18.36 (say 19 STAFF)</b>

### **SUMMARY OF REQUIREMENT OF STAFF FOR PLATFORM ACTIVITIES**

a) For NCJ depot	:	36 staff
b) For OEA/CAPE stations	:	19 staff
<b>TOTAL</b>	:	<b>55 STAFF</b>

#### **3.11 REQUIREMENT OF STAFF TO ATTEND SICK COACHES :**

Average No. of sick coaches attended per day	:	2 (Ref Para. 2.25)
Bench mark norms to attend sick coaches	:	0.14 per coach
Requirement of staff to attend sick coaches	:	$2 \times 0.14 = 0.28$
Actual staff utilised by the depot	:	5 staff per sick coach
Staff allowed on need base to attend sick coaches : ( i.e. $3 \times 5$ )	:	15 staff*

\*(Considering the present work load and introduction of new trains, one additional coach is given as sick to arrive the requirement of man power for maintenance of sick coaches.)

#### **3.12 REQUIREMENT OF STAFF TO ATTEND IOH COACHES**

Average No. of IOH coaches attended per day	:	1
Bench mark norms to attend IOH coaches	:	0.14 per coach
Requirement of staff to attend IOH coaches	:	$1 \times 0.14 = 0.14$
Staff allowed on need base to attend IOH coaches	:	30 staff

#### **3.13 REQUIREMENT OF STAFF FOR MATERIAL STORAGE/ACCOUNTAL:**

Bench mark norms for Material storage/Accountal	:	26 staff for the coach holding is more than 150.
Requirement of staff as per B/M for Material storage/Accountal	:	26
Actual staff utilised by the depot	:	15 (including messenger)
Staff allowed as per the actual utilisation by the depot:	:	15 staff.

### 3.14 **REQUIREMENT OF STAFF FOR LINEN MANAGEMENT**

Average work load per day	: 8 coaches
Bench mark norms coaches	: 0.22 per coach
Requirement of staff for linen management	: $8 \times 0.22 = 1.76$
Actual utilisation of staff by the depot	: 3
Staff allowed as per the actual utilisation by the depot: 3 staff.	

### 3.15 **MINISTRIAL STAFF :**

At present one Sr.Clerk is working at this depot. The sanctioned strength of the clerical cadre is 5. On discussion with the ADME/NCJ, he requested to allow designated clerical staff at the office instead of utilisation of other staff.

Hence, the sanctioned strength of ministerial staff for SSE/C&W/NCJ is allowed except one OS post which is identified as excess to the requirement.

### 3.16 **STAFF ALLOWED ON NEED BASE/ACTUAL UTILISATION FOR OTHER ACTIVITIES :**

• For Contract related work	: 4 Staff
• For welding work (as per sanctioned strength)	: 2 staff
• For Painting work (        - do -        )	: 2 staff
• For Trimming work(        - do -        )	: 1 staff
• For Carpentry work (        - do -        )	: 3 staff
• For M & P	: 3 staff
• For Coaching cell	: 6 staff
• For Time section	: 3 staff
• Special gang/any other work	: 2 staff
• Pit wheel lathe	: 4 staff
• Bio-toilet AMOC	: 5 staff
• For Fire Extinguisher	: 1 staff
• For OBHS	: 3 staff
Total	<hr/> : 39 staff <hr/>

### 3.17 **SUMMARY OF THE REQUIREMENT OF STAFF FOR SSE/C & W/NCJ**

a) For Primary/Secondary maintenance	-	87 staff
b) For PF activities	-	55 staff
c) To attend sick coaches	-	15 staff
d) For IOH activities	-	30 staff
e) For Material Storage/Accountal	-	15 staff
f) For Linen Management	-	03 staff
g) For other activities	-	39 staff
h) Ministerial staff	-	04 staff
Total	-	248 staff

To arrive the requirement of staff for SSE/C & W/NCJ the sanctioned Strength of staff shown by Sr.DPO/TVC and actual staff working at the depot is taken.

### 3.18 **REQUIREMENT OF STAFF IN GRADE WISE:**

Sl.No.	Category	Sanction	Actual	Requirement	Excess
1.	SSE	11	10	11	0
2.	JE	8	7	8	0
3.	Sr.Tech	29	13	29	0
4.	Tech.I	70	16	70	0
5.	Tech.II	2	14	2	0
6.	Tech.III	30	58	30	0
7.	Carpenter	3	3	3	0
8.	Welder	2	3	2	0
9.	Painter	2	2	2	0
10.	Trimmer	1	1	1	0
11.	Helper	96	85	86	10
12.	OS	3	0	2	1
13.	Sr.Clerk	1	1	1	0
14.	Jr.Clerk	1	0	1	0
<b>Total</b>		<b>259</b>	<b>213*</b>	<b>248</b>	<b>11</b>

\*One Apprentice Technician not accounted in actual strength.

**SANCTION Vs REQUIREMENT**

<b>SANCTION</b>	<b>ACTUAL</b>	<b>REQUIREMENT</b>	<b>SURPLUS</b>
259	213	248	11

**RECOMMENDATION NO.1**

**One** OS post (Grade pay Rs.4200/-) sanctioned excess to the requirement may be surrendered and credited to the bank of surplus post.

**RECOMMENDATION NO.2**

**TEN** posts of Helper (Grade pay Rs.1800/-) sanctioned excess to the requirement may be surrendered and credited to the bank of surplus post.

**CHAPTER – IV****4.0 PLANNING BRANCH'S REMARKS ON CO-ORDINATING OFFICER'S VIEWS**

The draft work study report was handed over to the Co-ordinating Officer (ADME / NCJ) on 15.05.2019. But, so far, no reply has been received . The time limit allowed for the Co-ordinating Officer to respond is only 15 days.

In this connection, the co-ordinating officer has not responded even after 26 days, from the date of submission of the draft report.

Hence, the report is released without the remarks of the co-ordinating officer.

**5.0 FINANCIAL SAVINGS**

5.1 If the recommendations made in the study report are implemented, the annual recurring financial savings will be as under:

Sl. No.	Category	Grade pay (Rs.)	No. of post	Mean Pay (Rs.)	Annual savings (Rs.)
1.	OS	4200	1	80551	966612
3.	Helper	1800	10	40821	4898520
<b>TOTAL</b>			<b>11</b>		<b>5865132</b>

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**ANNEXURE – I****SANCTION AND ACTUAL STAFF STRENGTH AT SSE/C & W /NCJ**

Sl. No.	Category	Sanction		Actual	
		Sr.DPO/TVC as on 13.06.2018	SSE/C&W/ NCJ as on 07.02.2019	Sr.DPO/TVC as on 13.06.2018	SSE/C&W/ NCJ as on 07.02.2019
1.	SSE	11	11	9	10
2.	JE	8	9	9	7
3.	Sr.Technician (GP Rs.4200)	29	29	14	13
4.	Technician-I (GP Rs.2800)	70	70	14	16
5.	Technician-II (GP Rs.2800)	2	2	9	14
6.	Technician-III (GP Rs.1900)	30	30	68	58
7.	Helper/Khalasi (GP Rs.1800)	96	96	94	85
8.	Welder	2	2	3	3
9.	Carpenter	3	3	1	3
10.	Painter	2	2	1	2
11.	Trimmer	1	1	0	1
12.	PB clerks	5	5	0	1
<b>TOTAL</b>		<b>259</b>	<b>260</b>	<b>222</b>	<b>213</b>
<b>APPRENTICE</b>					
TECHNICIAN		0	0	0	1
<b>GRAND TOTAL</b>		<b>259</b>	<b>260</b>	<b>222</b>	<b>214</b>

**ANNEXURE - II****Page I****BENCH MARKING NORMS FOR MAINTENANCE STAFF PROVISION FOR COACHING DEPOT NCJ****CORE ACTIVITIES****A. PRIMARY MAINTENANCE****a. SUPER FAST/LONG DISTANCE M/Exp**

TRAIN NO	SERVICE	COMPO	RAKES	TOTAL COACHES	AV MAINT /DAY	Req. of staff as per Bench Mark	Req
						Yard stick	
16339/16340 Exp	MON,TUE,WED,FRI	22	5	111	12.57		
16351/16352 Exp	SUN,THUR	22			6.28		
12665/12666 Exp	SAT	22+1			3.28		
16381/16382 Exp	DAILY	17	5	85	17.00		
12660/12659 S.F	SUN	23	1	23	3.28		
16335/16336 Exp	TUE	23	1	23	3.28		
16318/16317 Exp	FRI	13	1	13	1.85		
12642/12641 S.F	WED, FRI	22	2	22	6.28		
16353/16354 Exp	TUE	20		20	2.85		
			<b>15</b>	<b>297</b>	<b>56.67</b>	<b>1.1</b>	<b>62.33</b>

b. Other M/EXP: NIL

**c. PASSENGER TRAINS**

56320/56319 pass	DAILY	17	4	68	17		
56315/56318 pass	DAILY	14	4	56	14		
			<b>8</b>	<b>124</b>	<b>31</b>	<b>0.75</b>	<b>23.25</b>
<b>TOTAL PRIMARY MAINTENANCE</b>			<b>23</b>	<b>421</b>	<b>87.6</b>		<b>85.58</b>

**B. SECONDARY MAINTENANCE****a. SUPER FAST/LONG DISTANCE M/Exp**

15906/15905 Exp	THUR	22	2	22	3.14	0.45	1.41
<b>Total Secondary Maintenance</b>		<b>22</b>	<b>3</b>	<b>22</b>	<b>3.14</b>	<b>0.45</b>	<b>1.41</b>

b. Other M/EXP: NIL

c. Passenger trains: Nil

C. ENROUTE TRAIN PASSING, TURN ROUND ATTENTION, TERMINATION/ORIGINATING EXAMINATION PF					
SUPER FAST/LONG DISTANCE M/Exp					
Other End Attention					
12689/12690	SUN	18	1		2.5
12667/12668	FRI	23	1		3.3
22621/22622	SUN,TUE,FRI	16	3	48	6.8
12633/16525	DAILY	23			23
16526/12634	DAILY	23			23
b. Originating/Terminating					
16339/16340	4/Week	22			12.5
16351/16352	2/Week	22			6.3
12665/12666	1/Week	23			3.3
16335/16336	1/Week	23			3.3
12660/12659	1/Week	23			3.3
12642/12641	2/Week	20			5.7
16381/16382	DAILY	17			17
16318/16317	1/Week	13			1.8
15906/15905	1/Week	22			3
Pass Through					
16526/12634	DAILY	23			23
12665/12666	1/Week	22			3
12642/12641	2/Week	22			6.3
22621/22622	3/Week	14			6
Total			153.1 0.26 39.80		
Other Mail/Exp					
22667/22668	DAILY	16			16
16605/16606	DAILY	19			19
17235/17236	DAILY	20			20
16649/16650	DAILY	21			21
16861/16862	Fri	16			2.3
PASS THROUGH					
16381/82	DAILY	17			17
12633/16525	DAILY	23			23
16318/16317	1/Week	13			1.8
15905/15906	1/Week	22			3
16861/16862	1/Week	16			2.3
16723/16724	DAILY	22			22
16128/16127	DAILY	16			16
TOTAL for MAIL/EXP			163.4 0.23 37.58		

**PASSENGER****Originating/Terminating**

56320/56319	Daily	17			17
56315/56318	Daily	14			14
22668/56310	Daily	16			16

**PASS THROUGH**

56715/56717	Daily	9			9
56701/56700	Daily	18			18

**PFTR at NCJ**

56311/56304	Daily	14			14
56317/56316	Daily	14			14
56718/56719/ 56716	Daily	9			9

**Total Passenger Train****111****0.18****19.98**

**ANNEXURE – III**  
**Sheet - 1**

<b>BENCHMARKING NORMS FOR MAINTENANCE STAFF PROVISIONS FOR COACHING MAINTENANCE</b>			
<b>ANNEXURE TO BOARD'S LETTER 2000/M©/143/5, dated 24.12.2001</b>			
<b>Sl. No.</b>	<b>ACTIVITY</b>	<b>PREVALENT NORMS UNIT/MEN</b>	<b>BENCHMARKING NORMS UNIT/MEN</b>
1	Primary Maintenance	Primary Men / Coach / Day Super Fast / Long distance Trains – 1.2 Mail / Express – 1 Pass. Trains – 0.8	Men / Primary Coach handled per day Superfast / Long distance trains: 1.1 Mail / Express – 0.9 Pass. Trains – 0.75
2	Secondary Maintenance	50% of Primary	Men / coach examined / day Superfast / long distance trains – 0.55 Mail / Express Trains – 0.45.Pass. Trains – 0.36
3	Enroute Train Passing.  Turn round attention. Terminating / originating (Inclusive of cleaning and examination of Platform but excluding interior dry cleaning of turn round trains	As per local practice	Men / coach examined per day (up and down pair of trains to be counted as one rake)  Superfast / Long distance trains – 0.26  Main / Express Trains – 0.23  Pass. Trains – 0.18
4	Sick Line Attention	0.15 / coach held	0.14 / coach
5	Cleaning & complete washing	0.7 / coach maintained daily including primary and secondary trains	0.55 coach maintained daily including primary and secondary trains.
6	Only for dry cleaning	0.5 / coach cleaned	0.45 / coach cleaned
7	Watering	Not covered	A committee is separately examining the area. For the present requirement may be based on local conditions.
8	Material storage / accounting	32 men	26 men for each coaching depot holding 150 or more coaches

9	Linen management	0.27 men / AC coach	0.22 / AC coach holding
10	Inspection carriage	2.2 / insp. Carriage	1.76 / insp. Carriage
11	Train escorting staff	As per Boards letters 99 / TGV /12/2, dated 13.03.99	No Change
12	Statistical Work	10 men	8 men only for depots holding 150 or more coaches
13	Outstation / Line Attention	7 men	NIL
14	Pest Control	Already Outsourced	No Change
15	Waste disposal	Already Outsourced	No Change  Railways where yardstick provides for staff for these items of work may work towards outsourcing based on local condition
	Pit line sweeping & drain cleaning	Already Outsourced	
	Security and locking of rakes	Already Outsourced	
16	Staff Training requirement of trainers	Not covered	Not covered by benchmarking norms to be provided on Need basis
17	ART and accident relief Mill wright, W. measures and ancilliary staff	Not covered	Not covered by benchmarking norms to be provided based on existing norms for accident relief trains of different types and on NEED BASIS for other tasks

1. The above norms (other than sick line are inclusive of rest giver allowance (RG) but Leave Reserves (LR) may be provided as applicable. For sick line, both LR & RG are included.
2. The Norms do not cover ministerial staff and divisional control staff which may be provided according to local practices.