

“Review of Redundant, Non Operative and Out Sourced posts in Operating DepartmentOVER NAGPUR DIVISION”

Work Study Officers and Inspectors	
Officers	Inspector
Shri. Rajesh Sahani	ShriI G Babu
Secretary (PG)	SWSI / NGP
Shri. R. Subramanian	
Asst. Secy& APIO	

Coordinating Officers and Supervisor	
Officer	Supervisor
ShriAtulRane	Shri. D Gandhi
Sr. DOM / NGP	CMI/MPP/ NGP

CONTENTS

Sr. No.	CONTENTS	Page No.
1	Synopsis	03
2	Acknowledgement, Authority and terms of reference, Basis of the study & methodology	04
3	Summary of recommendations	05
4	Chapter-1(Introduction)	06
5	Chapter-2 (Existing Scenario & Working Procedure)	07 - 13
6	Chapter-3 (Critical Analysis)	14-15
7	Chapter-4 (Financial Implication)	16

SYNOPSIS OF THE STUDY

Study No	WSCR/OPTG/NGP/3/18-19
Name of the study	Review of Redundant Non Operative and outsourced posts in Operating Department of Nagpur Division
Proposed	AGM/ C Rly
Department	Operating
Date of Commencement	27/07/2018
Date of Completion	27/09/2018
Date of Submission	28/09/2018
No. of Recommendation	01
Sanction strength -	54
No. of Men studied	34
No. of vacancies	20
No. of Posts identified surplus	08
Financial Implications	Rs.55,77,312 per annum

ACKNOWLEDGEMENT

The work-study team express its deep gratitude to ShriAtulRane; Sr. DOM / NGP, whose valuable guidance provided a successful conclusion to this study and whose productive suggestion enhanced the enthusiasm of the team.

The team is very thankful to Shri.D Gandhi CMI/ MPP& other staff, who ever possibly made the availability of documents concerned & directed the team to its positive approach.

AUTHORITY AND TERM OF REFERENCE

The work-study on "Review of Redundant Non operative and outsourced posts in Operating department over Nagpur division" is a study proposed by AGM/C.Rly. the same has been included in Annual work study programme for the year 2018-19with Study No WSCR./OPTG/ NGP/03 / 18 – 19.

The terms of reference for given work-study is to review and assess judicious requirement of redundant non operative posts over NGP division corresponding to existing workload.

BASIS OF STUDY

After studying various cadres of operating staff it was found that **Cabinman** staff at some stations are becoming redundant in light of change in working pattern due modernization of technology on Indian Railway i.e. RRI cabin & Panel Cabin.

METHODOLOGY

The work-study team has adopted the following technique for completion of the study.

1. The relevant data collection & discussion at various levels.
2. Observation of working of Cabinman staff over NGP division.
3. Conduct of spot physical checks/observation and application of norms to the workload, where available, for ensuring the optimum Utilization of manpower & assets.
4. Critical analysis of data/information available and making recommendations for need based staff in present context.
5. Working out financial implication
6. Involved in saving as a result of surplus staff.

SUMMARY OF RECOMMENDATIONS

Sr. No.	RECOMMENDATION	Para No.	Page No.
1	<u>Recommendation 1</u> Work is in progress for CPI in DAE (SS 8 posts)these posts of cabinmen will rendered surplus once commissioning of CPI is done and to be surrendered after commissioning.	3.4	16

To pace with the need of time as well as to cater with the ever-growing transport need of country, advance technology and improved methods are adopted in Indian Railways with the replacement of conventional or old-fashioned system.

To bring improvement in operational work for quick movement of traffic recently modernization in signaling system has been done. The work of commissioning of PI/RRI, Providing Block Proving by Axle Counter and Track Cercuit in BSL division since last few years is at full swing.

The advantages of the installation of PI/RRI are shown below:

- Reduction in operational costs.
- Improve in the existing working system by way of upgrading of old technology.
- Modification of working lay out.
- Due to centralization, faster decisions can be taken.
- In place of hard ship work, mechanized/Electronic system of working has been introduced.
- There is reduction of movement of staff.
- Reduction in maintenance cost.
- Safer running of trains due to introduction

Accordingly, case in hand, Subject stations where PI/RRI is installed to improve the existing working system are selected as location of field study and subsequently relevant data (facts & figures) pertaining to the subject study were collected from the individual stations.

Commissioning of PI/RRI generally results into reduction in operating department posts, due to closure of some activities i.e. cabins etc. The subject study has been undertaken in line with one of the items of work studies termed as centralized operation of points & signals in place of end cabins/end panels.

Keeping above in view competent authority has duly approved this study with the proposed objective of assessing the requirement of optimal manpower needed to satisfactorily perform the activities related to operations of trains to be operated with central panel. The detail of study based on an in-depth analysis of available data been placed in the foregoing chapter together with recommendation for streamlining the system as well as estimating the optimum staff strength

- **Operating Department NGP C Rly**

- The Operating department is headed by Sr. Divisional Operations Manager and at Headquarter level by Chief Operations Manager, Mumbai. The Division comprises of 988.34 route kilometers and 92 Block stations. The division is a major crossing link in North-South and East-West corridors.
- Loading. Coal which comprises of 90% of total loading by the division is loaded by WCL for powerhouses, non-core and private consumers. Private coal loading is also done by KECM/Majri for power house at Bellary and from CKNI for Sunflag industries, Bhandara and Khirsadohgoodshed for PWCL power house at Warora.
- Cement is loaded from ACC Cement siding Ghuggus and diverted traffic of Ambjua and Ultratech from Tadali and PVIT.
- Container from ICD Ajni, MLSW / WR and Butibori.
- Other commodities are Clinker, DOC, Foodgrain, Military, Iron & Steel etc.
- Unloading of coal takes place at two major state-owned power houses at Chandrapur and Sarni and also at Private power houses of PWCL at Warora, P MEC at CKNI and MDIT at Tadali and VIPS at Sindi.
- POL is unloaded at Khapri, Borkhedi and Tadali
- Foodgrains is unloaded at FCI sidings at Ajni and Sewagram

- **Interchange**

- On an average 100 M/Exp trains and 44 passenger trains run per day in the division. This includes 100 M/Exp and 44 Passenger trains. Five pairs of Rajdhani, two pairs Garib-rath and six pairs of Durgam trains traverse the division. Primary maintenance of 9 M/exp. and 7 passenger trains are done on the division. 6 nos. link coaches are also maintained at Ballarshah.
- There are nine interchange points with adjacent Railways/Divisions.
Itarsi with West Central Rly, Nagpur, Godhani chord cabin, Chhindwara & Chanda fort with **South East Central** Railway, Ballarshah and Pimpalkuti with **South Central** Rly, **Badnera** and Chandur Bazar with **Bhusawal** Division.

- **Ghat section**

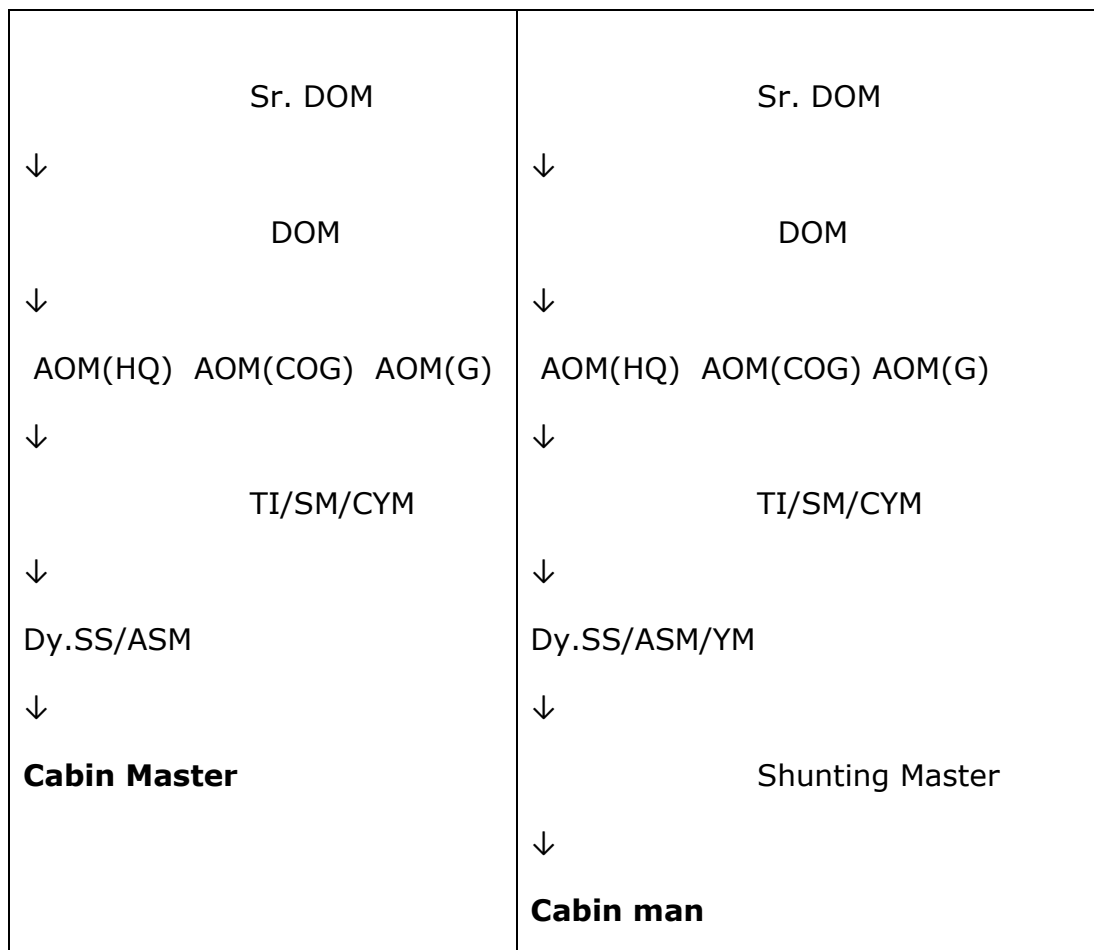
- Movement of trains in Nagpur-Itarsi-Nagpur section is a daunting task as two major steep Ghat sections are located in this section. The Teegaon – Chichonda section has a ruling gradient of 1 in 70 while in Dharakoh-Maramjhiri section there is a ruling gradient of 1 in 60. Banker engines have to be provided to push the trains up the Ghat whereas Assisting Engine is provided while descending down the Ghat.

2.1

NGP division is complemented with 115 stations of different categories (B' Class 78spl.class -- 5, C' class – 9 & D' Class – 23) for handling the above rail traffic. Operationally NGP division is divided into 03 main sections Viz. Nagpur- Badnera, Nagpur- Itarsi and Nagpur to Balharshah.

2.2 Authority of control: - Sr. DOM is the over all in charge of the department. The authority of control chart is shown below

Organizational setup-



2.3 DUTIES OF STAFF: -

2.3(a) CABIN MASTER.

1. The Cabin Master is responsible for operation of Block instruments, granting /obtaining line clear for trains and maintenance of Train Signal Register provided at Station.
2. He will also work on the operating panel provided at the cabin and will be responsible for correct operation of route and signals for the reception and dispatch of trains and also other shunt moves.
3. He will personally verify from the panel and personally observe the signaling section lines are clear before setting route and taking "OFF" signals.
4. Cabin Master exchanging hand signal with the crew of run through trains.
5. He will work under the supervision of Dy.SS and will obey instructions given from time to time.
6. He will do any other lawful work ordered by any person placed in authority over him but not specifically included in the above duty list.

2.3(b)Block ASM

1. He shall handle the block instrument himself when on duty and shall not permit any unauthorized person to manipulate or handle the block panel/block instrument & block telephone.
2. He shall keep the Station Manager's control keys block instruments in his personal custody whenever, he is required to leave his office even for a short duration.
3. He shall maintain TSR and other connected record/documents in good shape and ensure that all entries are completed and are up-to-date.
4. He shall attend the control and give arrival departure of trains promptly and shall carry out instructions given by superiors provided these do not violate safety rules & procedures.
5. He shall inform the ESM/MSM through a written message, any failure of block working etc. and invariably enter these failures in signal failure register.
6. In case of any accident, he shall inform promptly the section control Station
7. Manager/Station Master/ Dy. SM immediately. He shall give all the information available with him in regard to the nature, places, cause and assistance etc. in respect of the accident.
8. He shall communicate reasons for late start of outgoing trains and late arrival of incoming trains to control.
9. He shall come on duty after taking complete rest and shall not perform his duty under the influence of liquor, drugs, or intoxicants.
10. He shall keep his reference books upto date, posted with latest correction slips and shall keep himself fully conversant with the extant rules. He shall keep his books readily available for inspection when asked to do so.
11. He shall not absent himself from duty without prior permission of his superiors. He shall not leave his duty unless properly relieved by his relief and shall not exchange his duty without prior permission from his superiors.

12. He shall not consider himself relieved of duty unless he has completed transactions of trains for which he has given/obtained line clear till the complete arrival of such trains.
13. He shall always obey the lawful orders of his superiors so long as they do not contravene any of the extant rules in force.
14. In case of any abnormal working, he shall also perform the duties assigned to Panel ASM.
15. He shall advise the descriptions of the train to which he had granted line clear or obtained line clear to panel ASM.

2.3(c)Panel ASM

1. When on duty or when called upon to do so, in case of emergency, he shall be responsible for obtaining and granting line clear to trains or for shunting movements as per SWR & GR.
2. He shall handle the control panel himself when on duty and shall not permit any unauthorized person to manipulate panel.
3. He shall keep the SM's control keys of control panel in his personal custody whenever, he is required to leave his office even for a short duration.
4. While coming on duty, he shall ensure that all points and signals are in good working order and all the registers, records, pertaining to train passage are completed in all respect before taking over the charge.
5. He shall personally ensure that conditions for taking 'off' the reception signals are fulfilled and the clearance of line is verified as per SWRs before actually pressing the relevant button for taking off the signals.
6. He shall ensure from indications available in the panel that the signals are burning 'brightly and are giving correct indications.
7. He shall maintain complete and up to date record of the Engg. Restrictions. He shall be responsible for bringing forward the caution order register every Monday and displaying the restrictions on notice board as well.
8. He shall be responsible for ensuring delivery of proper caution orders to all trains.
9. He shall ensure that all Shunting operations are carried out as per extant orders and GR 5.19 and SRs thereof.
10. He shall inform the ESM/MSM in writing or through a written message, any failure of track/signals/ points/keys or panels etc. and shall invariably enter these failures in signal failure register.
11. He shall allow shunting in between the arrival/departure of trains or during slack period as frequently as possible to the maximum extent.
12. He shall come on duty after taking complete rest and shall not perform his duty under the influence of drugs, or intoxicants.
13. He shall keep his reference books up to date, posted with latest correction slips and shall keep himself fully conversant with the extant rules. He shall keep his books, readily available for inspection when asked to do so.
14. He shall not absent himself from duty without prior permission of his superiors. He shall not leave his duty unless properly relieved by his relief and shall not exchange his duty without prior permission from his superiors.
15. He shall not consider himself relieved of duty unless he has completed transactions of trains for which he has given/obtained line clear till the complete arrival of such trains.

16. He shall always obey the lawful orders of his superiors so long as they do not contravene any of the extant rules in force.
17. He shall ensure that proper indications of points, signals, track, circuits, crank handle, level crossing gate etc., are displayed at their proper places.
18. He shall be responsible for issuing required papers to trains entering/leaving the yard under the instructions of log ASM.
19. He shall issue shunting order for shunting operations as per extant rules.
20. He shall keep a watch on the working of shunting staff.
21. He shall ensure clearance of running lines in case of failure of their track circuits.

2.3(D) DUTY LIST OF CABINMAN/LEVERMAN:

1. He must check all essential equipments handed over by his relief and if any discrepancy is found report the same to the station master on duty.
2. He must ensure that normal position of every fixed signal is 'ON' aspect at all times except when taken off for a train and at night back lights of signals are burning properly.
3. Before permitting indoor ASM on duty under exchange of private numbers for granting line clear for train to station in rear, he must ensure that conditions for granting line clear as laid down in rules are fulfilled.
4. He must ensure that the reception or departure path is clear and free from obstruction; route is correctly set, facing points locked and level crossing are closed and locked against the road traffic for reception/dispatch of trains.
5. He is responsible to ensure that the reception line is clear up to the adequate distance required under the rules before lowering signals or releasing a slot for the reception of a train.
6. The cabin man will watch the safe passage of all trains leaving or arriving at the station. Should he notice any abnormality he shall inform the indoor ASM on duty at once.
7. He shall not alter route under moving wheels.
8. He will maintain register and will record all messages under exchange
9. of private number with indoor ASM and gateman on duty to connection with train passing shunting closing of level crossing etc.

2.4 Duty Hour

Cabinman are in 08 hrs. duty roster.

2.5 Sanction strength of Sr.Cabin Man with men on roll of NGP Division 5200-20200 +2400 (GP)

Station	SS	MoR	Vac
AJNI	5	5	0
BPK	8	5	3
DAE	8	4	4
DMN	8	3	5
CND	8	3	5
MLR	8	5	3
CD	9	9	0
TOTAL	54	34	20

2.6 LR% , RG%

LR%	16.66 %
RG%	16.66%

2.7 Standards of Signaling and Interlocking: - Interlocking at stations is standardized into four different classes viz. I(R), II(R), III (R) and IV(R). The regulations prescribing the four standards have been drawn up primarily to meet the needs of crossing stations on the single line but, with such modifications as may be necessary in regard to the equipment of signals; these are also applicable to other stations both on single and double lines. The standards are as follows: -

(Ref:- Para 170 to 174 of Indian Railway Signal Engineering Manual)

Two aspect signaling.

(a) Standard I.(R)

(i) Speed - 50 kms. Per hour.

(ii) Isolation - Isolation of the main line is recommended, but is not essential.

(iii) Points - the facing points should be provided with key locks, locking both switches independently and the switches detected independently by relative signals.

(iv) Interlocking - Interlocking between points and signals may be carried out indirectly by means of key locks.

(v) Signals - Outers and Bracketed Home signals shall be provided. The provision of Starter signals is optional. Working Warners may be provided for meter gauge stations where trains run through, if considered necessary, but are not required for other stations signaled to standard I.

(b) Standard II.(R)

(i) Speed - 110 kms. per hour.

(ii) Isolation of the main line is essential.

(iii) Points - the facing points should be provided with plunger type locks, locking both switches independently and the switches and the bolt being detected independently by relative signals.

(iv) Interlocking - The interlocking between points and signals may be direct or indirect. Where indirect interlocking is used, signals shall be worked from a position under the control of the Station Master and key must be provided to enable the Station Master to lock up the signal frame.

(v) Signal - Outers, Warners and bracketed Home signals must be provided, and Starters where considered necessary; (ii) Where Starters are not provided the "off" position of the Warner signal shall be dependent upon the receipt of 'Line Clear' on the block instrument.

(c) Standard III.

(i) Speed - 140 km/h Unrestricted speed.

(ii) Isolation - same as for Standard II.

(iii) Interlocking: - the interlocking between points and signals must be direct.

(iv) Signals. - Outers, Warners, Bracketed Home Signals and Starters must be provided and Advanced Starters as may be necessary.

(d) Standard-IV(R)

(i) Speed upto 160 km/h

(ii) Isolation - as per Standard III

3.0 Critical Analysis of Cabin man:-

Deployment of cabinman is done as per the requirement and often redeployment is done due to modification in working system and technique, therefore the requirement of these cadre is dynamic which reduces with in phases according to implementation of new methodologies.

Workstudy team, therefore, has opted to analysis the requirement of cabinman in phases. The phase wise critical analysis of these cadres is as under

3.1 NGP division is complemented with 115 stations of different categories (B' Class 78 spl.class -- 5, C' class – 9 & D' Class – 23) for handling the above rail traffic. Operationally NGP division is divided into 03 main sections Viz. Nagpur-Badnera, Nagpur- Itarsi and Nagpur to Balharshah

3.2 At present Cabinman are deployed 7 locations in NGP Division Duty hrs. of Cabinman are in 8 hrs. roster. In this way, the total requirement of Cabinmen comes including RG% and LR% is as under

3.3 Depot wise existing S/S, deployment and proposed deployment of Cabinman made by the Work- Study team.

Station/ Location	Existing		proposed		Actual MOR	Remark
	S/S	Deployment	S/S	Deployment		
AJNI	05	1x3+1RG/1LR	05	1x3+1 RG/1LR	05	Utilized on cabin.
BPK	08	2x3 +1 RG+1LR	08	2x3 +1RG+1LR	5	Both end cabins
DAE	08	2x3 +1 RG+2LR	00	2x3 +1RG+1LR	04	Central Panel Interlocking under progress. Posts to be surrendered once commissioned
DMN	08	2x3 +1 RG+1LR	08	2x3 +1RG+1LR	03	Both end cabin
CND	08	2x3 +1 RG+1LR	08	2x3 +1RG+1LR	03	Both end cabin
MLR	08	2x3 +1 RG+1LR	08	2x3 +1RG+1LR	05	Both end cabin
CD	09	2x3 +1 RG+2LR	09	2x3 +1RG+2LR	09	Both end cabin
TOTAL	54		46		34	

3.4Recommendation 1

Work is in progress for CPI in DAE (SS 8 posts)these posts of cabinmen will rendered surplus once commissioning of CPI is done and to be surrendered after commissioning.

CHAPTER 4	FINANCIAL IMPLICATIONS
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4.0 The following 8 posts of Sr. Cabin man staff are found surplus in Nagpur Division.

4.1 Financial implications for the surplus staff is as follows.

Sr. No	Category	Pay Band	Grade Pay	No of posts	Yearly value
1	Sr.Cabin Man	5200-20200	2400 Level 4	8	5577312
Total				8	5577312

There will be a net saving of Rs.5577312 p.a on surrendering the above posts.