



WORK STUDY REPORT
ON
REVIEW OF TRACKMAINTAINER STAFF
WORKING UNDER SSE/P WAY
CONTROLLED BY SR.DEN-III, IV & V
OVER
DELHI DIVISION (PART-II)
2019-20

WORK STUDY TEAM

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

EXECUTIVE SUMMARY

This study was allotted to Central Planning Cell, HQ Office on the directives of SDGM/NR on "Review of track maintainer staff working under SSE 'P' way controlled by Sr. DEN-III, IV & V over Delhi Division" Part-II with a view to achieve economy and manpower productivity.

STAFF POSITION

The sanctioned and on roll strength of Trackmaintainer staff under SSE P Way controlled by Sr. DEN-III, IV & V over Delhi Division is as under:-

S.N.	Category	S/S	O/R	Var.
1	Trackmaintainer	4160	3334	826
	Total	4160	3334	826

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

Gr. 'C' = Nil

Gr. 'D' = 298 posts

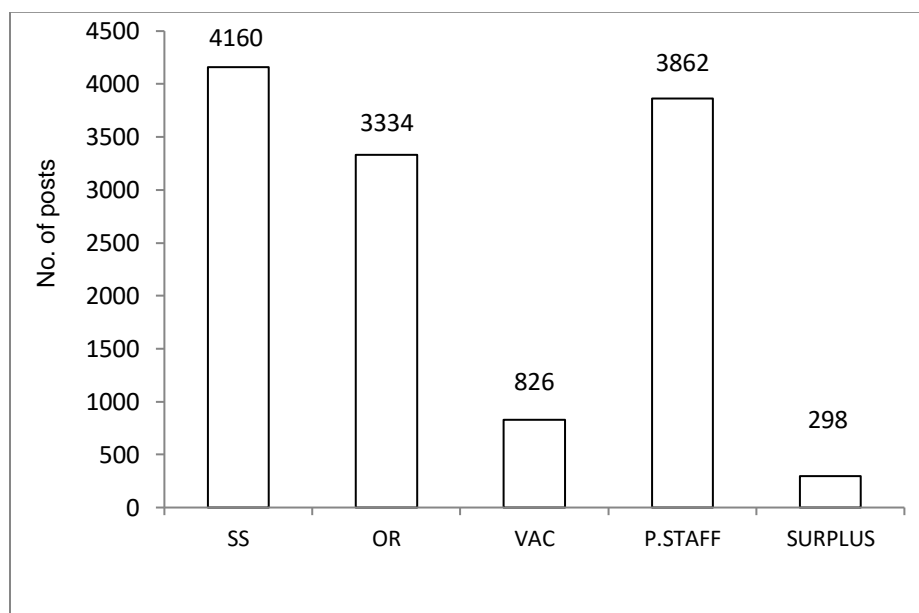
Total = 298 posts

FINANCIAL IMPLICATIONS

Anticipated recurring savings = ₹ 1566.89 lakh per annum.

Capital saving = Nil

Total = ₹ 1566.89 lakh per annum



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SYNOPSIS

Permanent way is the backbone of any railway. Indian Railway spread over the nation from North to South and East to West. A huge manpower is deployed to maintain the track within the prescribed tolerances so as to enable the trains to run at an optimum level of safety, security, reliability and punctuality.

It has become inevitable to run heavier trains at high speeds, which has necessarily to introduce modernized track structure and its improvised maintenance system. Even after the introduction of improvised track and machine maintenance, the Trackmaintainer staff is still being deployed on conventional pattern. Taking into consideration the activities based upon improvised track, outsourcing and mechanized *Maintenance as Per Manpower & Cost Norms for Track maintenance* (MCNTM) work study has been conducted by the Central Planning Cell, HQ Office.

The team collected the SSE 'P' way wise staff position and activity wise workload being maintained by the Trackmaintainer staff. The team critically analyzed the data supplied and the activities being performed by the trackman staff and assessed the requirement of Trackmaintainer staff accordingly.

The requirement of Trackmaintainer staff comes to 3862 posts against the sanctioned strength of 4160 posts and 298 posts of Trackmaintainer staff are identified as surplus and recommended for surrender under the jurisdiction of Sr. DEN-III, IV & V over Delhi division. The zealous acceptance and implementation of the recommendations contained therein the work study report will result in recurring saving worth ₹ 1566.89 lakh per annum to the administration.

SUMMARY OF RECOMMENDATIONS

S. N.	Recommendations	Refer para No.	Accepting/ Implementing authority.
1.	It is proposed that 298 posts of trackmaintainer staff in grade ₹ 5200-20200+1800 (L-I) under the control of Sr. DEN-III, IV & V over Delhi Division identified as surplus and recommended for surrender.	2.5.17	ADRM/Admin/NDLS Sr.DEN/C/NDLS Sr.DPO/C/NDLS

ACKNOWLEDGEMENT

The work study team is highly grateful to Shri Vikas Purwar, ADRM/Admin/NDLS, Sh. Manoj Sharma, Sr.DEN/C/NDLS and Sh. Devender Kumar, Sr.DPO/C/NDLS for their valuable guidance. The work study team is also thankful to other functionaries for extending full cooperation in providing requisite data/informations, during the conduct of study.

1.0.0 INTRODUCTION

- 1.1.0 Indian Railways runs around 11,000 trains every day of which 7000 are Passenger trains over 86526 TKM of Broad Gauge (BG) track. Moreover, technology advancement of track structure has necessitated switching over from manual maintenance to mechanized maintenance. The track structure has become sturdier and less amenable for manual maintenance due to continuous developments in various track components namely rails, sleepers, fastenings, points and crossings etc.
- 1.2.0 The Permanent way is the backbone of any railway system. The safety and comfort of rail users depend upon the proper maintenance of permanent way. The permanent way is maintained by Civil Engineering Department by deploying huge manpower. Mechanized maintenance staff have already been introduced to cope with heavier and faster traffic and introduction of heavy and modernized track structure. By virtue of heavy/modernized track structure and mechanized maintenance the workload/burden on track maintenance staff has eased to some extent
- 1.3.0 In view of above, SDGM/NR directed to conduct "Review of track maintainer staff under SSE P Way controlled by Sr. DEN-III, IV & V of Engg Deptt over Delhi Division" with a view to effect optimum utilization of manpower by avoiding wastages due to modernization and system development.

1.4.0 TERMS OF REFERENCE:

The following terms of reference were adopted for conducting the study:-

1. Review of staff strength vis-à-vis existing workload.
2. Suggest ways and means to identify redundant/unproductive activities to eliminate wastages.
3. Suggest ways and means to improve the standard the system economically in view of modernization and system development.

1.5.0 METHODOLOGY ADOPTED

The following method study and work measurement techniques of work study were applied for conducting the review:-

1. Data collection and its critical analysis to assess the factual status of the system in operation.
- 2 To access the staff as per yard sticks in vogue, if any
- 3 Held discussions at various levels.

2.0.0 BRIEF DESCRIPTION, STAFF POSITION, WORKLOAD, CRITICAL ANALYSIS, PROPOSED STAFF AND RECOMMENDATIONS.

2.1.0 BRIEF DESCRIPTION

2.1.1 Delhi Division is an important Division of Northern Railway. It is a strategic division with trains' operations point of view. It is spread over the states of Uttar Pradesh, Delhi, Haryana and Punjab.

2.1.2 Permanent Way or track is the real head upon which the trains run. Track, the backbone of any railway system, is maintained effectively by track engineers and track maintainer staff within the prescribed tolerances.

2.1.3 Modernization in Railway system has become necessity of today so as to haul heavier and longer trains at faster speeds safely and conveniently to achieve better productivity and render better consumer service to Rail users. Modernization of track involves use of heavier track structure, long welded rails, modern mechanized methods of track maintenance and quick renewals of track structure etc.

2.1.4 The Indian Railway track is mainly maintained by permanent way gangs of 10/20 men each having a beat of about 6 to 10 km. Depending upon various local/tropical/working conditions, the gangs normally carry out through packing of the section every year and deep screening once in five years and miscellaneous and specific also. Besides, trackmaintainer staff, mates, Keyman, blacksmiths and welders are also utilized for track maintenance.

2.1.5 Activities carried out by departmental staff and norms.

The activities performed by departmental staff and norms as per MCNTM formula is tabulated as under:-

	Activities	Norms
T	Activities 'T' affected by Traffic Density	
T.1	Slack attention to	
a.	Bad spots	12 sleepers/head, 1/4 length
b.	Low joints (F for welded) Glued joints	10 GJs attended 4 times/year
c.	SEJ (1 no. per km)	6 times/year, 8SL/SEJ, 12 SL/Head.
d.	Minor curve realignment	As required 10% of gang length.
T.2	For tie tamper work	
a.	Pretamping operations	(2 years cycle) 20 men/km
b.	Alongwith tamper	10 men for week/gang length of 10 km.
c.	Post tamping operations	28 men/km (includes boxing needed).

T.3	Casual renewal of	
a.	Rails	60 mandays/gang length of 10 km.
b.	Track sleepers	60 mandays/gang length of 10 km.
c.	Fasteners (alongwith re-gauging)	100 mandays/gang length of 10 km.
T-4	Repair Welding	12 men/failure/year
R	ACTIVITIES 'R' UNAFFECTED BY TRAFFIC DENSITY	
R.1	Lubrication of ERCs	Keyman duty
R.2	Shallow screening (1/5 length)	6 SL/Head
R.3	Loading, leading, unloading	Inferred from field data anlysis.
R.4	Overhauling of level crossing	1 LC per 1.5 km, 20 men/LC
R.5	Watching caution spots and misc.	Inferred from field data analysis.
R.6	Tree cutting for visibility	-do-
R.7	Lubrication of rails in curves	-do-
R.8	Accident relief & carcass removal in run over case.	-do-
R.9	Bridge sleeper attention and renewal.	-do-
R.10	Pre monsoon attention, such as cleaning of drains and water ways, cess repairs, dweeding of track and attention to cuttings and trolley refuges.	Referred from field data analysis.
R.11	Creep pulling (approaches of bridge turnout)	-do-
R.12	Rectifying damage to L/C posts and gates.	-do-
M	ACTIVITIES 'M'	
M.1	Monsoon patrolling	Total no. of patrol man in 24 hrs * D. No. of days for which patrolling is required.
M.2	Hot weather patrolling	No. of stations/men * no. of days 30*length of LWR in km on S/2 basis
M.3	Cold weather patrolling	12 * length of LWR
M.4	Vulnerable locations	Total no. of stationery watchman no. of days for which locations is watched.
M.5	Waterman duty	No. of beatx1 man/ beat*294
M.6	Site store chowkidar	No. of site store * shifts * 365
M.7	Rest Givers to gate keepers (No. of manned level xing.	L Xing*2*365- S/S of gate keeper * 294
S	ACTIVITIES 'S' SITE SPECIFIC	
S1	Tunnel maintenance = length of tunnel in km * no. of line in tunnel)*1.2 * 294	
S2	Bridge structure maintenance =(length of bridge in km. * no. of line on bridge) 1.1 * 294	
S3	Long girder bridge maintenance = $6 \times 4 \times 4 / 56 = 0.64 \times$ total water linear water in mtr.	
S4	Extra for very sharp curve= (Length of track in km * 1 * 294)	
S5	Extra for very bad formation =(Length of bad formation meter * 10 * 4 * 3/200)	
S6	Look out man duty= length of poor visibility/length of gang length * 294	
S7	Fog signal man duty Ist year IIInd Year IIIrd year Avg.	
S8	Filth removal= 1 man /beat	
S9	Security patrolling Ist Year IIInd Year IIIrd Year Avg.	

2.1.6 Activities that can be outsourced:

During the conduct of study, the activities which can be outsourced on contract basis was discussed at various levels. The work done on contractual basis is economical and better in quality when compared with departmental staff. Indian Railway has already out sourced certain activities in some departments like cleaning of coaches, cleaning of drains, platform surface cleaning, washing line cleaning, picking up slag/rag/poly bag from railway lines, cleaning work in Medical Department, box porter work in mechanical/operational departments etc. Some activities in P.Way can be outsourced which will not only improve economy but also increase productivity and standard of work. The activities which can be outsourced are listed below:-

1. Lubrication of elastic rail clips (ERCs)
2. Shallow screening.
3. Loading, leading and unloading of material
4. Cleaning of drains and waterways.
5. Heavy cess repair and attention to cuttings and trolley refuges.
6. Rectifying damage of L/C posts and gates.
7. Painting of weld collars and rails.
8. Destressing LWR when planned with track renewal.
9. USFD testing.
10. Creep pulling and overhauling of turn outs.
11. Reconditioning of tongue rails and crossings.
12. Unloading ballast.
13. Muck removal from yard.

2.1.7 This study is limited to review the trackmaintainer staff working under SSE (P.Way) controlled by Sr. DEN-III, IV & V of Delhi Division. The head quarters station of SSE (P.Way) under their respective ADENs is given below:-

S N	Sr.DEN	ADEN	SSE (P.Way)
1	Sr.DEN/III	DLI	Delhi (DLI)
			Shakurbasti (SSB)
		NDLS	New Delhi (NDLS)
2	Sr. DEN-IV	ROK	Bahadur Garh (BGZ)
			Gohana-I (GHNA-I)
			Jhajjar (JHJ)
			Rohtak (ROK)
		JHI	Gohana-II (GHNA-II)
			Jind (JHI)
		MSZ	Mansa (MSZ)
			Jakhal (JHL)
3	Sr DEN-V	DEE	Delhi Sarai Rohilla (DEE)
			Gurgaon (GGN)
		TKD	Faridabad (FDB)
			Tugulakabad (TKD)
		NZM	Hazarat Nizamuddin (NZM)

2.2.0 STAFF POSITION

During the course of study, the team collected the staff position from ADEN Office as well as from SSE/P way offices. The work study team has been provided, the trackman, Keyman, mate, gateman, trolleyman chowkidar and supporting khallasi as trackmaintainer staff. The detailed staff position is depicted as annexure No.II in the report and the summarized position of the trackmaintainer staff is tabulated below:-

S N	ADEN	SSE (P.Way)	Sanctioned Strength	On Roll	Vacancy
1	DLI	DLI	275	219	56
		SSB	177	156	21
	NDLS	NDLS	283	230	53
2	ROK	BGZ	254	210	44
		GHNA-I	204	160	44
		JHJ	203	182	21
		ROK	231	192	39
	JHI	GHNA-II	97	97	--
		JHI	389	355	34
	MSZ	MSZ	202	171	31
		JHL	373	259	114
3	DEE	DEE	272	202	70
		GGN	322	263	59
	TKD	FDB	262	201	61
		TKD	248	170	78
	NZM	NZM	368	267	101
Total			4160	3334	826

The above table reveals that the on roll strength is 3334 posts against the sanctioned strength of 4160 posts and 826 posts of trackmaintainer staff are lying vacant under Sr. DEN-III, IV & V over Delhi Division.

2.3.0 WORKLOAD

During the course of study, the team collected the workload in terms of track kilometer being maintained by track maintainer staff, GMT, mandays of miscellaneous and site specific as per MCNTM norms. The effective working days in one year are taken as **294** days. The work study team has taken in to consideration the LWR & SWR as combined and the track like fish plated track, loop lines, pts & crossings, busy sidings, ordinary sidings and yard lines has been taken as track on other lay out including running yard lines while assessing the requirement of mandays/yr and trackmaintainer staff.

The SSE/P Way wise workload in terms of GMT and track kilometer is depicted as Annexure III in the report and the summarized position of the same is tabulated below:-

S N	ADEN	SSE/P WAY	Section	Annual Averg GMT	Track on PRC sleeper LWR in TKM		Other Layout TKM	Total Track in km	Remark
					Mech	TOTAL LWR			
1	DLI	DLI	DLI-PNP	73.26	23.72	59.31	68.80	128.11	
			DLI-DSA	52.515	6.92				
			DLI-DBSI	21.635	3.80				
			DLI-RE	19.15	5.72				
			DBSI-ANDI	40.785	10.51				
			DSB-DKZ	21.635	2.873				
			DLI-NDLS DSB-DKZ	19.97	5.767				
		SSB	DLI-ROK	59.92	18	36.295	63.264	99.559	
			LPNR-PTNR	79.89	8.12				
			PTNR-DBSI	70.64	3.3				
			PTNR-DKZ	42.94	4.265				
			DBSI-ANDI	40.79	2.61				
2	NDLS	NDLS	NDLS-SBB	133.50	32.00	57.430	83.100	140.53	
			DSB-PGMD	66.20	15.620				
			ANVT-SBB	26.10	7.930				
			A Panel- B Panel	26.10	1.880				
			ANVT YARD	--	16.60				
			3RD & 4TH LINE YARD	--	16.500				
			ANVT-SBB YARD	--	11.500				
3	ROK	BGZ		35.755	121.58	121.58	17.460	139.320	
		GHNA-I		9.93	46.284	46.284	32.68	78.964	
		JHJ		4.18	72.00	72.00	15.684	87.684	
		ROK		38.755	93.026	93.026	28.592	121.618	
4	JHI	GHNA-II		2.75	69.538	69.538	5.522	75.06	
		JHI	KZH-DHY	34.725	143.725	153.580	34.858	188.438	S/L
			JCY-PPD	7.680	9.855				
5	MSZ	MSZ		21.88	118.518	118.518	46.80	165.318	
		JHL		27.46	136.820	136.820	26.04	162.86	

6	DEE	DEE		18.745	50.840	50.840	40.460	91.300	
		GGN		21.87	110.00	110.00	26.019	136.019	
7	TKD	FDB		72.23	123.283	123.283	66.701	196.401	
		TKD		--	--	--	184.50	184.500	
8.	NZM	NZM	MTJ-NZM	94.29	36.382	--			
			TKD-2 nd Y Bridge	56.595	19.874	96.056	138.01	234.066	
			NZM-PTNR	79.885	30.30				
			JNC-TKD	52.570	7.0				
			HNZM-DLI	30.90	2.50				
Total					1256.686				

*Gross million tonnes

*S/L single line

*D/L Double line

2.4.0 CRITICAL ANALYSIS

The modernization of track has resulted in introduction of modern infrastructure, equipments and devices etc. Modernization involves heavy costs in commissioning. On the other hand more deployment of manpower i.e. track maintainer inspite of modernization is still persisting. In this dynamic age, the track maintenance by modern infrastructure, equipments and devices not only minimize the working expenses but also improve safety standards. It has resulted in reduction of workload of track maintainer staff as well as saving of manpower.

In the era of modernization some of the track maintenance activities like thorough packing, deep screening, screening of ballast, tempting and lining work of track, spot tempting of concrete sleeper, tempting of newly laid turn outs, special SEJ, Glued joints, level crossing and curves etc; being maintained by track machines which was previously being done by trackmaintainer staff. Use of track machines has reduced the workload of track maintainer staff to great extent.

Some of the track maintenance activities are being carried out on contract basis for which ₹ 249.81 crores is being paid for running contracts on regular basis. Detail of running contracts have been shown vide para no.2.6.1 in the work study report, which also has reduced the work load of track maintainer staff significantly, however, no staff has been rendered surplus against the contract value.

In view of above to economize the track maintenance system due to effect of various modernizations of tracks to assess requirement of trackman has become imperative.

2.5.0 REQUIREMENT OF TRACKMAN STAFF

The team collected the workload in terms of track kilometers, GMT and mandays for miscellaneous and site specific activities from respective SSE/P way offices working under Sr. DEN-I & II over Delhi Division. The work study team has considered the GMT, Track kilometers, other layout and MCNTM committee formula while calculating the manpower. Extra cushion has been provided for other miscellaneous activities like Keyman, mate, trolleyman, gateman etc.

The activities 'T' for machine maintenance track kilometers

'T' = 80×2.3 GMT mandays/km/year

R = 159 mandays/km/year

The activities T & R for manual track taken as

T = $223 + 8.24$ GMT mandays/km/year

R = 169 mandays/km/year

The activities 'M':

Monsoon patrolling: No of days* No of beats* No of 2men* No of shifts

Hot weather patrolling: $30 \times$ length of LWR

Cold weather patrolling: $12 \times$ length of LWR

Site store chowkidar: No of stores*2*365 days

Rest giver gate keepers: No of LC*2*365-SSo of GK*294

The activities 'S':

Long girder bridge: $0.64 \times$ water ways in mtrs*no of bridge

The activities R for running yard line and non running yard line

R for mechanized and running yard line = 177 mandays/km/yr

R for non running yard line = 297 mandays/km/yr. As per MCNTM formula.

The SSE/P.Way wise requirement of trackmaintainer staff is calculated as:-

2.5.13 ADEN/wise and SSE/P.Way wise summarized position of existing sanctioned strength, proposed staff and surplus posts of trackmaintainer under the administrative control of Sr. DEN-III, IV & V of Delhi Division is tabulated as under:-

ADEN	SSE/P WAY	SS	Proposed Staff	Surplus Staff
DLI	DLI	275	256	19
	SSB	177	161	16
NDLS	NDLS	283	262	21
ROK	BGZ	254	246	8
	GHNA-I	204	200	4
	JHJ	203	194	9
	ROK	231	220	11
JHI	GHNA-II	97	109	-12
	JHI	389	351	38
MSZ	MSZ	202	216	-14
	JHL	373	302	71
DEE	DEE	272	222	50
	GGN	322	302	20
TKD	FDB	262	300	-38
	TKD	248	218	30
NZM	NZM	368	303	65
Total		4160	3862	298

The above table reveals that the proposed requirement of trackmaintainer staff comes to 3862 against the sanctioned strength of 4160 posts and 298 posts are identified as surplus and recommended for surrender. It will certainly improve economy and manpower productivity.

RECOMMENDATION NO.1

It is proposed that 298 posts of trackmaintainer staff in grade ₹ 5200-20200 +1800 (L-I) under the control of Sr. DEN-III, IV & V over Delhi Division identified as surplus and recommended for surrender.

2.6.0 DETAIL OF RUNNING CONTRACTS:

During the course of study, the team was apprised that certain P.Way works are being carried out on contractual basis like leading/loading/unloading of P.Way material, hiring of truck/multi utility vehicles, complete track renewal (CTR), complete renewal of points and crossings, shallow screening of track, over hauling of level crossings, annual zone contract for maintenance of track and level crossings, pre-post attention with BCM, painting of rails, deep screening of bridge approaches, remodeling of yards, welding of rails, Cess repair, provide ballast retaining walls, rag picking etc. for which ₹ 249.81 crores are being paid for running contracts on regular basis..

2.6.1 During the course of study, the team collected the details of running contracts under P.Way under Sr DEN-III, IV & V of Engineering Department over the Division which are tabulated below:-

S N	ADEN	Description of work	Agreement No	Amount of contract in ₹	Contract period	Remark
1	DLI	Replacement of non standard diamond crossing with standard 1 in 8.5 and 1 in 4.25 diamond crossing in the Delhi triangle area in the section of SSE/P Way/DLI for		12833204/-	23.01.2017-22.07.2017	Work in progress
		CTR (P) 4.38 with TRT of DUK section and deep screening (manual with BCM) of DAL section and pre post attention with BCM, CSM etc in the section of SSE/P Way DLI & SSB under ADEN Delhi		17373577/-	19.12.2017-18.10.2018 extended upto 31.12.2019	Work in progress
		CTR (P) (part of 3.96, 5.06 & 2.79 km) TRR (s) part of 25.00 km & TFR for length of 29.93 km (part of TFR 58.57 & 171.238) NZM-DBSI and DLI-BTI in the section of SSE/P way/SSB under ADEN/DLI)		24117327/-	06.08.2018-5.11.2018 extended upto 31.12.2019	Work in progress
		Through turnout Renewal of turnouts laid on wooden sleepers with turnouts in the section of SSE/P way SSB under ADEN/DLI)		12013018/-	09.04.2018-08.10.2018 extended upto 31.12.2019	Work in progress
		Removal of muck/malba/garbage in DLI & triangle area in between DLI-DSB in the section of SSE/P way/DLI under ADEN/DLI)		9037141/-	10.05.2018-9.11.2018 extended upto 31.12.2019	Work in progress
		Annual zone for maintenance of track work in the section of SSE/P way SSB under ADEN/DLI)		8552103/-	08.08.2018-12.08.2019 extended upto 30.11.2019	Work in progress
		Improvement of DLI yard by deep screening of T/outs approaches and overhauling of pathway including replacement of w/out slide chairs,		1328811233/-	15.11.18-14.05.19	Work in progress

		plate screws etc. and deep screening of line No. 24, 25, & 26 in DLI yard in the section of SSE/P way/DLI under ADEN/DLI)			extended upto 31.12.2019	
		Annual zone for maintenance of track work in the section of SSE/P way/DLI under ADEN/DLI)		10386628/-	10.01.19-29.01.20	Work in progress
		Replacement of balance 57 set of the existing 60/52 kg points and crossing with 60 kg thick web/fan shaped switches and WCMS/CMS) crossing (part of DLI division TTR (CS+CMSC)-3 set, part of DLI division TTR (TWS+WCMS) 107 set TTR (FS + TWS+WCMS) 82 sets TTR(FS+CMS+CMCS) 48 set, Part of New Delhi-HWH(TW+WCMS) 49 set etc		22142419/-	10.01.19-09.07.19 extended upto 31.12.2019	Work in progress
		CTR (P) 0.7 km south line DLI-DSA TRR (P) 1.89 km south line DLI-DSA. TRR (P) 4.89 km DLI-GZB section DLI yard line No 22 (0.120 km & WT siding (0.47 km part of TRR (S) in the section of SSE/P way/DLI & SMQL under ADEN/DLI) etc		8332310/-	28.02.19-27.08.19 extended upto 31.12.2019	Work in progress
		Leading of P/way material, hiring of trucks and other allied work for mis work of track maintenance/renewal in the section of ADEN/NDLS/DLI) etc		32309751/-	14.03.2018-30.09.2019	Work in progress
		Manual deep screening by BCM and associated work against part of TBR 20.355 (DLI_GZB) north line 0.700-1.280 & 2.130-3.440 south line 0-1.280 & 2.130- 3.440) etc		11700536/-	28.08.19 - 27.06.20	Work in progress
		Extension of washing line No 1 at SZM end for ART staling in DLI yard in the section of ADEN/NDLS/DLI) etc		4895513/-	09.09.19 - 27.06.20	Yet to start
		Total		1502504760		
2	NDLS	Through replacement of damaged sleepers on washable apron on platform lines at New Delhi station under Day/Night traffic block		13377000	01.11.17-extended upto 31.12.19	Work in progress
		Annual zone for maintenance of track work in the section of SSE/P.Way/NDLS under ADEN/NDLS		7954000	06.08.18-extended upto 31.12.19	Work in progress
		Total		21331000		
3	ROK	Hiring of truck utility vehicle and tractor for leading of material & machinery from station to station and other misc. casual work for day to day maint. of track and colonies for period of two years in the section of ADEN/ROK		12210729	13.09.19-15.03.20	Work in progress
		Annual zone work for maintenance of track under ADEN/ROK		6952485	Up to 30.06.2020	Work in progress
		TSR(P) 1.0 km of HPCL siding at asaudah under ADEN/ROK		4198391	14.10.2018 extended	Work in progress

					upto 31.10.19	
		Maintenance of track for one year in the section of ADEN/ROK		9153378	31.05.2019 21.08.19	Work in progress
		Deep screening and other misc. work under ADEN/ROK		10551209	15.06.2019 31.03.20	Work in progress
		Annual zone work for maintenance of track on ROK-PNP Section		6828137	30.09.19 04.04.2020	Work in progress
		Pre and post attention work with deep screening of track with BCM in the section of Sr.DEN-IV/NDLS		27239708	Up to 28.04.2021	Work in progress
		Total		77134037/-		
4	JHI	Supplying, stacking, leading putting of stone ballast (Machine crushed) on cess in the section of DEN-IV/DLI		14449539	13.06.2018	Work in progress
		Extensive repair of Bridges No. 255 UP & DN line bank by way of repair to approaches, ballast retaining wall and replacement of 52 Kg rail fitting of channel sleepers with 60 Kg fittings (bridge span 12x12.19 m) under ADEN/JHI.		6206716	15.07.16	Work in progress
		Through turn out renewal and Pre post attention works for tamping machine in the section of Sr.DEN-IV/DLI		9655895	02.10.19	Work in progress
		Pre post attention work with deep screening of track with BCM in the section of Sr.DEN-IV		27239708	28.04.2021	Work in progress
		Maintenance of Track under ADEN/JHI for period ending 30.06.2016		7868241	extended upto 20.05.19	Work in progress
		Renewal of sleeper and cleaning of ballast in the section of ADEN/JHI		8359746	extended upto 30.04.2019	Work in progress
		TRR(P) and renewal of t/out on various location on DLI BTI sec.under ADEN/JHI		12466183	extended upto 16.08.19	Work in progress
		CTR(P) 3.59 KM & TRR(P) 16.19 KM under ADEN/JHI on DLI-BTI Sect.		7969605	extended upto 30.06.19	Work in progress
		Pre-post attention of work in connection with deep screening of 195 km. track with BCM under ADEN/JHI & ADEN/ROK		16371818	27.03.14 15.11.19	Work in progress
		"Deep screening of stone ballast on DLI-BTI section under ADEN/ROJ.JHI "		18956294	20.03.14 30.08.19	Work in progress
		Supplying, stacking, leading, 30000 Cum 65 mm Gauge stone ballast (Machine crushed) in to Railway Wagons including all Leads & Lifts at Ballast Depot Jind on cess in the section of DEN/JHI		26612469	25.06.19 extended upto 24.10.19	Work in progress
		Reconditioning of Points and crossing, SEJ's etc. in the section of ADEN/Jind for 2 years		4095398	24.04.19 21.10.20	Work in progress
		Supplying, stacking, leading, putting of stone ballast (Machine crushed) on cess in the section of DEN-IV/DLI		16156279	21.09.19 21.03.2020	Work in progress

		Annual zone work for maintenance of track on DLI BTI and JHI-SNP section under ADEN/JHI for period		6184109	25.10.19 30.06.2020	Work in progress
		Misc. P. Way work to complete left over work n c/w JHI-MSZ doubling in the section of under ADEN/JHI		6328665	wef 31.12.17	Work in progress
		Leading of P.Way and other material under ADEN/ROK & JHI		12603743	Wef 31.10.18	Work in progress
		Provision of patrolmen for inspection and patrolling of Track under Sr.DEN/IV for a period of 1 year.		9291504	13.11.19 31.03.20	Work in progress
		CTR 5.174 TSR 1.684 & TRR 0.385 at various location under Sr.DEN-IV.		17570423	31.01.19 31.12.19	Work in progress
		Total		228386325		
5	MSZ	TRR of existing 90 R/52 KG rails with new/SH 52/60 KG rails of 20 rails panel or less and tightening all fittings and fastenings in traffic block including labour, T&P etc. Rate also includes pairing if rails for manual TRR as per site condition.	Tender No. 68-W-IV-19-20 closing date 05.11.19	5989185	05.11.19 04.09.2020	Work in progress
		Leading 5/10/20 rail panels on cess upto max. lead of 500 mtr. & jamming and pairing rails/panels by bringing them in up right position on leveled shoulders on track closing the gap in between panels by putting closure rail and fish plating the rail and panel & inserting glued joints and SEJs at proper locations as per instructions of site engineer to form continuous panels.	15,00 for TRR(P) 59.293 Km on DLI-BTI Section.	827730		Work in progress
		Dismantling existing check rail/guard rail by opening all fitting and fastenings, making new check rails/guard rail of required length by cutting, bending drilling, notching holes, gas cutting of flange etc. and laying the same with all fittings as required by site in charge including all handling, leading of material as required with contractors own labour, tools and plants, etc so nothing extra will be paid.		42546		Work in progress
		Cutting of rails, 90 R/52 Kg/60 Kg by gas cutting for required length as instructed by contactor's own labour, T&P including all handling etc The location will be given by ADEN to contractor in advance.		554252		Work in progress
		Cutting of rails, 90 R/52 kg/60 Kg by hacksaw, for required length. Cut shall be perfectly square including all handing etc.		54715	05.11.19 04.09.2020	Work in progress
		Drilling holes in rails, 28 to 32 mm dia, in the web of 90R/52 Kg rails/60 KG rails including proper chamfering with contractor's own tools and plants etc.		81480		Work in progress
		Item rate for drilling 18 mm to 20 mm dia holes in the web of 60 KG 90 UTS rails including chamfering, handling etc. the rate of include opening the bonds from old rails and refixing in new rails as directed by the site engineer with		55720		Work in progress

	contractors labour, T&P etc, No payment will be paid without chamfering hole. So nothing extra shall be paid except the expected rates whatsoever the case may be.				
	Complete item rate for leading of new/SH 60 Kg/52 kg rails and fittings from stacking point to the site of work and released rails from site to the loading point. SE/P. Way store by dip lorry/rail dolly or any other means under proper protection with/without traffic block including crossing of track, bridges, Level crossing turnouts etc., with average lead of 2 km. Rail dolly/dip lorry for the work will be arranged by the contractor, complete		1518256		Work in progress
	I.R for complete rate of boxing ballast and ballast profiling after completion of RR/Deep screening work or any location and unloading of ballast by DTM as directed by site engineer as per standard ballast complete (IRPWM) under the direction of site Engineer incharge. Including keeping rails foot and sleepers top free from ballast spacing and squiring of sleepers gauging cleaning of muck proper fixing of fastening.		1250489		Work in progress
	Greasing of EYE of insert and foot of rail under liner before driving ERC manually/ with clip applicator. The EYE of insert shall be cleaned with the help of steel brush before providing grease with the help of brush wrapped in cloth. The work shall be done as per instructions of site incharge with contractor own labour, materials and T&P, Grease shall be conform to IS.408 (graphite grease) and shall be approved by ADEN.		1954882		Work in progress
	Insertion of SEJ into track at the location as directed by site incharge including dismantling of old track and packing of newly laid SEJ		229579		Work in progress
	CIT for inserting of Glued joint with 60/52KG rails in situ on leveled shoulder in 20 rails panels/LWR track including adjusting the gap and 1 mtr long dish plates cutting of rails, drilling holes in rails, aligning, leveling and tightening of nuts and bolts with contractor's own labour, T&P etc. Dully tested and make it fit for track circulating, Cutting of rails and drilling of holes in rails will be paid separately under item no.2 & 3 below. Work will be completed to the fully satisfaction of site incharge. All P.way material will supplied at SSE/P.Way's store and leading the same will have to be done by the contractor at his own cost to the site of work, so nothing extra will be paid on this account and except the accepted rates.		25191		Work in progress
	De-Stressing of track at appropriate temperature as per LWR manual INSITU with		1428368	05.11.19 04.09.2020	Work in progress

		contractor's own labour and required equipments.				
		Item rate for loading, unloading including lead upto 1 km of Misc. railway materials, such as points and crossings, rails of all sections and all lengths, PSC sleepers, points & crossing fittings or other similar materials/articles from a various locations/places using mechanical devices such as road cranes, chain pulleys, winches of hoists etc. & other necessary operations, taking all safety measures, including all lead, lift, ascent, descents , crossing of nalah or any other obstructions whatsoever, including all octroi, sales tax or any other charges levied by central/Govt. and including stacking of materials as per directions of engineer in charge and as per tender conditions, as a complete job. (a) Lead from starting point & upto 1 km.		140115		Work in progress
		Item rate for removal of Jammed ERC by heating with gas and greasing of ERC including fixing of missing liners and rubber pads with contractor's tools, plants etc. The work is to be carried out under traffic with proper protection of track & track geometry, railway material and any damage shall be recovered from the contractor at prevalent market rates & charges. The rate is for complete item so nothing extra shall be paid to affect this item whatsoever the case may be.		77250		Work in progress
		Supply of Track gauge cum level, Aluminum (with built in spirit level) Model ST-2 (BG) make PIE or similar as approved by ADEN. The rate including all lead, lift, loading, unloading, carrying, handling, stacking all local and central tax, octroi etc. and nothing extra shall be paid, whatsoever the case may be.		47660	05.11.19 04.09.2020	Work in progress
		C.I. Rate for dismantling existing damaged sleepers on isolated locations and inserting & linking SH/New PRC sleepers including removing much/ballast etc. along with deep screening and lifting to clear cushion with one round of katcha and two round of through packing (ballast by DMT) etc. with initial aligning, grading, leveling of track for approved longitudinal and transverse profile etc. with contractor's own labour, Tools & Plants etc. as a complete job.		516720		Work in progress
		Item rate for painting of rails with anticorrosive paint bituminous paint two coats of thickness 100 micron each as per IP 9862-1981 after cleaning and rubbing of rails with wire brush as per CE circular No. 258 P.Way (outside track i.e., on cess). The painting will be done after removing the rust and dust and loosening the scales by brushing/scrapping etc. All the		4178970		Work in progress

	applications will be done in uniform brushing. The work shall be complete in all respect with all L&M misc. and incidental works related to the job as per direction of Engineer in charge at site to his entire satisfaction (painting of rails will be done outside the track i.e., on the cess and at the site of work and contractor will have to re-handle the rails, if required, to cover the requisite area of rails with his own L,M & T&P etc.				
	Unloading of Rail from DMT, 20/10 rail or any other length, 52 KG/60KG rails panel from DMT at site or in yard and keeping them at safe distance from running track during the traffic block. During traffic block the contractor will provide the gas cutter alongwith skilled artisans to meet the any emergency which may require cutting of rail panel etc.		1072017		Work in progress
	Complete item rate for leading of misc. materials i.e., iron work, rails sleepers, including PRC crossings, fastenings, pipes wooden logs stone over pitching size cement bags and similar items with all lead, lift, loading, unloading (manually or mechanically) and proper stacking/spreading as directed by the site incharge at nominated locations. Work will be done with contractor's own labour transporting means, crane, T&P etc. Rate will be complete for all local/central taxes, taking permission from local authorities etc. so nothing extra will be paid to the contractor except the accepted rates (A) Lead above 1 KM upto 50 km etc.		479955		Work in progress
	-----do--- (B) Additional lead above 50 Kms for every kms or part thereof upto 200 kms.		344250.00		Work in progress
	-----do----- (C) Additional lead above 200 kms for every km or part thereof.		122500.00		Work in progress
	Item rate for removing existing ballast, ballast cushion from track and stacking at site, putting and packing the same after screening in the track after completion of work as directed by site incharge including all labour, materials, T&P, Leading, Loading and Unloading, lifting screening, incidental works compete with manual or mechanical method. The rate shall be complete item rate, so nothing extra shall be paid whatsoever the case may be.		361620.00		Work in progress
	Item rate for application of Bitumastic Paint on pandrol clips confirming to 158:1981. The work shall include taking out of pandrol clips from the track/site/store, their collection and transportation to local site/store, washing of pandrol by kerosene oil by keeping them dipped		1958800	05.11.19 04.09.2020	Work in progress

		in kerosene oil, atleast by 12 hours, drying them dipped and dipping them for short period in bituminous paint of ISI mark, approved make such as Asian, Nerolac/ICI or similar and subsequently drying them up, leading to the site and inserting them into track, including all tools & paints, labour and material, lead & lift etc, as a complete job, so nothing extra shall be paid to affect this item whatsoever the case may be.				
		Opening out of level crossing upto 50 mm below the bottom of sleeper and upto required length of TRT working by dismantling pucca road surfacing and removing ballast much etc. Disposing off all malba as directed, filling back ballast upto crib of sleepers and leveling the ballast profile after TRT working as per the instruction given by site incharge with contractor's own labour tools and plants, etc. complete , so nothing extra will be paid.		103568	05.11.19 04.09.2020	Work in progress
		C.I. Rate fr leading of U/S released /New PRC sleepers by manual/rail dolly etc. upto nearest stacking point with Avg lead upto 2.0 KMS including all lead, lift. etc as a complete job.		86540.00		Work in progress
		Hiring of truck, multi utility and tractor for leading of material and machinery from station to station and other misc. casual work for day to day maintenance of track and colonies for a period of 2 years in the section of ADEN/JHI under DEN-IV.	128-W/260/53/17-18/W-IV dt.21.09.17 Agg. No. 15/17-18	11173031	21.09.17 extended up to 20.09.19	Work in progress
		TTR, TRR, Deep screening and shallow screening and misc. work on DLI-BTI section under DEN-IV.	128-W/260/48/17-18/W-IV dt.31.08.17/04.09.17	26911034	04.09.17 extended up to 31.12.19	Work in progress
		CTR 5.174 TSR 1.684 & TRR 0.385 at various locations under Sr. DEN-IV.	128-W/260/28/17-18/W-IV	1757043	extended up to 31.12.19	Work in progress
		Through turn out renewal and Pre/Post attention works for tamping machines in the section of Sr. DEN-IV/DLI	128-W/260/427/18-19/W-IV	14340614	extended up to 02.10.19	Work in progress
		Reconditioning of Points and crossings SEJs etc in the section of ADEN/JHI for two years	128-W/260/285/18-19/W/ROK	4095398	extended up to 21.10.20	Work in progress
		Supplying, stacking, leading, putting of stone ballast(Machine crushed) on cess in the section of Sr. DEN-IV	127-W/260/328/18-19/W-IV	16156279	extended up to 21.09.19	Work in progress

		Annual zone work for maintenance of Bridges under ADEN/MSZ for two years		6194444	extended up to 30.06.21	Work in progress
		Total		104048721		
6	DEE	Linking of line No.6 and connection with Garhi Harsaru Yard on DEE-RE section under ADEN-DEE		3774774	31.11.17 extended	Work in progress
		Balance work of Through Rail Renewal work in C/with TWR(P) 39.00 KM under SSE/P.Way/GGN on DLIL-RE Section		17511033	30.04.18 extended	Work in progress
		Pre Post attention work with deep screening of track with BCM in the section of ADEN/DEE		42273372	30..06.19 extended	Work in progress
		Hiring of Multi Utility Vehicles and truck for leading of P.Way material misc. work for day maintenance work in the section of ADEN/DEE		12287188	06.01.18 extended	Work in progress
		Casual renewal sleepers renewal in the section of SSE/P.Way/DEE TFR9.62 km (20.38 to 30/0 line PM GGN under ADEN/DEE		5670095	30.08.19 extended	Work in progress
		Through Rail Renewal (P) 7.765 km and complete track renewal (P) 6.528, 765 km increasing sleepers density and TFR on Delhi RE Section under ADEN/DEE		27153747	28.06.19 extended	Work in progress
		Track zone misc. P way work in the section SSE/P.Way/DEE		10679327	20.12.18 extended	Work in progress
		Picking of rags from vicinity of track in the section of SSE/P.Way/DEE under ADEN/DEE		2679135	27.08.19 extended	Work in progress
		Track Zone misc. work inn the section of SSE/P.Way/GGN under ADEN./DEE		9581021	31.07.19 extended	Work in progress
		TRR(P)7.65 km and CTR (P)6.52 & 7.66 km increasing sleepers density and TFR on DLI RE Section under ADEN/DEE		27153747	28.06.19 extended	Work in progress
		Track zone misc. P. way work in the section SSE/P.Way/DEE		10782717	06.05.19-05.05.20	Work in progress
		Leading, loading and unloading of various P.Way material in the section of Sr.DEN/V/NDLS		7347965	24.05.19-23.05.20	Work in progress
		Track zone misc. P.Way work in the Section of SSE/P.Way/GGN		10257910	24.05.19-23.05.20	Work in progress
		Total		187152031		
7	TKD	Deep screening of stone ballast on down under ADEN/TKD		27805855	29.03.13	Work in progress
		CTR(S) of 5.90 kms of yard lines of FBD		32457381	31.08.19	Work in progress
		Through Turn out renewal of existing thick web assembly on FDN-JNC.		9344586	28.03.14	Work in progress
		Reconditioning of worn out 90R/50KG/60 KG points under ADEN/TKD & NZM		5117057	03.10.13	Work in progress
		Hiring of multi utility vehicle truck & tractor for under ADEN/TKD/HNZM		6587227	31.03.19	Work in progress
		Complete track renewal (P) of SAIL siding (HSYG) line No.1 & 2 at BVH etc.		4076407	31.03.18 extended	Work in progress
		Addition alteration of FBD & BVH yard for removal of PSR of 12		12287187	05.01.18-04.01.2020	Work in progress
				14422282		
				17326762		
				4130168	30.09.18 extended	Work in progress
				7239122	30.11.17 extended	Work in progress

7	TKD	Pre-temping track measurements, designing track alignment transferring design etc.		1721378	229.06.19	95% Work done
		Track zone misc. P.Way works in the s/o SSE/P.Way/FBD		15594720.60	13.03.19 extended	Work in progress
		Through turn out renewal of existing CS & CMS xing. Thick web switches & weldable xing etc.		9689921.05 10607843.00	31.12.19	Work in progress
		TSR (P) 16.00 kms with TRT & Manual TRR on NDLS-PWL section		21245914.43	22.06.19 extended	Work in progress
		Supplying stacking & leading of 12000 cum stone ballast etc.		17966321.57	30.04.19 Extended	Work in progress
		Leading loading & unloading of various P.Way materials in the s/o Sr.DEN/V/NDLS		7347965.76	24.05.19-23.05.20	Work in progress
		CTR(S) of 6.48 kms in TKD Yard.		12721787 15882936		Work complete
		TRR(S) 17.076 kms & TSR(S) 16.95 (part of CTR(S) 40.72 kms) with 52 Kg/60 Kg SH Rail and PSC sleepers etc. n the section of SSE/P.Way/TKD		28932013	15.2.19-31.12.19	Work in progress
		Track zone misc P.Way works in the s/o SSE. P Way/TKD under ADEN/TKD		10135205	16.04.19-15.04.20	Work in progress
		Total		292640043		
8	NZM	Picking of rags from vicinity of track in SW-321/NZM/17-18		6257198	25.01.18-31.12.19	Work in progress
		Track Works in c/w prov of extra stabling line extension of existing EMU line 1 & 2 HN ZM SW-335/HZM/18-19		7362168	16.07.18-30.12.19	Work in progress
		Reconditioning/Repair of points & crossing in the s/o SSE/P.Way/HNZM SW-339/NZM/18-19		4334717	26.07.18-30.11.19	Work in progress
		Casual renewal of PRC sleepers in the s/o SSE/P.Way/HNZM SW-348/NZM/18-19		12750281	29.08.18-31.08.19	Work in progress
		TRR(S) 7.406km, TFR3.5KM and TRR 8.0 Km ADEN/HNZM SW-348/NZM/18-19		8232243	21.01.19-20.09.19	
		Annual maintenance of track in the s/o SSE/P.Way/HNZM... ADEN/HNZM SW-354/NZN/18-19		11588612	15.04.19-14.04.20	Work in progress
		Leading, Loading, Unloading of various P.Way materials in the s/o Sr. DEN-V SW-358/NZM/18-19		7347965	24.05.19-23.05.20	Work in progress
		Renewal of points & crossings in 1 in 8.5 and 1 in 12 laid in the s/o SSE/P.Way/HNZM ADEN/HNZM SW-366/HZN/19-20		23598300	15.07.19-14.04.20	Work in progress
		Repair to wheel burn between 2 nd Yamuna Bridge-TKD .. in the s/o Sr.DEN/V SW-369/NZM/19-20		3499993	18.07.19-17.11.19	Work in progress
Total			84971477			
Grand Total			2498168394			

The above table reveals that the expenditure on P.Way works on for running contracts under ADENS- DLI, NDLS, ROK, JHI, MSZ, DEE, TKD & NZM under the administrative control of Sr DEN-III, IV & V comes to ₹ **2498168394/-**

3.0.0 FINANCIAL IMPLICATIONS

After the implementation of the work study recommendations following are the financial implications:

SN	Category	Grade Rs.	Refer Recom. No.	No. of surplus posts	Monthly value per posts in ₹	Anticipated annual recurring saving in ₹
1	Track maintainer	5200-20200+ 1800	1	298	43817	15,66,89,592/ -

No. of posts identified as surplus: -

Group 'C'= NIL posts

Group 'D'= 298 posts

Total = 298 posts

Anticipated recurring saving = ₹ 1566.89 lakh per annum

Capital saving = Nil

Total saving = ₹ 1566.89 lakh per annum

4.0.0 PRODUCTIVITY

4.1.0 The total annual expenditure on the sanctioned strength of P.Way trackman staff working under SSE/P.Way controlled by Sr. DEN-III, IV & V over Delhi Division is tabulated as under:-

S N	Category	Pay Scale + Grade Pay	Monthly value per posts in ₹	Sanctioned strength	Total annual expenditure in ₹
1	Trackmaintainer-I	5200-20200+2800	71078	232	197881152
2	Trackmaintainer-II	5200-20200+2400	62361	418	312802776
3	Trackmaintainer-III	5200-20200+1900	48614	777	453276936
4	Trackmaintainer-IV	5200-20200+1800	43817	2733	1437022332
Total				4160	2400983196

The above table reveals that the total annual expenditure on the sanctioned strength of trackmaintainer working under SSE/P.Way controlled by Sr. DEN-III, IV & V over Delhi Division is ₹ 2400983196/-

4.1.2. The annual expenditure on the proposed staff working under SSE/P.Way controlled by Sr. DEN-III, IV & V over Delhi Division is tabulated as under:-

S N	Category	Pay Scale + Grade Pay	Monthly value per posts in ₹	Proposed staff	Total annual expenditure in ₹
1	Trackmaintainer-I	5200-20200+2800	71078	232	197881152
2	Trackmaintainer-II	5200-20200+2400	62361	418	312802776
3	Trackmaintainer-III	5200-20200+1900	48614	777	453276936
4	Trackmaintainer-IV	5200-20200+1800	43817	2435	1280332740
Total				3862	2244293604

The above table reveals that the total annual expenditure on the proposed trackmaintainer staff working under SSE/P.Way controlled by Sr. DEN-I & II over Delhi Division is ₹ 2244293604/-. Therefore the expenditure on the proposed staff reduced from ₹ 2400983196/- to ₹ 2244293604/-

WORK STUDY REPORT DETAILED CHART

Department : - Engineering

Name of study: - Review of P.Way trackmaintainer staff working under SSE/P.Way controlled by Sr. DEN-III, IV & V over Delhi Division.

Activity Centre: - SSE/P.Way controlled by Sr. DEN-III, IV & V over Delhi Division.

S N	Sub activity	Actual staff deployed	Work Study recommendation	Brief description of workload
1	DLI, SSB, NDLS, BGZ, GHNA-I, JHJ, ROK, GHNA-II, JHI, MSZ, JHL, DEE, GGN, FDB, TKD & NZM.	S/S= 4160 O/R= 3334 Vac= 826	S/S = 4160 Proposed = 3862 Surplus = 298	Maintenance of track through various maintenance practices, security, Hot/Cold patrolling bad spots, activity, 'T' Activity 'R' Misc Activities 'M' & site specific activities 'S'

LIST OF ANNEXURES

S.N.	Description	Annex. No.
1	Authority Letter to conduct the work study report No. 16-CP/31/WS/2019-20	I
2	Statement showing category wise, the sanctioned strength and on roll position of trackmaintainer staff working under SSE/P.Way controlled by Sr. DEN-III, IV & V over Delhi Division.	II
3	Statement showing workload in terms of track kilometers being maintained by the trackman staff working under SSE/P.Way controlled by Sr. DEN-III, IV & V over Delhi Division.	III

Annexure No. I

Annexure No. II

STATEMENT SHOWING CATEGORY & GRADEWISE STAFF POSITION OF TRACK MAINTAINER STAFF
WORKING UNDER SSE/P WAY CONTROLLED BY SR. DEN-III, IV & V OF DELHI DIVISION

ADEN	SSE/ P WAY	Trackmaintainer-I			Trackmaintainer-II			Trackmaintainer-III			Trackmaintainer-IV			Total		
		SS	OR	V	SS	OR	V	SS	OR	V	SS	OR	V	SS	OR	Vac
DLI	DLI	27	2	25	55	4	51	55	95	-	138	118	20	275	219	56
	SSB	17	2	15	33	4	29	41	66	25	86	84	2	177	156	21
NDLS	NDLS	18	11	7	35	5	30	65	86	21	165	128	37	283	230	53
ROK	BGZ	8	3	5	16	12	4	66	65	1	164	130	34	254	210	44
	GHNA-I	10	8	2	10	9	1	8	8	0	176	135	41	204	160	44
	JHJ	1	1	0	0	0	0	66	66	0	136	115	21	203	182	21
	ROK	9	6	3	11	9	2	12	12	0	199	165	34	231	192	39
JHI	GHNA-II	9	0	9	12	1	11	9	8	1	67	88	-21	97	97	0
	JHI	23	6	17	47	8	39	86	135	49	233	206	27	389	355	34
MSZ	MSZ	9	0	9	18	15	3	40	22	18	135	134	1	202	171	31
	JHL	13	1	12	26	4	22	73	53	20	261	201	60	373	259	114
DEE	DEE	18	17	1	25	25	0	64	57	7	165	103	62	272	202	70
	GGN	12	9	3	18	17	1	54	54	0	238	183	55	322	263	59
TKD	FDB	26	8	18	52	23	29	52	36	16	132	134	-2	262	201	61
	TKD	10	4	6	16	3	13	6	6	0	216	157	59	248	170	78
NZM	NZM	22	6	16	44	6	38	80	0	80	222	255	-33	368	267	101
Total		232	84	148	418	145	273	777	769	8	2733	2336	397	4160	3334	826

STATEMENT SHOWING SUMMARIZED STAFF POSITION OF TRACK MAINTAINER STAFF WORKING
UNDER SSE/P WAY CONTROLLED BY SR. DEN-III, IV & V OF DELHI DIVISION:

Category	SS	OR	Vac
Trackmaintainer-I	232	84	148
Trackmaintainer-II	418	145	273
Trackmaintainer-III	777	769	8
Trackmaintainer-IV	2733	2336	397
Total	4160	3334	826

Annexure No. III

STATEMENT SHOWING WORKLOAD IN TERMS OF TRACK KILOMETER BEING MAINTAINED BY TRACK MAINTAINER STAFF WORKING UNDER SSE/P WAY CONTROLLED BY SR. DEN-III, IV & V OF DELHI DIVISION

S N	ADEN	SSE/ P WAY	Track on PRC sleeper LWR in KM		Track on PRC SWR in KM		Fish plated Track	Loop lines	Other lay outs				Total Track in km	Remarks
			Mech	Con	Mech	Con			Points & Xing	Busy siding	Yard Lines	Ord. Siding		
1	DLI	DLI	59.31	--	--	--	--	--	34.8	--	34.00	--	128.11	
		SSB	36.295	--	--	--			22.3		40.964		99.559	
2	NDLS	NDLS	57.430	--	--	--			83.10				140.53	
3	ROK	BGZ	114.800	--	7.060	--	4.530	6.730	6.200	--	--	--	139.320	
		GHNA-I	26.023	--	20.261	--	25.180	2.800	4.700	--	--	--	78.964	S/L
		JHJ	71.220	--	0.780	--	8.899	--	5.000	-	0.740	1.045	87.684	S/L
		ROK	88.600	--	4.426	--	6.130	8.637	11.800	--	--	2.025	121.618	
4	JHI	GHNA-II	68.035	--	1.503	--	--	2.888	2.634	--	--	--	75.060	
		JHI	142.425	--	1.300	--	--	16.800	4.580	1.420	2.106	9.952	178.583	D/L
			--	--	9.855	--	--	--	--	--	--	--	9.855	S/L
5	MSZ	MSZ	109.538	--	8.98	--	--	--	--	--	--	--	118.518	
		JHL	123.535	--	13.285	--	--	26.04	--	--	--	--	162.860	
6	DEE	DEE	48.200	--	2.640	--	--	--	16.400	6.411	13.964	3.685	91.300	
		GGN	95.967	--	14.033	--	2.543	--	12.500	1.500	9.476	--	136.019	
7	TKD	FDB	123.283	--	6.417	--	--	26.986	21.800	11.915	--	6.000	196.401	
		TKD	--	--	--	--	154.000	--	30.500	--	--	--	184.500	
8	NZM	NZM	96.056	--	--	--	11.320	15.590	19.100	--	92.000	--	234.066	

Salient features of work study report No. 16-CP-32/WS/2019-20

Sub: "Review of track maintainer staff working under SSE 'P' way controlled by Sr. DEN-III, IV & V over Delhi Division" Part-II

Staff Position:

i) Sanctioned strength	= 4160
ii) On roll strength	=3334
iii) Vacancy	=826
iv) Proposed staff	= 3884
v) Identified as surplus for surrender	= 298

i) The work study team has considered the GMT, Track kilometers, other layout and MCNTM committee formula while calculating the manpower.

ii) Some of the track maintenance activities like thorough packing, deep screening, screening of ballast, tempting and lining work of track, spot tempting of concrete sleeper, tempting of newly laid turn outs, special SEJ, Glued joints, level crossing and curves etc; being maintained by track machines which was previously being done by trackmaintainer staff. Use of track machines has reduced the workload of track maintainer staff to great extent.

iii) Some of the track maintenance activities are being carried out on contract basis for which ₹ 249.81 crores is being paid for running contracts on regular basis. Detail of running contracts have been shown vide para no. 2.6.1 in the work study report, which also has reduced the work load of track maintainer staff significantly, however, no staff has been rendered surplus against the contract value.

iv) Extra cushion has been provided for other miscellanies activities like Keyman, mate, trolleyman, gateman etc

Financial implication:

Anticipated recurring saving	= ₹ 1566.89 lakh per annum
Capital saving	= Nil
Total saving	= ₹ 1566.89 lakh per annum

