



WORK STUDY REPORT
ON
REVIEW OF ARTISAN/TECH. STAFF
WORKING IN ENGINEERING (WORKS)
OVER
MORADABAD DIVISION
2020-21
WORK STUDY TEAM

SH. LALIT KUMAR	AWSO	LEADER
SH. RAJEEV YADAV	CWSI	MEMBER
SH. YOGESH BADHWAR	CWSI	MEMBER

STUDY COMMENCED ON: 12.10.2020
STUDY COMPLETED ON: 26.10.2020

GUIDANCE BY
Sh. ASHOK KUMAR AGARWAL
SWSO

No. 16-CP/25/WS/20-21

Central Planning Cell
Northern Railway;
Headquarters Office,
New Delhi.

EXECUTIVE SUMMARY

This study was allotted to the Central Planning Cell, HQ Office, with a view to identify redundant/unproductive activities in the working of Artisan/Tech. Staff working in Engineering (Works) department over Moradabad division. The improved methods of working have also been suggested with a view to eliminate the wasteful expenditure of the railways.

STAFF POSITION

The total sanctioned and on roll strength of Artisan/Tech Staff working under SSE/SE(W) is as under: -

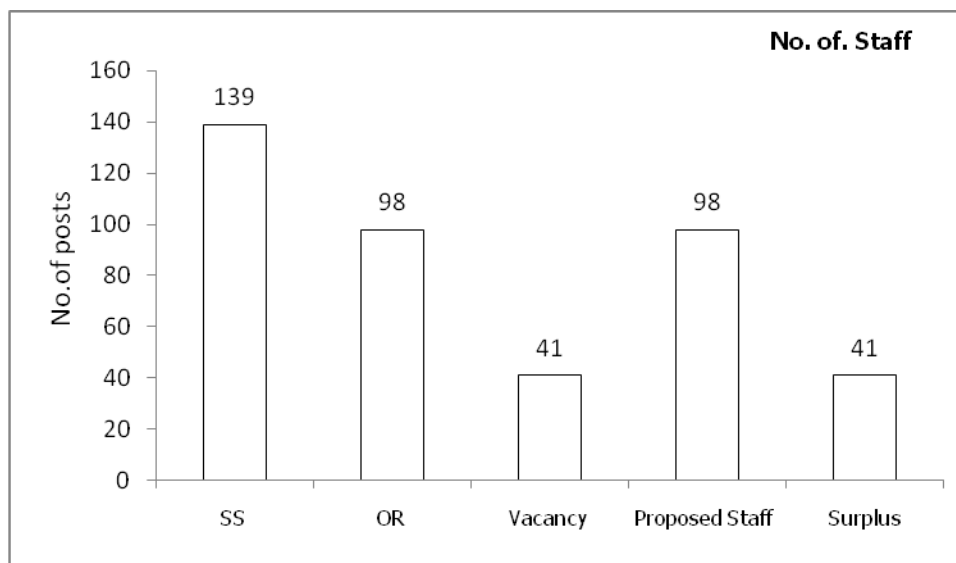
S.N.	Category	S/S	O/R	Var.
1	Artisan/Tech.	139	98	41
Total		139	98	41

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

Group 'C'	= 41 posts
Group 'D'	= Nil posts
Total	= 41 posts

FINANCIAL IMPLICATIONS

Anticipated recurring savings = 159.79 lakh per annum
Capital savings = Nil
Total savings = 159.79 lakh per annum



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SYNOPSIS

Indian Railways is the cheapest mode of transport in the country. It is biggest organization of government with huge manpower engaged in its safe working. Several departments are functioning as a team to keep the wheels moving and achieve the goal by transporting passengers and freight from one place to another. The Civil Engineering department plays twin role in providing public utility services. The P. Way department provides good quality of track fitness. On the other hand the works department provides maintain the infrastructure like residential and service buildings, water supply system, rest houses and public amenities to rail users.

In view of technological developments in every sphere of railway working, the Engg. Works department has also adopted the pattern of working by multiskilling in trades, closing down of redundant activities and outsourcing of major works to contractors. The departmental labour is attending minor/petty repair work, which shows reduced workload. Although the Engineering department (Works side) has executed construction work, wooden/steel work on contractual basis, yet the manpower is being engaged in excess.

Keeping above in view, SDGM/NR assigned the work study to review Artisan staff working in Engg.(Works) over Moradabad division to Central Planning Cell, HQ Office with a view to optimize utilization of manpower. After review of existing workload in SSE/SE units over MB division, the team identified 41 posts of Artisan staff as surplus and recommended for surrender. After implementation of all the recommendations made in the report, a net recurring annual saving to the tune of Rs. 159.79 lakh per annum will be achieved.

SUMMARY OF RECOMMENDATIONS

S. No.	Recommendations	Ref. Para No.	Accepting/ Implementing authority																								
1	<p>It is proposed that 41 posts (37 posts of Artisan and 04 of Motor Mechanic) are identified as surplus and recommended for surrender.</p> <table border="1"> <thead> <tr> <th>S. No</th><th>Category</th><th>Grade Rs.</th><th>No. of posts</th></tr> </thead> <tbody> <tr> <td>1.</td><td>MCM/Smithy/Carpenter/Fitter/ Masson/Painter/Motor Mech</td><td>9300-34000-4200</td><td>03</td></tr> <tr> <td>2.</td><td>Tech-I/Smithy/Carpenter /Fitter/Masson/Painter/ Motor Mech</td><td>5200-20200-2800</td><td>08</td></tr> <tr> <td>3.</td><td>Tech-II/Smithy/Carpenter/ Fitter/Masson/ Painter</td><td>5200-20200-2400</td><td>09</td></tr> <tr> <td>4.</td><td>Tech-III/Smithy/ Carpenter/Fitter/Masson/ Painter</td><td>5200-20200-1900</td><td>21</td></tr> <tr> <td colspan="3">Total</td><td>41</td></tr> </tbody> </table>	S. No	Category	Grade Rs.	No. of posts	1.	MCM/Smithy/Carpenter/Fitter/ Masson/Painter/Motor Mech	9300-34000-4200	03	2.	Tech-I/Smithy/Carpenter /Fitter/Masson/Painter/ Motor Mech	5200-20200-2800	08	3.	Tech-II/Smithy/Carpenter/ Fitter/Masson/ Painter	5200-20200-2400	09	4.	Tech-III/Smithy/ Carpenter/Fitter/Masson/ Painter	5200-20200-1900	21	Total			41	2.8	ADRM/MB SR.DEN/C/MB SR.DPO/MB
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Total			41																								

ACKNOWLEDGEMENT

The work study team is highly grateful to Shri Man Singh Meena, ADRM/Admin./MB, Shri Neeraj Kumar, Sr.DEN/C/MB, Sh. Vipul Goel, Sr.DPO/MB and other functionaries for giving their valuable guidance and extending their full cooperation in providing relevant data/information during the conduct of the study.

1.0 INTRODUCTION

- 1.1 Indian railway provides transportation services at a desired level of safety to its users. Being a public utility service it also provides various passenger amenities like drinking water, waiting rooms, clean platform environment within railway premises
- 1.2 It is the Civil Engineering department, which maintains track fitness and maintenance of infrastructures. But as this study is related to (works) side of engineering department, it is necessary to say that entire maintenance (works) of service/residential buildings, bridges, foot over bridges, water system, approach roads etc. is supervised by Sr. Section Engineer (Works) under his jurisdiction.
- 1.3 In works department, a huge manpower has been engaged to meet with the day to day maintenance activities, with heavy amount incurred by railways to meet out their high wages. It is true that Engg. Department is highly expenditure orientated so more attention is required towards its economical approach of men and materials.
- 1.4 The modernization and technological up-gradation in railway system has brought a lot of change in policies, the maintenance work is being outsourced by Engineering (works) department. All the major works costing more than Rs. 10,000 are being outsourced. This has resulted in improved quality of maintenance and reduction in workload of works department. Keeping in view above, SDGM/NR assigned the work study to Central Planning Cell HQ Office with a view to review the works Artisan staff in relation to existing workload.

1.5 TERMS OF REFERENCE

The work study has been conducted under the following terms of references: -

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

1.6 METHODOLOGY ADOPTED

The work study is based on the following method study and work measurement techniques: -

- 1. Data collection and its critical analysis.
- 2. Physical observations, spot-checks of various activities done by maintenance staff, analytical estimation, and application of yardstick in vogue, if any.
- 3. Held discussions at various levels.

BRIEF DESCRIPTION, STAFF POSITION, CRITICAL ANALYSIS, REQUIREMENT OF STAFF AND RECOMMENDATIONS

2.1 BRIEF DESCRIPTION

Moradabad division is an important division of Northern Railway and famous for its brass metallic works. The lay out of MB division is from Alamnagar station (Excl) which is adjacent to LKO Jn. at one end and up to Balliakheri station adjacent to Saharanpur Jn. (Excl) on double line section. The sectional layout of MB division is as under: -

- i) LKO-BE-MB-SRE (Excldg LKO & SRE)
- ii) ON-BLM-SPC (Excldg. ON)
- iii) BE- CH-ALJN (Excl. ALJN)
- iv) BE-CH-MB
- v) MB-HPU-GZB (Excldg. GZB)
- vi) GJL-MZM
- vii) NBD-KTW
- viii) LRJ-HW-DDN
- ix) HW-RKSH
- x) MTC-HPU-KRJ(Excldg MTC & KRJ)

The MB division interchanges traffic with NER, NCR, LKO division, UMB division & DLI division for goods and coaching traffic.

- 2.2 Sr. DEN (Co-ordination) is the administrative head of Engg. Deptt. There are total 17 sub sectional offices of works branch under the control of SSE/SE/Works over the division.

2.3 STAFF POSITION

The team collected the maintenance staff position of Artisan/Tech staff working in 17 SSE/SE(W) units for the conduct of review , which is placed as annexure-I in the report. The summarized position of staff of these units is given as under: -

Table-I

SN	Category	Grade	S/S	O/R	Variation
1	MCM/Smithy/Carpenter/Fitter/Masson/Painter/Motor Mech	9300-34800-4200	09	06	03
2	Tech-I/Smithy/Carpenter/Fitter/Masson/Painter/Motor Mech	5200-20200-2800	31	23	08
3	Tech-II/Smithy/Carpenter/Fitter/Masson/Painter	5200-20200-2400	34	25	09
4	Fitter/Civil	5200-20200-2000	03	03	--
5	Tech-III/Smithy/Carpenter/Fitter/Masson/Painter	5200-20200-1900	62	41	21
Total			139	98	41

The above table reveals that the sanctioned strength of Works staff under 17 SSE/SE (Works) offices is 139 while 98 are on roll with 41 vacant posts.

2.4 ACTIVITIES PERFORMED BY MAINTENANCE STAFF (WORKS)

The maintenance staff working under control of SSE/SE (Works) carries out the following activities under their jurisdiction.

1. Maintenance of service and residential buildings, water supply system, drainage system, platform, yard, approach road, parks, lawns, rest houses and running room etc.
2. Repair work of furniture and other assets like doors, windows, roof and flooring.
3. Entire activity under horticulture i.e. nursery seed bed, flower pots, pruning hedge and plantation..
4. Vacating encroachment of railway land.
5. Grass clearance in railway premises
6. Maintenance of stores.

CRITICAL ANALYSIS

- 2.5.1 The study is confined to Artisan staff and to provide the actual requirement of staff in view of existing workload. In Engg. Deptt. (Works side) the major works are already outsourced. Similarly road construction, replacement of wooden/iron doors and windows is being carried out by contractors. Certain annual maintenance and repairs like white washing and painting of staff quarters/service buildings, remodeling of quarters etc. are carried out under zonal contract.

The road formation and repair work over Indian Railway is being managed on contract basis as there no machinery for the said work in the works units. Consequently, the outsourcing of certain activities has reduced the workload of departmental skilled staff drastically. The team collected various data and relevant information to observe the trend of workload in these works units over MB division.

- 2.5.2 The Divisional Repair Centre (DRC) was established to carry out pretty repair of Wooden and Steel furniture, hand barrow, motor trolley, push trolley and departmental vehicles. But as the out sourcing spread in the maintenance activities, the work load of DRC has reduced drastically. During the course of study, the team observed the workload of DRC and found that there is very meager workload which arised in the last three months.

- 2.5.3 There are 04 sanctioned posts of Motor Mechanic in DRC and are lying vacant since long. These posts were provided for the repair of departmental vehicles and such vehicles are not provided for any repair. The vehicles available with the departments concerned are being repaired from the open market by imprest itself.

2.6.0 REQUIREMENT OF ARTISAN STAFF AND RECOMMENDATIONS

- 2.6.1 The Rightsizing of the Railways has been the refrain in recent times particularly since it has a direct bearing on the profitability of the Railways and operating ratio. This will be cost saving too the Railways. These days the Works department is also giving contracts under zonal contract to carry out the activities which requires skilled manpower like carpenter, painter, mason, fitter etc.

So the team proposes the 37 vacant posts of Artisan staff as surplus and recommended for surrender.

- 2.6.2 There are 04 sanctioned posts of Motor Mechanic in DRC and are lying vacant since long. These posts were provided for the repair of departmental vehicles. Now days the vehicles are repaired from open market. So the team proposes the 04 vacant posts of Artisan staff as surplus and recommended for surrender.

2.6.3

SUMMARY OF EXISING AND PROPOSED A STAFF

S.N	SSE/Works units	S/S	O/R	Proposed requirement	Posts identified surplus
1	NBD	08	05	05	03
2	CPS	07	05	05	02
3	LRJ	07	05	05	02
4	HW	06	04	04	02
5	DDN (including JP)	06	04	04	02
6	HRI	07	05	05	02
7	SPC	06	04	04	02
8	BLM	05	05	05	0
9	SPN	05	04	04	01
10	RAC	10	06	06	04
11	MB/HQ	17	16	16	01
12	HRH	07	05	05	02
13	DRC/MB	07	02	02	05
14	BE	13	10	10	03
15	CH	09	04	04	05
16	HPU	12	08	08	04
17	GJL	07	06	06	01
Total		139	98	98	41

Category wise and Grade wise Sanctioned, Proposed and surplus posts of Artisan staff over MB division.

SN	Category	Grade	S/S	Proposed staff	Identified surplus
1	MCM/Smithy/Carpenter/Fitter/Masson/Painter/Motor Mech	9300-34800-4200	09	06	03
2	Tech-I/Smithy/Carpenter/Fitter/Masson/Painter/Motor Mech	5200-20200-2800	31	23	08
3	Tech-II/Smithy/ Carpenter/Fitter/Masson/Painter	5200-20200-2400	34	25	09
4	Fitter/Civil	5200-20200-2000	03	03	--
5	Tech-III/Smithy/ Carpenter/Fitter/Masson/ Painter	5200-20200-1900	62	41	21
Total			139	98	41

RECOMMENDATION NO.1:

It is proposed that 41 posts of Artisan/Motor Mech. staff are identified as surplus and recommended for surrender as follow:

SN	Category	Grade Rs	Identified surplus
1	MCM/Smithy/Carpenter/Fitter/ Masson/Painter/Motor Mech	9300-34800-4200	03
2	Tech- I/Smithy/Carpenter/Fitter/ Masson/Painter/Motor Mech	5200-20200-2800	08
3	Tech- II/Smithy/Carpenter/Fitter/ Masson/Painter	5200-20200-2400	09
4	Tech- III/Smithy/Carpenter/Fitter/ Masson/Painter	5200-20200-1900	21
Total			41

3.0.0 FINANCIAL IMPLICATIONS

3.1.0 The annual expenditure as per 7th CPC on Engineering (Works) Artisan staff working under SSE/SE/W over MB division is as under:-

S. No.	Category	Grade Rs.	Monthly value per post	S/S	Annual expenditure
1	MCM/Smithy/Carpenter/Fitter/Masson/ Painter/Motor Mech	9300-34000-4200	47736.00	09	5155488.00
2	Tech-I/Smithy /Carpenter/Fitter/ Masson/ Painter/Motor Mech	5200-20200-2800	39371.00	31	14646012.00
3	Tech-II/Smithy/ Carpenter/Fitter/Masson / Painter	5200-20200-2400	34398.00	34	14034384.00
4	Fitter(Civil)	5200-20200-2000	29309.00	03	1055124.00
4	Tech-III/Smithy/ Carpenter/Fitter/Masson/P ainter	5200-20200-1900	26852.00	62	19977888.00
Total				139	54868896.00

The above table reveals that the annual expenditure being incurred on 139 sanctioned strength of Engineering (Works) maintenance staff working under SSE/SE/W over MB division 54868896.00

3.2.0 Proposed strength: The annual expenditure on the proposed strength of Engineering (Works) Artisan staff working under SSE/SE/W over MB division as under:-

S. No.	Category	Grade Rs.	Monthly value per post	P/S	Annual expenditure
1	MCM/Smithy/Carpenter/Fitter/ Masson/Painter/Motor Mech	9300-34000-4200	47736.00	06	3436992.00
2	Tech-I/Smithy/ Carpenter/Fitter/Masson /Painter/Motor Mech	5200-20200-2800	39371.00	23	10866396.00
3	Tech-II/Smithy/C arpenter/Fitter/Masson/Painter	5200-20200-2400	34398.00	25	10319400.00
4	Fitter(Civil)	5200-20200-2000	29309.00	03	1055124.00
4	Tech-III/Smithy/ Carpenter /Fitter/Masson/ Painter	5200-20200-1900	26852.00	41	13211184.00
Total				98	38889096.00

The above table reveals that total annual expenditure on 98 proposed posts of Engineering/Works Artisan staff working under SSE/SE/W over MB division will be reduced to ₹ 38889096.00 instead of ₹ 54868896.00 and net recurring saving of ₹ 15979800.00 per annum will be achieved.

2.0 FINANCIAL IMPLICATIONS

S. No.	Category	Grade Rs.	No. of posts	Monthly value per post	Annual expenditure
1	MCM/Smithy/Carpenter/Fitter/Masson/Painter/Motor Mech	9300-34000-4200	03	47736.00	1718496.00
2	Tech-I/Smithy/Carpenter/Fitter/Masson/Painter/Motor Mech	5200-20200-2800	08	39371.00	3779616.00
3	Tech-II/Smithy/Carpenter/Fitter/Masson/Painter	5200-20200-2400	09	34398.00	3714984.00
4	Tech-III/Smithy/Carpenter/Fitter/Masson/Painter	5200-20200-1900	21	26852.00	6766704.00
Total			41		15979800.00

No. of posts identified as surplus: -

Group 'C' = 41 posts

Group 'D' = NIL posts

Total = 41 posts

Anticipated recurring saving = ₹ 159.79 lakh per annum

Capital saving = Nil

Total saving = ₹ 159.79 lakh per annum

LIST OF ANNEXURE

SN	Contents	Anex.No.
1	Statement showing staff position of SSE/SE(Works) depots over MB division	I
2	Statement showing ITKMs being maintained by SSE/SE(Works) depots over MB division	II

Annexure-I

Statement of Artisan staff working under Engineering/works Department over MB division.

S.N	SSE/Works units	S/S	O/R	Vacancy
1	NBD	08	05	03
2	CPS	07	05	02
3	LRJ	07	05	02
4	HW	06	04	02
5	DDN (including JP)	06	04	02
6	HRI	07	05	02
7	SPC	06	04	02
8	BLM	05	05	0
9	SPN	05	04	01
10	RAC	10	06	04
11	MB/HQ	17	16	01
12	HRH	07	05	02
13	DRC/MB	07	02	05
14	BE	13	10	03
15	CH	09	04	05
16	HPU	12	08	04
17	GJL	07	06	01
Total		139	98	41

WORK STUDY REPORT DETAILED CHART

Department: - Engineering

Name of study:- Review of Artisan staff working under Engineering/works
Department over MB division

Activity Centre: - Over Moradabad division.

S. No	Sub activity	Brief description of workload	Actual staff deployed	Work Study recommendation	
				Proposed requirement of staff	Representati ve workload
1	Maintenanc e and petty repairs of railway assets.	Maintenance of service/residential buildings, platform surface, water pumping stations, patch repair of roads, maintenance of level crossing gates, bridges and other misc. works under the jurisdiction of works depot.	The works depot wise staff strength is as under: - SS= 139 OR= 98 Vac.= 41	The work study team identified 41 posts as surplus and recommended for surrender.	The workload of works depot has reduced due to zonal contract and out sourcing of certain activity.

Salient features of the work study

Name of the Work study: Review of Artisan staff working in Engg/works department over MB division.

No. 16-CP/25/WS/20-21

- (i) The study is confined to provide the actual requirement of Artisan staff in view of the existing workload. In Engineering Deptt.(Works side) the major works are outsourced. Similarly road construction, replacement of wooden/iron doors and windows is being carried out by contractors. Certain annual maintenance and repairs like white washing and painting of staff quarters/service buildings, remodeling of quarters etc. are carried out under zonal contract.
- (ii) The departmental labour cost much higher than the contractual labour. The activities of Artisan staff are already outsourced in zonal contract of Engg. department for maintenance over MB division for day to day requirement. So 37 vacant posts of Artisan staff are identified as surplus and recommended for surrender.
- (iii) There are 04 sanctioned posts of Motor Mechanic in DRC and are lying vacant since long. These posts were provided for the repair of departmental vehicles. The vehicles available with the departments concerned are being repaired from the open market by imprest itself. So 04 vacant posts of Motor Mechanic in DRC are identified as surplus and recommended for surrender.

Staff proposed and identified surplus:-

Total sanctioned strength	139
On roll strength	98
Vacancy	41
Proposed strength	98
No. of post identified as surplus	41
Net recurring saving	159.79 lakh