

**Study Report On**  
**Review of Staff Strength of**  
**Printing Press at Mahalaxmi,**  
**Stores Department**

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**Study No.G.463/WR/WS-01/2018-19**

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### Executive Summary

Sr. No. of Study : 01

Case No. : G.463/WR/WS-01/2018-19

Subject : Review of Staff Strength of  
Printing Press at Mahalaxmi,  
(Stores Department)

Authority : As per AGM's directives

Terms of Reference : Assessment of need based actual  
Manpower.

Total No. of Recommendations : 02

Summary of Recommendations : Placed on Page No.06

Projected Manpower :

Category	Sanctioned cadre	On Roll Cadre (as on 14.05.2018)	Vacancy	Proposed Surrender
<b>Group 'C' (Supervisors)</b> <b>PB: 9300-34800</b> <b>GP:(4600/4200)</b>	<b>38</b>	<b>17</b>	<b>21</b>	<b>21</b>
<b>Group 'C'</b> <b>(Sr. Technician/Technicians/Artisan staff)</b> <b>PB: 9300-34800/5200-20200</b> <b>GP:(4200/2800/2400/1900)</b>	<b>217</b>	<b>147</b>	<b>70</b>	<b>70</b>
<b>Group 'C'</b> <b>(Establishment and Ministerial staff)</b> <b>PB: 9300-34800/5200-20200</b> <b>GP:(4600/4200/2800/1900)</b>	<b>15</b>	<b>09</b>	<b>06</b>	<b>06</b>
<b>Group 'D'</b> <b>(Peon/Khalasi/Safaiwala/Cook</b> <b>/Khalasi/Paper counter/App.</b> <b>Technician Gr. III staff)</b> <b>PB: 5200-20200 GP:</b> <b>(1800)</b>	<b>17</b>	<b>11</b>	<b>06</b>	<b>06</b>
<b>TOTAL</b>	<b>287</b>	<b>184</b>	<b>103</b>	<b>103</b>

Financial Implication : Recurring saving of @ **10.12 crores p.a.**  
on implementation of Work Study Report

### **Terms Of Reference**

As per Additional General Manager's directives, Secy./PG has instructed to conduct a Work Study to review the staff strength of Printing Press at Mahalaxmi, Stores Department. Accordingly, a study has been conducted with a view to assess the requirement of manpower on the basis of present work load arising.

### **Acknowledgement**

The Work Study Team acknowledges with gratitude the co-operation given by

**Shri. Sanjay Patil, Sr. Manager - (Printing & Stationary)**

**Shri. Rakesh Barman - (SSE)**

**Shri. Sanjay\_Shewale - (SSE)**

**Shri. Ajit Singh - (SSE)**

For rendering their valuable guidance during the course of the study. The Study Team is also thankful to all the Supervisors / Staff of Printing Press at Mahalaxmi who have extended their co-operation during conducting and finalizing the study.

### **Methodology**

- Collection : Collection of data required for conducting the study.
- Scrutiny : The scrutiny of data collected, deployment of existing staff strength, quantum of work load arising.
- Discussion : Discussion with concerned Officers, SSE and Staff. Suggestions and guidelines offered by concerned supervisory staff.
- Identification : of Vacant posts available.
- Finalization : of Work Study Report with recommendations for implementations.

## Summary of Recommendations

### Recommendations

#### **Recommendation No.1**

<b>Recommendations</b>	<b>Para ref.</b>	<b>Page No.</b>
As per Para 2.26 vide item no. i to x, the workload of General printing is reduced. Thus it is recommended that : The Vacant <b>97</b> posts of Group 'C' staff {All Vacant} and <b>06</b> posts of Group 'D' staff {All Vacant} (Total 103) which are vacant as on 14.05.2018 may be surrendered immediately.	<b>2.27.1</b>	<b>27</b>

#### **Recommendation No. 2.**

<b>Recommendations</b>	<b>Para ref.</b>	<b>Page No.</b>
<p>Due to reduce of workload, the manpower of Night Shift may be utilized in Day shift and working of Night Shift of all section may be closed.</p> <ul style="list-style-type: none"><li>• This will save the Electricity in the Night Shift.</li><li>• Proper utilization of Machinery rather than keeping idle in a day shift.</li><li>• Proper utilization of manpower.</li></ul>	<b>2.27.2</b>	<b>27</b>

## **Chapter – I**

### **1.0 Introduction:**

- 1.1** The Printing Press building is located at Mahalaxmi in a multistoried building having total built-up area of @ 90,000 sq. ft.
- 1.2** Senior Manager (Printing & Stationary) is in-charge of all the activities of the Press assisted with SSE & Supervisors.
- 1.3** The Printing Press caters to the printing needs of all Books and Forms, including Money Value items, Publications and other Non-Standard Books and Forms for entire Western Railway. It is also the Centralized Cell for printing supply of all Money Value items, Parcel Way Books and Railway Receipts to entire Indian Railways.
- 1.4** There are majorly 03 modules of work is carried out in printing press
  - i. Pre- Printing : Typesetting, Typing, Tracing output, DTP, Plate making and pasting
  - ii. Printing : Plate fixing, Printing & Numbering
  - iii. Post Printing : Binding, Pinning, Cutting, Pasting, Finishing, Packing and Delivery

Primarily, there are three sections at Printing Press –

#### **a) General Printing Section:**

This section undertakes printing and binding of Standard and Non-Standard Books and Forms, Publications, North Western Railway Standard Books and Forms items and other miscellaneous items.

#### **b) Centralized Cell:**

This section caters to the requirement of Goods Invoices (RRs), Parcel Way Bills (PWBs) for all the Zonal Railways and other Money Value items (@ 49 items) for Western Railway.

#### **c) Ticket Printing Section:**

- i. This section caters to the need of Platform Tickets & Season Tickets. As Card Ticket printing facility is not available at the press, it is being printed through Central Railway Press, Byculla.
- ii. Over Western Railway, UTS system is implemented at all the stations (suburban & Non-suburban ) i.e.100% UTS tickets are issued without any alternative ticketing system. As such Central Railway Printing Press at Byculla shall not required to print card tickets for Western Railway to meet unforeseen demands and to keep 30% buffer stock capacity to offset the failure of UTS system.

- iii. Now, the system of UTS is smoothly working and as per the past records, card tickets were not issued over suburban & Non-suburban station over Western Railway.
- iv. Earlier, there was heavy load at Ticket printing section. After introducing the UTS, no indents for card tickets as well as SN24 B were received from Suburban & Non suburban station as the UTS system running with full proof system for issuing tickets. Maximum tickets were issued through UTS system over suburban & non Suburban section over Western Railway. As such accountal of tickets is being done through computer system instead of Manual accounting.
- v. Printing of Season Tickets/ Circular Ticket/ Izzat Pass are completely closed.
- vi. Printing of Rajdhani Ticket/ Shatabdi Exzpress Tickets/ Journey extension is also closed.

**d) In addition to this, the following sections are also part of the printing modules :**

- i. SSE (GP)
- ii. Production Control Organization (PCO) Section
- iii. DTP section
- iv. Pasting & Plate Making
- v. Screen Printing
- vi. Machine
- vii. Centralized Cell
- viii. Binding
- ix. Ticket Printing
- x. Reading
- xi. Establishment
- xii. General
- xiii. Manitenance
- xiv. COS office



**1.5 Total cadre of Printing Press at Mahalaxmi is as under –**

**Group “C” staff**

**"Section A"**

Sr.No	Cadre	Pay Band + GP	Level	Sanctioned Cadre	Men On Roll	Vacancy
	<b>Supervisors</b>					
1	SSE	9300-34800+4600	7	25	13	12
2	JE + Head Reader	9300-34800+4200	6	13	4	09
				<b>38</b>	<b>17</b>	<b>21</b>
	<b>Composing</b>					
3	Sr. Technician	9300-34800+4200	6	13	10	3
4	Technician Gr. I	9300-34800+2800	5	25	14	11
5	Technician Gr. II	9300-34800+2400	4	04	07	+3
6	Technician Gr. III	9300-34800+1900	2	01	04	+3
				<b>43</b>	<b>35</b>	<b>08</b>
	<b>Machine</b>					
7	Sr. Technician	9300-34800+4200	6	19	15	4
8	Technician Gr. I	9300-34800+2800	5	38	22	16
9	Technician Gr. II	9300-34800+2400	4	06	13	+7
10	Technician Gr. III	9300-34800+1900	2	06	5	1
				<b>69</b>	<b>55</b>	<b>14</b>
	<b>Binding</b>					
11	Sr. Technician	9300-34800+4200	6	23	19	04
12	Technician Gr. I	9300-34800+2800	5	46	16	30
13	Technician Gr. II	9300-34800+2400	4	07	04	03
14	Technician Gr. III	9300-34800+1900	2	08	06	02
				<b>84</b>	<b>45</b>	<b>39</b>
	<b>Reading</b>					
15	Sr. Technician	9300-34800+4200	6	01	01	00
16	Technician Gr. I	9300-34800+2800	5	02	01	01
17	Technician Gr. II	9300-34800+2400	4	00	00	00
18	Technician Gr. III	9300-34800+1900	2	00	00	00
				<b>03</b>	<b>02</b>	<b>01</b>
	<b>Composing &amp; Mono Casting</b>					
19	Sr. Technician	9300-34800+4200	6	02	02	00
20	Technician Gr. I	9300-34800+2800	5	02	02	00
21	Technician Gr. II	9300-34800+2400	4	01	01	00
22	Technician Gr. III	9300-34800+1900	2	00	00	00
				<b>05</b>	<b>05</b>	<b>00</b>
	<b>Maintenance</b>					
23	Sr. Technician	9300-34800+4200	6	02	00	02
24	Technician Gr. I	9300-34800+2800	5	05	01	04
25	Technician Gr. II	9300-34800+2400	4	01	00	01
26	Technician Gr. III	9300-34800+1900	2	01	01	00
				<b>09</b>	<b>02</b>	<b>07</b>
	<b>MKV Operator</b>					
27	Technician Gr. I	9300-34800+2800	5	01	00	01

28	Technician Gr. II	9300-34800+2400	4	00	01	+1
				<b>01</b>	<b>01</b>	<b>00</b>
	<b>Steno Typist</b>					
29	Sr. Technician	9300-34800+4200	6	01	01	00
30	Technician Gr. I	9300-34800+2800	5	01	00	01
31	Technician Gr. III	9300-34800+1900	2	01	01	00
				<b>03</b>	<b>02</b>	<b>01</b>
		<b>TOTAL</b>		<b>255</b>	<b>164</b>	<b>91</b>

### "Section B"

Establishment & Ministerial Staff (Group C)						
Sr.No	Cadre	Pay Band + GP	Level	Sanctioned Cadre	Men On Roll	Vacancy
	<b>Estt.</b>					
1	COS	9300-34800+4600	7	01	01	00
2	OS	9300-34800+4200	6	01	01	00
3	Sr.Clerk	9300-34800+2800	5	02	01	01
4	Jr.Clerk	9300-34800+1900	3	03	00	03
	<b>Ministerial.</b>					
5	COS	9300-34800+4600	7	01	01	00
6	OS	9300-34800+4200	6	02	05	+3
7	Sr.Clerk	9300-34800+2800	5	02	00	02
8	Jr.Clerk	9300-34800+1900	3	02	00	02
9	Asst. Canteen Manager	9300-34800+1900	3	01	00	01
		<b>Total</b>		<b>15</b>	<b>09</b>	<b>06</b>

### "Section C"

Group D Staff						
Sr. No	Cadre	Pay Band + GP	Level	Sanctioned Cadre	Men On Roll	Vacancy
1	Sr.Peon/Peon	5200-20200+1800	1	03	03	00
2	Khalasi Helper/ Khalasi	5200-20200+1800	1	09	05	04
3	Safaiwala	5200-20200+1800	1	02	02	00
4	Cook	5200-20200+1800	1	01	00	01
5	Khalasi	5200-20200+1800	1	01	01	00
6	Paper Counter	5200-20200+1800	1	01	00	01
7	Apprentice Technician Grade.III	5200-20200+1800	1	00	00	00
		<b>Total</b>		<b>17</b>	<b>11</b>	<b>06</b>
		<b>Grant Total</b>		<b>287</b>	<b>184</b>	<b>103</b>

### Summary

Section	Sanctioned Cadre	Men On Roll	Vacancy
A	255	164	91
B	15	09	06
C	17	11	06
<b>Total</b>	<b>287</b>	<b>184</b>	<b>103</b>

## Chapter - II

### 2.0 Critical Analysis of Workload and Manpower Assessment:

2.1 Assessment of Manpower requirement has been worked on the basis of Effective Working Hours available per person and calculation of machine output vis-à-vis its' capacity.

2.2 Working hours (for Technical Staff):

The press works in Two Shifts viz. Day and Night Shifts. However due to Low work load minimal staff is utilized in night staff.

	Monday to Friday	Saturday
Day Shift	07:15 to 15:45 (Rest – 11:15 to 11:45)	07:15 to 11:15
Night Shift	15:45 to 00:15 (Rest – 19:45 to 20:15)	11:15 to 15:15

2.3 According to working hours applicable to Non-Ministerial Staff of Printing Press at Mahalaxmi, calculation of **Monthly Effective Working Hours** available per person is as given below:

No. of days in a year = 365 days

No. of holidays in a year

Public Holidays = 16 days

Saturdays (Half Day) = 26 days

Sundays = 52 days

-----  
Total = 94 days

Maximum working days in a year =  $365 - 94 = 271$  days

Maximum working hours in a day/Shift = 8.30 hrs.

Less hours for Fatigue Allowance & Lunch Time in a day/Shift = 1.30 hrs.

Actual working hours in a day/Shift = 7 hrs.

Total man hours available in a year / person =  $271 \times 7 = 1897$  hrs.

(Note: As per the norms followed under Work Study while calculating working hours, only 30 minutes Lunch Break per shift is admissible. In addition to this, an additional 30 minutes for oiling of machine & 30 minutes for cleaning of machine is done per shift is also taken into consideration. i.e. total period of 1.30 hrs. per Shift )

## 2.4 Cadre position as on 14/05/2018:

### Group 'C' Cadre: Pay Band = 9300-34800 (GP- 4600/4200/2800/2400/1900)

Sr. No	Category	Scale	Sanctioned Strength	Men On Roll	Excess	Vacancy
1	SSE (General Printing)	9300-34800 + GP 4600	2	2	0	0
2	SSE (Composing)	9300-34800 + GP 4600	6	2	0	4
3	SSE (Binding)	9300-34800 + GP 4600	6	3	0	3
4	SSE (Printing)	9300-34800 + GP 4600	7	3	0	4
5	SSE (C.C.)	9300-34800 + GP 4600	2	1	0	1
6	SSE (PCO)	9300-34800 + GP 4600	1	1	0	0
7	SSE (Maintenance)	9300-34800 + GP 4600	1	1	0	0
		<b>Total</b>	<b>25</b>	<b>13</b>	<b>0</b>	<b>12</b>
8	JE (Composing)	9300-34800 + GP 4200	4	1	0	3
9	JE (Binding)	9300-34800 + GP 4200	4	1	0	3
10	JE (Printing)	9300-34800 + GP 4200	3	0	0	3
11	JE (Mechanical Composing)	9300-34800 + GP 4200	0	0	0	0
12	JE (Maintenance)	9300-34800 + GP 4200	1	1	0	0
		<b>Total</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>9</b>
	Head Reader	<b>Total</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
13	Senior Technician (Composing)	9300-34800 + GP 4200	13	10	0	3
14	Technician Gr.I (Composing)	5200-20200 + GP 2800	25	14	0	11
15	Technician Gr.II (Composing)	5200-20200 + GP 2400	4	7	3	0
16	Technician Gr.III (Composing)	5200-20200 + GP 1900	1	4	3	0
		<b>Total</b>	<b>43</b>	<b>35</b>	<b>6</b>	<b>14</b>
17	Senior Technician (Machine)	9300-34800 + GP 4200	19	15	0	4
18	Technician Gr.I (Machine)	5200-20200 + GP 2800	38	22	0	16
19	Technician Gr.II (Machine)	5200-20200 + GP 2400	6	13	7	0
20	Technician Gr.III (Machine)	5200-20200 + GP 1900	6	5	0	1
		<b>Total</b>	<b>69</b>	<b>55</b>	<b>7</b>	<b>21</b>
21	Senior Technician (Binding)	9300-34800 + GP 4200	23	19	0	4
22	Technician Gr.I (Binding)	5200-20200 + GP 2800	46	16	0	30
23	Technician Gr.II (Binding)	5200-20200 + GP 2400	7	4	0	3
24	Technician Gr.III (Binding)	5200-20200 + GP 1900	8	6	0	2
		<b>Total</b>	<b>84</b>	<b>45</b>	<b>0</b>	<b>39</b>
25	Senior Technician (Reading)	9300-34800 + GP 4200	1	1	0	0
26	Technician Gr.I (Reading)	5200-20200 + GP 2800	2	1	0	1
27	Technician Gr.II (Reading)	5200-20200 + GP 2400	0	0	0	0
28	Technician Gr.III (Reading)	5200-20200 + GP 1900	0	0	0	0
		<b>Total</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>1</b>
29	Senior Technician (Mechanical Composing)	9300-34800 + GP 4200	2	2	0	0
30	Technician Gr. I(Mono Casting)	5200-20200 + GP 2800	2	2	0	0
31	Technician Gr.II (Mono Casting)	5200-20200 + GP 2400	1	1	0	0

32	Technician Gr.III (Mono Casting)	5200-20200 + GP 1900	0	0	0	0
		<b>Total</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>
33	Senior Technician (Maintenance)	9300-34800 + GP 4200	2	0	0	2
34	Technician Gr.I (Maintenance)	5200-20200 + GP 2800	5	1	0	4
35	Technician Gr.II (Maintenance)	5200-20200 + GP 2400	1	0	0	1
36	Technician Gr.III (Maintenance)	5200-20200 + GP 1900	1	1	0	0
		<b>Total</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>7</b>
37	Technician Gr.I (MKB Operator)	5200-20200 + GP 2800	1	0	0	1
38	Technician Gr.II (MKB Operator)	5200-20200 + GP 2400	0	1	1	0
		<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
39	Senior Technician (Maintenance)	9300-34800 + GP 4200	1	1	0	0
40	Technician Gr.I (Maintenance)	5200-20200 + GP 2800	1	0	0	1
41	Technician Gr.III (Maintenance)	5200-20200 + GP 1900	1	1	0	0
		<b>Total</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>1</b>
		<b>Grand Total</b>	<b>255</b>	<b>164</b>	<b>14</b>	<b>105</b>

<b>Establishment &amp; Ministerial Staff (Group C)</b>					
<b>Sr.No</b>	<b>Cadre</b>	<b>Pay Band + GP</b>	<b>Sanctioned Cadre</b>	<b>Men On Roll</b>	<b>Vacancy</b>
	<b>Estt.</b>				
1	COS	9300-34800+4600	01	01	00
2	OS	9300-34800+4200	01	01	00
3	Sr.Clerk	9300-34800+2800	02	01	01
4	Jr.Clerk	9300-34800+1900	03	00	03
	<b>Ministerial.</b>				
5	COS	9300-34800+4600	01	01	00
6	OS	9300-34800+4200	02	05	+3
7	Sr.Clerk	9300-34800+2800	02	00	02
8	Jr.Clerk	9300-34800+1900	02	00	02
9	Asst. Canteen Manager	9300-34800+1900	01	00	01
		<b>Total</b>	<b>15</b>	<b>09</b>	<b>06</b>

<b>Erstwhile Group D Staff</b>					
<b>Sr. No</b>	<b>Cadre</b>	<b>Pay Band + GP</b>	<b>Sanctioned Cadre</b>	<b>Men On Roll</b>	<b>Vacancy</b>
1	Sr.Peon/Peon	5200-20200+1800	03	03	00
2	Khalasi Helper/ Khalasi	5200-20200+1800	09	05	04
3	Safaiwala	5200-20200+1800	02	02	00
4	Cook	5200-20200+1800	01	00	01
5	Khalasi	5200-20200+1800	01	01	00
6	Paper Counter	5200-20200+1800	01	00	01
7	Apprentice Technician Grade.III	5200-20200+1800	00	00	00
		<b>Total</b>	<b>17</b>	<b>11</b>	<b>06</b>

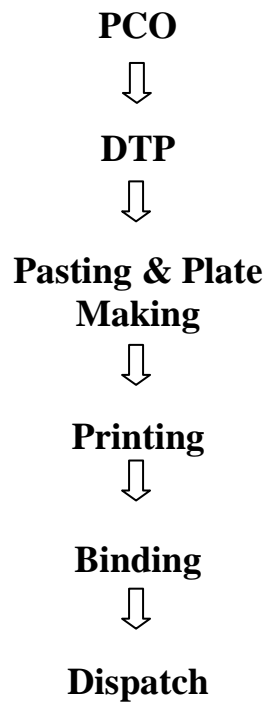
## 2.5 Section-wise deployment of staff (Shift-wise):

Sr. No.	Section	Day Shift		Night Shift	
		Supervisor	Gr.'C'	Supervisor	Gr.'C'
1	SSE (GP)	1	0	1	0
2	PCO	1	8	0	0
3	DTP	2	17	1	5
4	Pasting / Plate Making			0	
5	Screen Printing		7	0	
6	Machine	2	28	1	13
7	Centralized Cell	1	15	0	4
8	Binding	3	41	Shift Closed	
9	Ticket Printing	1	9	0	0
10	Reading	1	2	Shift Closed	
11	Establishment	1	3	0	0
12	General	1	7	0	0
13	Maintenance	1	5	1	0
14	COS Office - CCG	0	1	0	0
TOTAL		15	143	4	22
		184			

## 2.6 Existing System of Working –

- Demand for printing work from respective Divisions / Units and other Zonal Railways are placed to the Press in the form of indents. On receipt of the indent, Work Orders are prepared with clear instructions about the nature of work of composing, printing, binding, quality / quantity of paper and any other specific instructions by the indenter about the print out.
- Stock Indents (Books & Form) directly received from Dy. CMM(ITS)-CCG
- All Non Standard & publication items are indented either form division or HQ are received from Dy. CMM(ITS)-CCG.
- Money Value Demands received from all Zonal Railways i.e. Directly received to press from concern consignee.
- Demand of PVC I/cards, Medical cards, Letter head, Visiting card, Certificate etc are directly received to press from respective unit of Western Railway.
- Demand of Platform Ticket, Season Ticket and Card Ticket directly received to press from Dy. CAO(T)-AII.

**2.7 Flow process chart of Printing of Tickets and other Materials:**



**2.8 Number of Indents received during last three years: -**

<b>Sr.No.</b>	<b>Category</b>	<b>No. of indents received</b>		
		<b>2016</b>	<b>2017</b>	<b>2018 (till date)</b>
1	Std. Stock Items	310	320	179
2	Non Stock Items	444	375	123
3	Publications	62	83	18
4	Money Value	78	110	26
5	Other Railways (NWR / WCR)	177	3	0
6	Ticket Printing (Card Ticket,Platform,JET etc)	296	277	0

**2.9 Capacity and Out-turn in terms of DFCI (Double Foolsaps Impressions) and corresponding Sanctioned / On Roll strength of staff during last few years:-**

Year	Capacity in DFCI	Production achieved in DFCI	Sanctioned Strength		On Roll Strength	
			Gr.C	Gr.D	Gr.C	Gr.D
2002-03	9,45,00,000	10,25,81,000	366	110	328	36
2003-04	9,45,00,000	9,11,94,000	366	110	325	24
2004-05	9,45,00,000	9,51,30,000	351	98	313	24
2005-06	9,45,00,000	8,37,51,000	343	53	315	24
2006-07	8,16,00,000	10,35,60,000	338	43	303	23
2007-08	8,16,00,000	8,61,46,000	334	27	296	22
2008-09	8,16,00,000	8,28,16,000	319	27	278	21
2009-10	8,05,92,000	8,39,23,000	318	27	268	19
2010-11	8,50,30,000	9,04,86,000	318	27	265	16
2011-12	8,50,30,000	8,52,84,590	313	27	250	12
2012-13	8,50,30,000	8,51,74,000	292	26	244	12
2013-14	7,65,27,000	8,51,79,625	288	22	234	15
2014-15	7,65,27,000	8,25,96,500	288	22	215	18
2015-16	7,65,27,000	6,98,79,626	288	22	202	14
2016-17	7,65,27,000	6,08,60,000	288	19	184	14
2017-18	6,95,04,000	6,17,00,000	288	19	173	14

**2.10 Statistical Information of Production (from April'2017 to March'2018):**

Targeted Production for the year → 6,95,05,000 DFCI  
 Targeted Production for the month → 57,92,083 DFCI  
 Achieved in the year 2017-2018 → 6,08,52,000 DFCI

Staff Utilization Ratio → 84%  
 Machine Utilization Ratio → 83.5%

**2.11 Printing work off-loaded during last three years:-**

- Printings of All color pages / covers are being out sourced.
- For lifting and sale of paper wastes on annual basis
- For hiring of truck to deliver the Books and Forms to consignees within Mumbai area and to railway stations for onward transporting to consignees outside Mumbai.

**2.12 Money Value Items (Books & Forms) Printed for Zonal Railways :-**

Zonal Railway	2016	2017	2018 (till date)
Western Railway	135430	111245	79110
North West Railway	91000	90320	27500
West Central Railway	50000	-	40000
South West Railway	145500	-	-
South East Central Railway	-	25500	40000
North Central Railway	-	30000	-
East Coast Railway	71500	55500	74500
East Central Railway	50000	50000	50000
South Central Railway	658400	-	46000



South Eastern Railway	101200	1200	-
Southern Railway	75000	50000	40000
North East Frontier Railway	-	26500	6600
North Eastern Railway	4800	-	10800
Northern Railway	13200	100000	-
Eastern Railway	61500	47500	-
Central Railway	-	-	25000
Konkan Railway	1500	2500	-

### 2.13 Department-wise Work Orders (Stock Items):-

Sr. No.	Department	2015	2016	2017
1	General	157	181	168
2	Engineering	16	35	31
3	S&C	0	0	6
4	Loco & Carriage	61	37	56
5	Carriage & Wagon	76	54	71
6	Operating	100	117	144
7	Commercial	52	52	62
8	Accounts	30	16	24
9	Stores	21	37	48
10	Cash & Pay	0	3	1
11	Medical	78	60	34
12	Security	15	119	35
13	School	3	0	0
14	Publicity	2	0	0
15	Electric – Power	10	20	14
16	Electric – Traction	274	79	67
17	S&T	19	6	17
18	NWR	0	0	3
19	WCR	21	177	0
<b>TOTAL</b>		<b>935</b>	<b>993</b>	<b>781</b>

### 2.14 Desk Top Publishing (DTP) Section:

Present Deployment:

		Day Shift	Night Shift
		-----	-----
Supervisor (DTP/PlateMaking/Screen Prining)	→	02	01
Group 'C' (DTP/PlateMaking/Screen Prining)	→	17	00

This section is equipped with latest computers / laser printers and scanners. Licensed software of Adobe Page Maker, Corel Draw, Photoshop, MS Office 7 and Akruti Hindi has been purchased. Staff working in this section has been given specialized training to setting, design and merge text with graphics in a single format using this software.

The digital output from these computers is first proof read, corrected, final approved and then taken out on tracing sheets or transparencies or positives. At times, small

quantities in Black & White, the output is directly taken out from the Risograph machine.

The composition of matter for Offset & Rotary machines, which are high yielding and quality printing machines, are done on DTP and converted into printable matter by plate making.

Plates used for offset machines are made with the help of tracings taken out on computer using DTP software and sent to Plate Making section.

The major of the work of DTP section comprises of Publication items such as Rate Advice, GM Narrative Report, Quarterly Magazine, Manuals, Special Gazettes, Telephone Directory, Hindi Magazine, Abhivyakti, Rail Srujana and other publications.

DTP Section consists of two sub-sections:

- 1) Graphic designing.
- 2) Normal typesetting of books and forms.

#### Machines used in DTP Section.

Sr. No.	Description of machine	Capacity (per shift)
3	Risograph machine MZ 870A	8000 sheets Single job
4	Epson Stylus PRO 4450	

### **2.15 Pasting / Plate Making Section:**

Present Deployment:

		Day Shift	Night Shift
		-----	-----
Supervisor (DTP/PlateMaking/Screen Prining)	→	02	00
Group 'C' (DTP/PlateMaking/Screen Prining)	→	17	05

In the Plate Making section, first the layout is prepared from the tracings / transparencies / positives received from DTP section as per the size of the printout and the machine on which the job is to be printed. Pasting and Plate Making section has to cater to the plate requirements of five different size Offset Machines.

This job also involves –

- Cutting and Trimming of tracings / transparencies / positives
- Taping the tracings / transparencies / positives on the layout
- Putting Registration / Gripper marks
- Marking Gripper / Centre marks on the plate
- Pasting the ready layout on light sensitive pre-coated photo plate
- Exposing the plate through diffusion
- Separating the layout from the plate
- Developing the plate
- Retouching the plate

- Washing the plate
- Gumming the plate
- Storing the layout in racks for lamping on machine and thereby printing.

Machines used by Plate Making Section

Sr. No.	Description of machine	Capacity (per shift)
1	Metal Halide Exposing Unit	20 plates
2.	Plate Exposing Unit	20 Plates
3.	Baking Unit	To increase the capacity of machine.

**Number of Plates Transferred To Printing Section**  
**By Plate Making Section**

Sr. No.	Machine	2015	2016	2017
1	PO-36	752	718	926
2	S & W	1150	1571	1618
3	Ajit	2025	931	1579
4	Prakash	74	383	220
5	Auto	195	433	220
<b>TOTAL</b>		4196	4036	4563
<b>Average per Day</b>		15.48	14.89	16.84
<b>Average per Shift</b>		7.74	7.45	8.42

Capacity: 20 plates (per shift)

Avg. output for the last 3 years:

$$= ( 7.74 + 7.45 + 8.42 ) / 3$$

$$= 7.87 \text{ (per shift)}$$

**2.16 Screen Printing Section:**

Present Deployment: Day Shift

Supervisor	→	02
(DTP/PlateMaking/Screen Prining)		
Group 'C'	→	17

Screen Printing caters in printing Letter Head, Visiting Cards, Invitation Cards, Envelope printing, Certificates, Covers in the line work of 2-3 colors, Stickers, Text Greeting Cards etc.

The screen is first checked for tightness, dried and then coated with light sensitive coating solution. The solution is then allowed to thoroughly dry. The tracing / positive is pasted on the coating and exposed to light. Then it is developed, dried and re-touched. Then the dry screen is ready for printing.

Output of Screen Printing Section

	2015	2016	2017
<b>No. of Work Orders executed</b>	211	165	188
<b>No. of impressions</b>	228540	168300	207610

**2.17 Machine Section:**

Present Deployment:

		Day Shift	Night Shift
		-----	-----
Supervisor	→	02	01
Group 'C'	→	28	13

This is a General Printing Section of the press. This section undertakes printing of Standard and Non-Standard Books and Forms, Publications, North Western Railway Standard Books and Forms items and other miscellaneous items.

Machines Used in Printing Section

Sr. No.	Description of machine	Capacity (per shift)
1	Sud & Warren Offset Rotary (FB-14)	15000 sheets
2	Platen (P-6)	5000 sheets
3	PO-36 Offset Sheetfed (FB-16)	10000 sheets
4	Auto Record Cutting Machine	225 reams
5	PO-36 Offset Sheetfed (FB-18)	10000 sheets
6	Ajit Web Offset (FB-17)	25000 sheets
7	Prakash Offset (FB-19)	10000 sheets
8	Autoprint (PB-20)	10000 sheets

**2.18 Centralized Cell Section:-**

Present Deployment:

Supervisor	→	01	(Day Shift)	00	(Night Shift)
Group 'C'	→	15	(Day Shift)	04	(Night Shift)

This section caters to the requirement of Parcel Way Bills (PWBs) for all the Zonal Railways and other Money Value items (@ 49items) for Western Railway.

Machines Used in Centralized Cell

Sr.No.	Description of machine	Capacity (per shift)
1	Crabtree Letterpress Rotary (R-1)	32000 sheets
2	Timson Letterpress Rotary (R-2)	35000 sheets
3	Strapping Machine (Total = 2)	300 bundles

Workload tackled by Centralized Cell for Printing Money Value Items in Terms of DFCI

Year	Workload Tacklekd in sheets
2015-16	12222575
2016-17	8654725
2017-18	15287350

**2.19 Binding Section:**

Present Deployment:

	Day Shift	Night Shift
	-----	-----
Supervisor	→ 03	Shift Closed
Group 'C'	→ 41	

Printed job from General Printing Section is forwarded to Binding Section for Binding / Bundling and Dispatch.

Depending upon the nature of work, every job goes through various Operations of Binding like Cutting, Knocking, Gathering, Folding, Numbering, Sewing, Wiring, stitching, Binding, Finishing, Bundling etc.

Pasting job includes End paper pasting / Back patti pasting / Straw board pasting / Cloth patti pasting / Paper patti pasting / Color cover pasting etc.

To get the finished product, a few machines such as Cutting machine, Folding machine, Wire Stitching machine, Sewing machine and perfect binding machine may be used.

Most of the operations in Binding Section are labor oriented and hence staff requirement is based on activities performed as per demand and production.

**Machines Used in Binding Section**

Sr. No.	Description of machine	Capacity (per shift)
1	Acme Wire Stitching Machine	3600 wires
2	Brehmer Wire Stitching Machine	3600 nos.
3	Goeppigen Punching & Eyeletting Machine	2000 nos.
4	Krause Cutting Machine	225 reams
5	Vickers Wire Stitching Machine	4800 wires
6	Polar Cutting Machine	225 reams
7	Polygraph Wire Stitching Machine	3600 wires
8	Perforating Machine	5000 sheets
9	Paper Drilling Machine	10000 sheets
10	Cundall Folding Machine	10000 sheets
11	Martini Book Sewing Machine	1500 sheets
12	Pivano Cutting Machine	225 reams
13	Polygraph Auto Folding Machine	18000 sheets
14	Three Knife Trimmer	5000 books

15	Shrink Sealer & Shrink Wrapping Tunnel Machine	200 bundles
16	Strapping Machine (Total = 2)	200 bundles
17	Perfect Binding Machine	1600 books

### **Output of Binding Section**

<b>Description</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>STANDARD</b>			
a. Limb Binding	120445	356625	223170
b. Quarter Binding	105725	32105	30655
c. Half Binding	0	440	290
d. Loose Forms	9660750	14625550	36182600
<b>NON-STANDARD</b>			
a. Limb Binding	49572	86065	47574
b. Quarter Binding	6222	5751	5355
c. Half Binding	100	0	385
d. Loose Forms	3416266	874400	670350
<b>PUBLICATIONS</b>			
a. Limb Binding	67290	69595	25880
b. Quarter Binding	16200	100	150
c. Half Binding	0	0	0
d. Loose Forms	770072	87950	6860
<b>Centralized Cell</b>			
a. Limb Binding	215860	163760	253680
b. Comp RR	580493	567000	704500
c. Loose Forms	72250	99870	89075
<b>NWR</b>			
a. Limb Binding	0	41600	7500
b. Quarter Binding	0	0	0
c. Half Binding	0	0	0
d. Loose Forms	0	51500	0
<b>WCR</b>			
a. Limb Binding	14320	76980	0
b. Quarter Binding	0	5315	0
c. Half Binding	0	50	0
d. Loose Forms	8414600	6403400	0
<b>Screen Printing Section</b>			
Impression	185190	228540	168300
No. Of Work Order	179	211	165
<b>Perfect Binding Machine Out Turn</b>			
No. of Books Binded	123782	44015	72945

## 2.20 **Ticket Printing Section:**

Present Deployment:

Supervisor → 01 (Day Shift)  
Group 'C' → 09 (Day Shift)

This section caters to the need of Platform Tickets and Monthly Season Ticket. As Card Ticket printing facility is not available at the press, it is being printed through r Central Railway Press, Byculla.

The workload of this section includes –

- Registering of indents received in press
- Composing of tickets
- Printing / Counting / Checking of tickets
- Numbering of tickets
- Packing and Dispatch of tickets as per demand on indent
- Correspondence work

### **Output of Ticket Printing Section**

Year	Monthly Season Tickets	Platform Tickets	Card Tickets
2015-16	12600	650000	3847750
2016-17	10000	750000	3329000
2017-18	2000	400000	2995650

## 2.21 **Digital Printing Section cum PVC I/card :**

Present Deployment:

Group 'C' → 3 (Day Shift)

Specialized printing on Color Digital Printer and Two Color Risograph machine is taken out in this section.

## 2.22 **Reading Section:**

Present Deployment: Day Shift only

Supervisor → 1  
Group 'C' → 2

Proof reading or corrections are carried out in the copies of printed matter prepared in various stages. The composed matter is corrected at different stages of composing like form proof, page proof and author's proof before being printed. In this section both Hindi and English texts are verified for correctness before printing.

Till the final stage of printing, there are about 4 times reading per page. The corrections are carried out after each reading. The average corrections carried out, taking English and Hindi together.

After diversification of Western Railway Printing Press from Letterpress technology to Offset Technology, the pages are now being typeset on DTP and the output printed on A4 size paper.

#### Output of Proof Reading Section

Sr. No.	Year	Proof Reading Out Turn in A-4 Size	No. of Staff	Avg. Per Year per Person	Avg. per Day
1	2015-16	2585	2	1293	4.75
2	2016-17	1824	3	608	2.24
3	2017-18	1448	3	483	1.77

### 2.23 Establishment Section:

Present Deployment:

Supervisor	→	1	(Day Shift)
Group 'C'	→	3	(Day Shift)

The nature of work handled by this section includes -

- Promotion, Reversion and Transfer
- Recruitment, Trade Test, Selection, Suitability, Training etc.
- Maintenance of Leave Record
- Issue of Passes / PTOs / Identity Cards / Medical Cards / Memo etc.
- Preparation of Pay Sheet, Recovery of Loans, Grant of different type of Loans and Allowances, Checking Muster Rolls. Settlement of staff retired, RTI dealing etc.
- Staff Welfare, Settlement cases, DAR cases, HER policy, Returns, Factory Act, Licenses, Inspection Reports, PNM, Nomination
- Staff details entry in ARPAN & IPASS.

### 2.24 General Section:

Present Deployment:

Supervisor	→	1	(Day Shift)
Group 'C' & "D"	→	7	(Day Shift)

The General Section primarily caters to -

- Budget Demand / Allocation / Disbursement.
- M&P Program.
- Requisition of tenders for NS items.
- Miscellaneous work such as chasing of indents, P&T telephone bills.
- T&P register maintenance, Undertaking, Registration and DS-8ing.
- Maintenance of Bills, Register and Registration and Submission to Accounts.
- Supply of uniforms to staff.
- Work of Centralized Cell, Requisition of consumable items and its maintenance, posting of Credit Notes, RR delivery etc to the consignee.
- Cash Imprest handling



## 2.25 **Maintenance Section:**

Present Deployment:

		Day Shift	Night Shift
		-----	-----
Supervisor	→	1	1
Group 'C'	→	5	0

This section is entrusted with the responsibility of repairs and maintenance of the machines in the press.

### **2.26.1 OBSERVATIONS**

- i. It is observed that overall General Printing work at printing press is reduced from past several years.
- ii. Printing of only Platform Tickets and Monthly Season Tickets are done in Ticket section of Press. Card Tickets are printed through Central Railway Press, Byculla.
- iii. All Multi color printings are managed by HQ as per SOP. No in House color printing is done at Printing Press, MX.
- iv. Printing of DTC Book (SN 42B) has been reduced due to UTS Ticketing.
- v. Resulted Work of Binding section also reduced as compare to past workload.
- vi. Due to reduce of the work load, Night Shift workers are also shifted in day shift.
- vii. Printing of Money Value items also reduced for other Zonal railways as per data provided under item No. 2.12
- viii. Canteen Section is totally closed and three staff working in canteen section is utilized in other section.
- ix. It has been observed during the work study that Machines available at Mahalaxmi Printing Press are quite outdated. They are not at par with the highly advanced technology available in the open market, especially for printing items with advanced security features, which are very useful in printing Tickets and other Money Value items.
- x. Looking to the importance of Money Value items and security feature there is need for modernization but during the study it has been noticed that there is proposal for closing of Mahalaxmi Printing Press in due course.

### **2.26.2 CONCLUSION**

The overall work load of all sections of Mahalaxmi Printing Press has been scrutinized during the work study by the team of work study inspectors. The existing work load has been reduced as compare to past work load specially in General Printing. However, looking to the importance of Money Value Items & security features of existing work, the present manpower is justified and vacant post found surplus to the requirement. Thus, these vacant posts of printing press may be surrender immediately.

## **2.27      Recommendations**

### **2.27.1      Recommendation No.1**

As per Para 2.26 vide item no. i to x, the workload of General printing is reduced. Thus it is recommended that : The Vacant **97** posts of Group ‘C’ staff {All Vacant} and **06** posts of Group ‘D’ staff (Total 103) which are vacant as on 14.05.2018 may be surrendered immediately.

### **2.27.2      Recommendation No. 2.**

Due to reduce of workload, the work of Night Shift of all section may be closed and staff working in Night Shift shall be utilized in Day shift

- This will save the Electricity & Water in the Night Shift
- Proper utilization of Man Power.

### **Chapter - III**

#### **3.0 Financial Implication:**

- 3.1** After carefully scrutinizing the quantum of section-wise workload being attended, the Work Study team proposes to retain **173** Gr.'C' staff against sanctioned cadre of **270** posts and **11** Gr.'D' staff against sanctioned cadre of **17** posts for deployment to deal with the day-to-day workload arising.
- 3.2** The Work Study team has identified **97** posts of Group 'C' staff {All vacant} and **06** posts of Group 'D' staff {All Vacant} as vacant and recommendation has been made to surrender these vacant posts.
- 3.3** Implementation of the Study Report and surrendering the vacant posts as recommended by the Work Study Team would fetch an approximate annual recurring saving of Rs.10.21 crores.

<b>Number of posts</b>	<b>Average cost per employee/year (In lakhs)</b>	<b>@ Annual Savings (In crores)</b>
<b>97 Gr.'C' posts</b>	<b>10.03</b>	<b>9.73</b>
<b>06 Gr.'D' posts</b>	<b>6.45</b>	<b>0.39</b>
<b>Total</b>		<b>10.12</b>