

ON

REVIEW OF TRAFFIC ASSISTANT (SWITCHMAN/CABIN MASTER,
CABINMAN, LEVERMAN/CABINMAN STAFF) WORKING
IN OPERATING DEPARTMENT DUE TO
INTRODUCTION OF RRI/PANEL INTERLOCKING

OVER

LUCKNOW DIVISION

2020-21

WORK STUDY TEAM

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SWSO

DATE OF COMMENCEMENT: 12/05/2020

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No. 16-CP/08/WS/20-21

Central Planning Cell,
Northern Railway,
Headquarters Office,
Baroda House, New Delhi.

EXECUTIVE SUMMARY

This study was allotted to Central Planning Cell, HQ Office with a view to identify redundant/unproductive/obsolete activities due to introduction of technological up-gradation in the working of signaling system and to suggest ways and means to improve manpower productivity over Lucknow Division.

STAFF POSITION

The total sanctioned and on roll strength of Traffic Asstt.(Switchman, Cabin master, Cabin man, Lever man) staff working over LKO Division is as under:-

S.N.	Category	GP	S/S	O/R	Var.
1	Traffic Asstt.(Switchman/Cabin master)	2400	115	48	67
2	Traffic Asstt.(Cabinman)	2400	256	14	242
3	Traffic Asstt.(Leverman/ Cabinman)	1900	-	75	(+)75
4	Leverman	1800	43	03	40
Total			414	140	274

No. posts identified as surplus and recommended for surrender: -

Gr. 'C' = 226 posts

Gr. 'D' = 27 posts

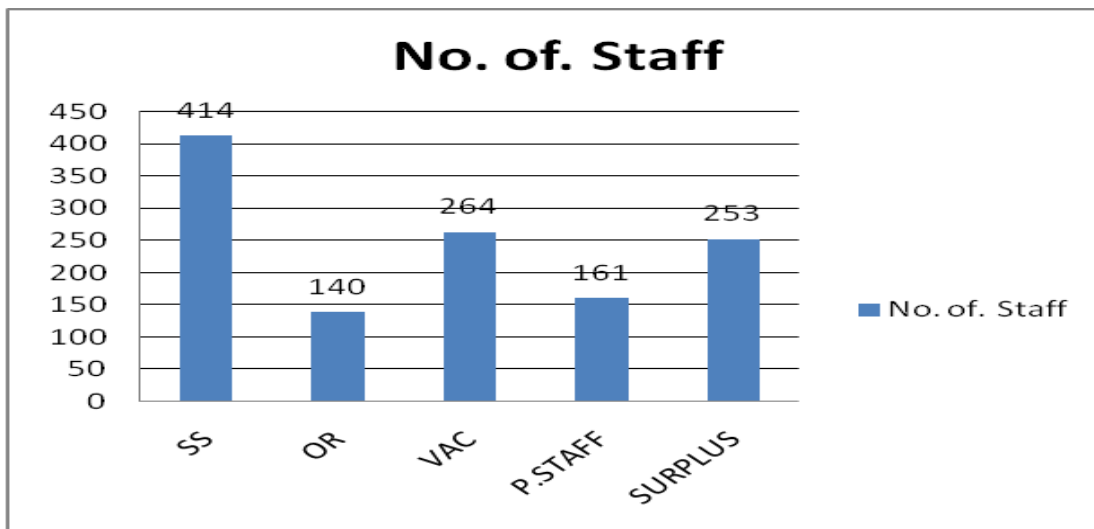
Total = 253 posts

FINANCIAL IMPLICATIONS

Anticipated recurring savings = ₹ 1011.53 lacs per annum.

Capital saving = Nil

Total = ₹ 1011.53 lacs per annum



I N D E X

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SYNOPSIS

Indian Railway is one of the largest and busiest rail network in the world and an important mode of public transportation in the country. Today, Indian Railway ranks among the top five National railway systems in terms of size and scale and is poised to emerge a world class railway system. Indian Railway has been performing a valuable social role in passenger and freight sector by providing affordable means of relatively safe and efficient transportation for millions of passenger daily.

Indian Railway has successfully adopted to the changing needs of travel and transport and observed the advancement in railway technology to meet with the requirement of moving large volume of passengers and freight traffic. The efficient, safe, fast and reliable operation needs multiple aspect colour light signaling, panel interlocking, SSI, Automatic block signaling system, block proving by axle counter etc. Great emphasize has been laid for enhancing safety of signaling system through provision of track circuiting at stations. The panel interlocking is one of the prime safety measures, which enables safe, secure and reliable train operation at stations. Out of 158 block stations of LKO division 140 stations have been equipped with panel interlocking by replacing the obsolete mechanical interlocking system.

Keeping in view of above, SDGM/NR has allotted this work study to Central Planning Cell, HQ Office, to Review Traffic Asstt.(Switchman, Cabin master, Cabin man, Lever man) due to introduction of Panel interlocking over LKO Division to eliminate wasteful expenditure as a result of modernization after installation of PI/RRI at 140 block stations.

In this review 253 posts of Traffic Asstt.(Switchman, Cabin master, Cabin man, Lever man) have been identified as surplus. After implementation of all the recommendations made in the report in toto, the railway administration will achieve a net recurring annual saving to the tune of ₹ 1011.53 lacs per annum.

SUMMARY OF RECOMMENDATIONS

<u>Rec.No</u>	Recommendations	Refer para No.	Accepting/ implementing authority.																				
1	<p>It is proposed that 253 posts of Traffic Asstt.(Switch man/Cabin master/Cabin man/Leverman) staff identified as surplus from LKO division due to introduction of panel interlocking be surrendered.</p> <table><tr><th>S.No.</th><th>Category</th><th>Grade Rs.</th><th>No. of post identified at surplus</th></tr><tr><td>1</td><td>Traffic Asstt.(Switchman/ Cabin master)</td><td>5200-20200-2400</td><td>75</td></tr><tr><td>2</td><td>Traffic Asstt.(Cabin man)</td><td>2400</td><td>151</td></tr><tr><td>3</td><td>Leverman</td><td>1800</td><td>27</td></tr><tr><td colspan="3">Total</td><td>253</td></tr></table>	S.No.	Category	Grade Rs.	No. of post identified at surplus	1	Traffic Asstt.(Switchman/ Cabin master)	5200-20200-2400	75	2	Traffic Asstt.(Cabin man)	2400	151	3	Leverman	1800	27	Total			253	2.5.4(B)	ADRM/Admin./ LKO Sr.DOM/LKO Sr.DPO/LKO
S.No.	Category	Grade Rs.	No. of post identified at surplus																				
1	Traffic Asstt.(Switchman/ Cabin master)	5200-20200-2400	75																				
2	Traffic Asstt.(Cabin man)	2400	151																				
3	Leverman	1800	27																				
Total			253																				

ACKNOWLEDGEMENT

The work study team is highly grateful to Smt. Veena Verma, ADRM/Admin./LKO, Sh. Ajit Sinha, Sr.DOM/LKO and Sh. M.B. Singh, Sr.DPO/LKO and other functionaries for giving their valuable guidance and extending full cooperation in providing requisite data/information during the conduct of study.

1.0.0 INTRODUCTION

1.1.0 The main objectives of the operating department in the Indian Railways is to ensure maximum utilization of line capacity as well as maximum through put with the available resources/assets. All these objectives can be achieved by upgrading the technology in signal and telecommunication, standard of interlocking, strengthening of track and bridges, modernization of rolling stock, replacement of overaged assets etc. To get these objectives, right sizing of staff strength, increase the manpower productivity and economy in expenditure are in the line

1.2.0 Keeping in view of above, SDGM/NR has assigned a work study to review staff strength of Traffic Asstt.(Switchman, Cabin master, Cabin man, Lever man) due to introduction of panel interlocking over LKO Division to Central Planning Cell, HQ Office with a view to eliminate wasteful expenditure and to ensure optimum utilization of manpower and assets

1.3.0 TERMS OF REFERENCE:

The following terms of reference have been adopted to conduct the study:-

1. To review staff strength vis-à-vis existing workload.
2. To identify redundant/unproductive activities with a view to eliminate wasteful expenditure.
3. To suggest ways and means to improve the efficiency and productivity of the system.

1.4.0 METHODOLOGY ADOPTED

The following work study techniques were adopted to conduct the study:-

1. Data collection and its critical analysis
2. Sample check, personal spot observations, activity sampling, analytical estimation and application of yardstick in vogue, if any.
- 3 Held discussions at various levels.

- 2.0.0 BRIEF DESCRIPTION, CRITICAL ANALYSIS, REQUIREMENT OF STAFF AND OBSERVATIONS.
- 2.1.0 Lucknow division has 158 block stations. Out of these 158 block stations of LKO Division, 140 station are already equipped with RRI/PI and train operation has become centralized and pulling/pushing of levers for setting of routes and lowering of signals from end cabins/central cabins have been totally eliminated and rest 18 block stations are working on standard-III/rudimentary system.
- 2.2.0 The installation of panel interlocking system has eased the operational working of stations masters. These panels are provided at a centralized place of the station building. It consists of various types of push buttons for operation of motor points and colour light signals. The route and track circuits are exhibited by LEDs. After the introduction of panel interlocking the operation work is carried out by station master on duty. Prior to this the same operation was done by leverman cum cabinman from the end cabins/central cabins on the guidance of on duty station master.
- 2.3.0 The power cabins are commissioned at major junction stations whereas road side stations have been equipped with axle counter block system/SGE type block instrument for granting/obtaining line clear for reception/dispatch of trains.
- 2.4.0 Activities which are done by Traffic Asstt staff.(Switchman, Cabin master, Cabin man, Lever man)
- 1) Cleaning and maintaining the operational equipments provided at cabins.
 - 2) Operation of levers for setting of points, locks and opening/closing of barrier operated gates.
 - 3) Recording of messages/private numbers with entry in cabin log register for arrival/departure timings of trains.
 - 4) Exchanging private number through telephone with gateman/station master for movement of trains.
 - 5) Exchanging all right signals and ensuring complete arrival of trains.
 - 6) Maintaining the charge diary for taking over/handing over of daily charge.
 - 7) Other misc. works and obeying duties assigned by their senior subordinates from time to time.

2.5.0 CRITICAL ANALYSIS

2.5.1 The upgradation in assets/working systems are introduced to achieve better utilization of available resources. In the panel interlocking system, lesser human involvement is required than mechanical/rudimentary interlocking. In the mechanical/rudimentary interlocking system, the operation for train involves working of rods, wires, levers, gears, bolts, keys etc. which are operated by the Traffic Asstt.(Switchman, Cabin master, Cabin man, Lever man) staff from the end cabins whereas in the panel interlocking the working of stations for trains has become centralized and carried out through electrical devices by pressing various knobs provided on illuminated diagram/mimic board. After installation of panel interlocking, all these operations are carried out by station master on duty and there is no requirement of Traffic Asstt.(Switchman, Cabin master, Cabin man, Lever man) staff for end cabins/central cabins. The panel interlocking is more economical, safer and faster in comparison to mechanical interlocking which has also abolished the deployment of Traffic Asstt. (Switchman, Cabin master, Cabin man, Lever man) staff.

2.5.2 The provision of panel interlocking has increased the line capacity and through put of the Section. In train operation safety has great importance which we derive from panel interlocking/route relay interlocking system. Hence, considering the aforesaid facts involves in the working of operating staff i.e. Traffic Asstt.(Switchman, Cabin master, Cabin man, Lever man) over LKO Division, the review has been conducted to eliminate wasteful expenditure which is imperative due to redundant/obsolete activities as a result of modernization after commissioning of panel interlocking at the 140 block stations and to calculate the bare requirement of Traffic Asstt.(Switchman, Cabin master, Cabin man, Lever man) staff for the balance non 18 non PI/RRI stations.

2.5.3 STAFF POSITION

The total sanctioned and on roll strength of Traffic Asstt.(Switchman, Cabin master, Cabin man, Lever man) staff working over LKO Division is as under:-

S.N.	Category	GP	S/S	O/R	Var.
1	Traffic Asstt.(Switchman/Cabinmaster)	2400	115	48	67
2	Traffic Asstt.(Cabinman)	2400	256	14	242
3	Traffic Asstt.(Leverman/Cabinman)	1900	-	75	(+)75
4	Leverman	1800	43	03	40
Total		-	414	140	274

The above table reveals that the total sanctioned strength of Traffic Asstt. (Switchman, Cabin master, Cabin man, Lever man) staff working over LKO Division is 414 with on roll strength 140 and 274 vacant posts.

2.5.4.

REQUIREMENT OF STAFF AND RECOMMENDATIONS

During the course of study, the team observed that out of 158 block stations, 140 stations have been equipped with RRI/PI. So there is no requirement of Traffic Asstt.(Switchman/Cabin master/Cabin man/Lever man) at these 140 block stations. The team calculated the bare requirement of Traffic Asstt. (Switchman/Cabin master/Cabin man/Lever man) staffs for the rest 18 block stations.

S.No.	Station name with code	Status	Location	Requirement of staff
1	LKO YARD	Cabin working	Cabin C & F for up yard,	02 cabins 02 staff for 03 shifts=02X02X03 = 12 staff.
			B & E for DN yard,	02 cabins 02 staff for 03 shifts=02X02X03 = 12 staff.
			F & D and bahar line	03 cabins 01 staff in 03 shifts=03X01X03 = 09 staff.
				Sub tot = 33 staff
				RG/LR=29% on 33= 9.57
				Total=42.57 or say 43 staff.
1	Unnao Jn.(ON)	Color Light without panel.	02 end cabins	(Cabin staff works in 08 hrs shift.) =1X3x02=06, RG/LR =02, Total = 08 staff. Requirement of Leverman staff =1X3X2 =06, RG/LR =02, Total= 08 staff.
2	Raebareli(RBL)		02 end cabins.	(Cabin staff works in 08 hrs shift.) Requirement of Switchman/Cabin master staff =1X3x02=06, RG/LR=02, Total= 08 staff. Requirement of Leverman staff =1X3X2=06, RG/LR=02, Total= 08 staff.
3	Tanda(TD)	--		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total = 05 staff.
4	UBN	Two aspect lower quadrant with Standard-I		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman

			staff=3X2=06, RG/LR=2, Total =08 staff.
5	MSOD	Two aspect lower quadrant with Standard-I	Cabin staff at MSOD works in 12 hrs duty shift. Requirement of Cabinman/ Leverman staff =3X2=06, RG/LR=2, Total =08 staff.
6	BTKD	Color Light with Standard-I	Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/ Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
7	KJA		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/ Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
8	KBE		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/ Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
9	PPU		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
10	KDF		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
11	BQP		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
12	TQA		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
13	DMW		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
14	JPD		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
15	BTJ		Cabin staff works in 12 hrs duty shift .Requirement of Cabinman/Leverman staff

			=2X2=04, RG/LR=1, Total =05 staff.
16	MEM		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
17	SWE		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total =05 staff.
18	MAY		Cabin staff works in 12 hrs duty shift. Requirement of Cabinman/Leverman staff =2X2=04, RG/LR=1, Total =05 staff.

2.5.5 SUMMARY OF EXISING AND PROPOSED STAFF

S.N	Station	Category	S/Strength	Proposed strength	Identified surplus
1	LKO Yard	Traffic Asstt.(Switchman, Cabin mater, Cabin man, Leverman)	414	43	
2	ON	--do--		16	
3	RBL	--do--		16	
4	TD	--do--		05	
5	UBN	--do--		08	
6	MSOD	--do--		08	
7	BTKD	--do--		05	
8	KJA	--do--		05	
9	KBE	--do--		05	
10	PPU	--do--		05	
11	KDF	--do--		05	
12	BQP	--do--		05	
13	TQA	--do--		05	
14	DMW	--do--		05	
15	JPD	--do--		05	
16	BTJ	--do--		05	
17	MEM	--do--		05	
18	SWE	--do--		05	
19	MAY	--do--		05	
Total			414	161	253

The above table reveals that the total sanctioned strength of Traffic Asstt.(Switchman/Cabin master/Cabin man/Lever man) over LKO division is 414 and the bare requirement for 18 non paneled stations and LKO Yard comes to 161 staff. Hence, 253 posts of Traffic Asstt.(Switchman/Cabin master/Cabin man/Lever man) are identified as surplus and recommended for surrender

RECOMMENDATION NO.1

It is proposed that 253 posts of Traffic Asstt.(Switchman/Cabin master/Cabin man/Lever man) identified as surplus due to introduction of panel interlocking over LKO Division be surrendered.

S. No.	Category	GP	No. of post identified as surplus
1	Traffic Asstt. (Switchman/Cabin master)	2400	75
2	Traffic Asstt.(Cabin man)	2400	151
3	Lever-man	1800	27
Total			253

3.0.0 FINANCIAL IMPLICATIONS

3.1.0 The annual expenditure as per 7th CPC on Traffic Asstt. (Switchman/Cabin master/Cabin man/Lever man) staff working in Traffic department over LKO division is as under:-

S.N.	Category	Grade Rs.	S/S	Monthly value per post (in ₹)	Annual expenditure (in ₹)
1	Traffic Asstt (Switch man/Cabin master)	5200-20200-2400	115	34398	47469240.00
2	Traffic Asstt (Cabin man)	5200-20200-2400	256	34398	105670656.00
3	Lever man	5200-20200-1800	43	24278	12527448.00
Total			414		165667344.00

The above table reveals that the annual expenditure being incurred on 414 sanctioned posts of Traffic Asstt. (Switchman/Cabin master/Cabin man/Lever man) staff working in Traffic department over LKO division is Rs. 165667344.00

3.1.1 The annual expenditure as per 7th CPC on the proposed strength of Traffic Asstt. (Switchman/Cabin master/Cabin man/Lever man) staff working in Traffic department over LKO division is as under:-

S.N	Category	Grade (in ₹)	Monthly value Per post	Prop. Strength	Annual Expenditure (in ₹)
1	Traffic Asstt (Switch man/Cabin master)	5200-20200-2400	34398	40	16511040.00
2	Traffic Asstt (Cabin man)	5200-20200-2400	34398	105	43341480.00
3	Lever man	5200-20200-1800	24278	16	4661376.00
Total				161	64513896.00

The above table reveals that the annual expenditure on the proposed 161 posts of Traffic Asstt (Switchman/Cabin master, Cabin man, Lever man) staff of Traffic department over LKO division will be reduced to Rs. 64513896.00 instead of Rs. 165667344.00 and the net recurring saving will be Rs. 101153448.00 per year.

3.3.0 ANTICIPATED RECURRING SAVING

S.N.	Category	Grade (in ₹)	Refer Recom. No.	No. of posts identified as surplus	Monthly value per post	Annual expenditure (in ₹)
1	Traffic Asstt (Switch man/ Cabin master)	5200-20200- 2400	2.5.16.	75	34398	30958200.00
2	Traffic Asstt (Cabin man)	5200-20200- 2400		151	34398	62329176.00
3	Lever man	5200-20200- 1800		27	24278	7866072.00
				253		101153448.00

No. of posts identified as surplus: -

Group 'C' = 226 posts

Group 'D' = 27 posts

Total = 253 posts

Anticipated recurring saving = ₹ 1011.53 lacs per annum

Capital saving = Nil

Total saving = ₹ 1011.53 lacs per annum

WORK STUDY REPORT DETAILED CHART

Department : - Operating

Name of study : - Review of Traffic Asstt. (Switch man/Cabin master/Cabin man/Lever man) staff due to introduction of PI/RRI over LKO division.

Activity centre : - Over Lucknow Division.

S.N.	Sub activity	Brief description of workload	Actual staff deployed	Work Study recommendations	Representative workload
1	Operational duty performed by Traffic Asstt. (Switch man/Cabin master/Cabin man/Lever man) staff to set route and lowering of signals from end cabins/ central cabins before introduction of PI.	Out of 158 block stations of LKO division, 140 stations have already been equipped with PI/RRI, therefore mechanical/ rudimentary interlocking has been replaced at these stations. Bare requirement of Cabin staff have been calculated to rest 18 non PI/RRI stations and LKO Yard.	SS= 414 OR=140 Vac=274	The work study team have identified 253 posts of Traffic Asstt.(Switch man/Cabin master/Cabin man/lever man) staff and recommended for surrender.	After commissioning of PI at 140 stations of LKO division mechanical workload has reduced.

LIST OF ANNEXURES

S.N.	Description	Annex. No.
1	Statement showing staff position of Traffic Asstt. (Switch man/ Cabin master/Cabin man, Leverman) staff over LKO Division.	I
2	Letter of C.P. cell to initiate the work study No. 16-CP/08/WS/20- 21 dated 13/03/2020	II

Annexure No. I

STATEMENT SHOWING STAFF POSITION OF TRAFFIC ASSTT. (SWITCHMAN/
CABIN MASTER, CABIN MAN, LEVERMAN WORKING IN TRAFFIC DEPARTMENT
OVER LKO DIVISION.

S.N	Category	GP	S/S	O/R	Var.
1	Traffic Asstt.(Switchman/Cabinmaster)	2400	115	48	67
2	Traffic Asstt.(Cabinman)	2400	256	14	242
3	Traffic Asstt.(Leverman/Cabinman)	1900	-	75	+75
4	Lever man	1800	43	03	42
Total		-	414	140	274