



सत्यमेव जयते

ON

UNION TERRITORY OF JAMMU & KASHMIR

EVALUATION REPORT ON

**MACADAMIZATION OF ROADS UNDER “CITIES & TOWNS PROGRAMME”
(DISTRICT SRINAGAR)**



**2016-17
to
2018-19**



**CONDUCTED BY
DISTRICT STATISTICS AND EVALUATION OFFICE, SRINAGAR**

**DIRECTORATE OF ECONOMICS & STATISTICS, J&K
PLANNING DEVELOPMENT & MONITORING DEPARTMENT
JAMMU & KASHMIR GOVERNMENT**



PREFACE

The maintenance and upkeep of roads in cities and towns is being addressed under the “**Cities and Towns Programme**” and is aimed improving the riding surface. The macadamization of the roads under the programme is designed to provide smooth riding experience for all type of vehicles.

The State Level Evaluation Committee (SLEC) during its 9th meeting among other programmes assigned “Macadamization of the roads under “Cities and Towns Programme” of Public Works (R&B) department in Srinagar as a district level study.

The Evaluation study assessed the impact of programme on the socio-economic conditions of the local people from the implementation of programme.

Apart from Director General, PM&CE Division, PD&MD, Regional Directors Evaluation & Statistics Jammu / Kashmir, the report of the study was also shared with HoD, Economics Department Kashmir University and HoD, Statistics Department Jammu University for technical inputs/suggestions in accordance with the terms and Conditions of the Technical Advisory Committee (TAC) on Evaluations.

Gratitude to all those who contributed in the conduct of evaluation study especially HoD, Economics Department, Kashmir University and HoD, Statistics, Jammu University for their valuable inputs/insights, which enhanced the quality and content of this report.

The report of the study stand approved by the Apex Level Evaluation Committee (SLEC) in its 10th meeting held on May 15-16th, 2024 for release. The Evaluation report is released with the hope that the findings of by the study would go a long way in bringing about an improvement in the implementation of the programme.

Jammu.

September, 2024.

CONTENTS

Chapter	Description of Chapter	Page No.
	Highlights of the study	1-3
Chapter No-I	Introduction	4 - 6
Chapter No-II	Analysis of Official Data	7 - 16
Chapter No-III	Field Findings	17 - 28
Chapter No-IV	Summary of Field Findings	29 - 31
	Suggestions & Recommendations	32
Appendix -I	Response of the implementing department	33
Appendix -II	Schedules of the study	34-38
Tables		
Table 1.0	Physical/Financial Achievements under the programme in the district	4
Table 1.01	Year wise works taken up for Macadamization	5
Table 2.0	Funds released and utilization position under the Scheme (Rs in Lacs)	7
Table 2.01	Year-wise/Constituency -wise Physical achievements	8
Table 2.02	Financial details of Sample Roads	11
Table 2.03	Sample roads of AmiraKadal Constituency:	12
Table 2.04	Sample Roads of Sonwar Constituency	13
Table 2.05	Sample Roads of Hazratbal constituency	13
Table 2.06	Sample Roads of Khanyar constituency	14
Table 2.07	Sample Roads of Zadibal Constituency	14
Table 2.08	Sample Roads of Eidgah constituency	14
Table 2.09	Sample Roads of Batmaloo constituency	15
Table 2.10	Sample Roads of HabbaKadal constituency	15
Table 2.11	Expenditure per Km of sample road projects	16
Table 3.00	Constituency-wise Sample Selection of roads macadamized during 2016-17, 2017-18 and 2018-19	17
Table 3.01	The status of the sample roads as observed in the field	18
Table 3.02	Constituency wise Status of Roads	18
Table 3.03	Follow-up of codal formalities like formulation of DPR, AAA	19
Table 3.04	Follow-up of Codal Formalities like floating of NIT, technical clearance etc.	20
Table 3.05	No of sample roads whose riding surface found improved	20
Table 3.06	Impact of Macadamization of Roads	21

Chapter	Description of Chapter	Page No.
Table 3.07	Beneficiary opinion about surface of sample roads	21
Table 3.08	Beneficiary opinion about quality/durability/maintenance of sample roads	22
Table 3.09	Beneficiary opinion about impact of sample roads on common masses	23-24
Table 3.10	Beneficiary opinion about impact of sample roads on business/trade	24
Table 3.11	Beneficiary opinion about air pollution, accidents/traffic jams	25
Table 3.12	Beneficiary opinion drainage system of sample macadamized roads and maintenance	25
Table 3.13	Occupation of Knowledgeable Persons	26
Table 3.14	Opinion of Knowledgeable Persons about impact on common masses	26-27
Table 3.15	Opinion of Knowledgeable Persons about benefits of roads macadamized	27
Table 3.16	Opinion of Knowledgeable Persons	28
Table 3.17	Satisfaction of Knowledgeable Persons	28

Highlights

- The main objective of Macadamization of the roads under “**Cities and Towns Programme**” in district Srinagar is to strengthen the road network and provide smooth riding surface for all type of vehicles.
- Under the programme, **600 roads have been reportedly macadamized against the target of 682 roads** in all the 08 constituencies of district Srinagar during the reference period **2016-17 to 2018-19**.
- An amount of **Rs.15067.81** lacs has been released for macadamization of roads under the programme in District Srinagar during the reference period out of which **Rs.14598.16 lacs** has been reportedly utilized **registering 96.88% utilization percentage**.
- The funds released under the programme in the district during the reference period (2016-17 to 2018-19) **shows a constant decreasing trend**. The funds released under the programme during the year 2016-17 were Rs.7259.90 lacs which have been decreased to Rs.5432.71 lacs in 2017-18 and finally to Rs.2375.20 lacs in the year 2018-19.
- Constituency-wise targets set for macadamization under the scheme in the district reveal that some constituencies have altogether been neglected. No proportion appears to have been followed in taking-up the roads from the constituencies of the district.
- Less or negligible number of roads have been taken-up for macadamization during the reference period from Downtown constituencies like Khanyar, Zadibal, Eidgah and Habbakadal. On the other hand, civil lines constituencies like AmiraKadal, Sonwar and Batamaloo have got lions share from the programme resources.
- The criteria followed by the implementing department of the programme in setting constituency-wise targets and taking-up roads for Macadamization in the district during the reference period, **was sought from Superintending Engineer (R&B) Department, Srinagar for clarification**. In response, the following three reasons were furnished by Superintending Engineer (R&B) Department, Srinagar with regard to the selection of targets for Macadamization of road under the programme in district Srinagar:
 - The Targets for carrying out Macadamization of roads under Cities and Towns is based on actual rectification of damages to the roads which varies from roads of one constituency to another constituency.
 - Secondly, in some rare cases, the roads whose surface has got minimal damages are not taken up for rectification immediately, but when the damages get increased, the Macadamization of such roads become necessary so, the targets fixed earlier gets varied.
 - Thirdly, the directions issued by the Government from time to time have to be implemented in letter and spirit.
- For field study, **5%** roads macadamized subject to maximum of **10** roads from each constituency were taken as sample. Therefore, **30** roads following proportionate

simple random sampling technique were selected as sample from all **08** constituencies of district Srinagar.

- All the 30 sample roads were located and Macadamization of all of them was found done.
- All 30(100%) sample roads were found fully macadamized.
- As regards the condition of sample roads, 18(60%) roads were found in good condition whereas road condition of 10(33%) roads were found average and the road condition in 2(7%) road seems to be poor.
- It was also seen that 21(70%) roads have either small cuts or potholes. The maintenance of roads is a prime issue and the concerned department should take necessary steps to maintain the roads properly and regularly.
- Regarding follow-up of codal formalities, DPR/estimates for all the 30 (Thirty) sample roads for Macadamization have been formulated and Accord of Administrative Approval (AAA) has been accorded to all of them.
- Notice Inviting tenders (NIT) has been floated for all the 30 sample roads and all sample works have been executed as per the NIT in respect of all of them.
- During physical verification the riding surface of all the 30 sample roads was observed improved. Smooth movement of traffic with less congestion/jams and pollution like dust were observed on sample roads.
- During field verification it was observed that side drains were not maintained properly in all the 08 constituencies of district Srinagar and with the result the silt is accumulated in the drains causing the water logging.
- 5 sample beneficiaries from each Macadamized road have been taken for investigation in order to know their views regarding the programme. Furthermore 2 Knowledgeable persons from the locality of each Macadamized Road have also been taken to know their opinion regarding the scheme.
- **91(61%)** sample beneficiaries were satisfied with the riding surface of the roads, whereas 59(39%) were unsatisfied with the riding surface and safety of roads due to cuts and potholes. Furthermore 91(61%) sample beneficiaries were of the opinion that due to Macadamization of sample roads travelling time reduced whereas 59(39%) were of the opinion that due to cuts and potholes travelling time was not reduced.
- 150(100%) sample beneficiaries reported that Macadamization of roads has positive impact on lives of common masses living within the vicinity of the sample roads.
- 100% of the sample beneficiaries have reported that Macadamization of roads have positive impact on trade as it has increased the business activity besides increasing the flow of carrying raw material and finished goods.
- 60 Knowledgeable persons were contacted in order to know their views regarding the Scheme, out of which 49(82%) were shopkeepers,6(10%) were private employees and 5(8%) were from other sectors.

- 100% knowledgeable persons reported that the Macadamization of roads had positive impact on common masses with respect to increase in business activities etc.
- The field study also revealed that out of 60 Knowledgeable persons contacted, 37(62%) were satisfied with the quality and durability of roads. Only 22 (37%) knowledgeable persons were satisfied with the maintenance of Macadamized roads.

Chapter I

Introduction

Roadways are the engines of the economic growth and most widely used mode of transportation. The vital sector of transportation is indeed the backbone of any nation in economic development. It providing access to employment, social, health and education services makes a road network crucial in fighting against poverty. Country has witnessed a tremendous growth and changes in the road sector since independence through various policies and programmes of the government from time to time.

The roads of district Srinagar are of prime importance catering to the modern traffic needs of the city. However, over a period of time, road infrastructure is required to be maintained because of increase in number of motor vehicles, freight and passenger traffic congestion, excess wear and tear of road surface and also unfavorable weather conditions during the winter season warrant proper maintenance and upkeep of roads on yearly basis.

The maintenance and upkeep of roads is carried out every year by PWD(R&B), under the programme titled **“Macadamization of Roads under Cities and Towns Programme”**. The main objective of the programme is to improve the riding surface of the roads. An amount of **Rs.145.98** crores have been reportedly spent by the department during the reference period 2016-17 to 2018-19 under the programme for Macadamization of 600 roads in the city. The year wise funds released and achievements made under the programme are given below:

S. No	Year	Financial Achievements			Physical Achievements	
		Funds released and utilization position under the Scheme (Rs in lacs)			No. of Roads/works	
		Funds released	Funds Utilized	%age of Utilization	Target	Achievements
1	2016-17	7259.90	7259.90	100.00	210	196
2	2017-18	5432.71	5156.36	94.91	285	232
3	2018-19	2375.20	2181.90	91.860	187	172
	Total	15067.81	14598.16	96.88	682	600

Source :Chief Engineer, PWD(R&B)

The State Level Evaluation Committee (SLEC) in its 9th meeting held on 12th April 2019 under the chairmanship of Principal Secretary to Government, PM&MD assigned the Evaluation Study on **“Macadamization of Roads under Cities and Towns Programme”** to the District Statistics and Evaluation Office Srinagar. The evaluation study assigned was proposed to be conducted as per the following plan of action.

Objectives of the Evaluation study

1. To assess the achievements made against the targets set under the programme.
2. To assess how far the riding surface of roads improved in the district and to what extent it helped in optimizing the flow of traffic.
3. To assess how far the roads macadamized led to improve the safety on roads.
4. To assess how far the roads macadamized has resulted in reducing congestion on the roads.
5. To assess how far the roads macadamized have resulted in minimizing the accidents, reducing delay and adverse effects of the incidents.
6. To assess how far the roads macadamized has resulted in addressing the problems of environmental pollution caused by dusty and bumpy roads.

Reference period

The years 2016-17, 2017-18 and 2018-19 were taken up for evaluation study by selecting the required sample given in the methodology of the design.

Sample size and Selection procedure

As per information furnished by implementing department, a total of 600 roads have been macadamized against the target of 682 roads during the reference period 2016-17 to 2018-19 as per the constituency wise break-up given below. Multistage sampling has been followed for determining sample size. At 1st stage of sampling, all the constituencies under the programme have been covered. However, at the 2nd stage 5% of roads macadamized have been taken and were limited to the maximum of 10 roads from any of the 08 (Eight) constituencies for evaluation study following the simple random sampling procedure. The sample roads are selected on sample random sampling basis proportionately from the years 2016-17 to 2018-19. The constituency wise sample of roads taken is depicted below in the following table:

Table No – 1.01										
S. No	Name of the constituency	Year wise works taken up for Macadamization						Total		5%Sample (Maximum of 10 roads)
		2016-17		2017-18		2018-19				
		Target	Ach	Target	Ach.	Target	Ach.	Target	Ach	
1	AmiraKadal	91	85	149	121	61	56	301	262	10
2	Sonawar	51	47	47	38	51	47	149	132	7
3	Hazratbal	27	25	35	29	18	16	80	70	4
4	Khanyar	04	04	05	4	05	5	14	13	1
5	Zadibal	04	04	03	3	06	5	13	12	1
6	Eidgah	03	03	05	4	03	3	11	10	1
7	Batmaloo	29	27	40	32	42	39	111	98	5
8	HabaKadal	01	01	01	01	01	01	03	01	1
		210	196	285	232	187	172	682	600	30

Besides physically verifying the sample roads, 05 beneficiaries and 02 knowledgeable persons in respect of each sample road have been contacted in order to know their views in light of the objectives of the study.

Field operations

The field study has been conducted by the Evaluation Staff of DSEO Srinagar under the overall technical guidance and supervision of Regional Director (E&S) Kashmir and DSEO Srinagar.

Instrument of investigation

The data was collected by the field staff by means of schedules made on the basis of the exhaustive analysis of the detailed data submitted by the concerned Department.

Scrutiny and tabulation of data

The data collected during the field operation has been scrutinized by the District Statistics and Evaluation office under the technical guidance and supervision of Regional Director Kashmir.

Report writing

After the successful completion of field operation, the task of report writing has been done by the concerned staff of the District Statistics and Evaluation Office, Srinagar under the overall supervision of DSEO Srinagar and technical vetting by Regional Director Kashmir.

Analytical tools and techniques

Statistical tools like simple averages have been used in the analysis and synthesis of the collected data. An effort was made to represent the data in such a way so as to make the final report easy to read, analyze and interpret.

Chapter II

Analysis of official Data

The roads in district Srinagar are of prime importance catering to the modern traffic needs of the city. However, over period of the time road infrastructure is required to be maintained because of increase in number of motor vehicles, freight and passenger traffic congestion, excess wear and tear of road surface and unfavorable weather conditions during the winter season warrants proper maintenance of roads on yearly basis.

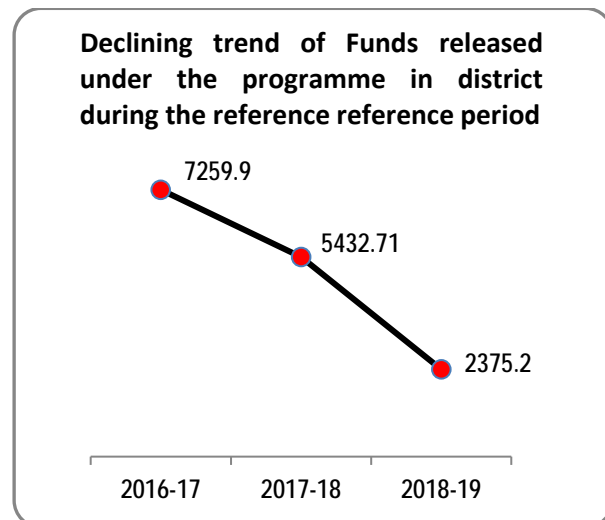
The maintenance of roads is carried out every year by R&B department under the programme titled **“Macadamization of Roads under Cities and Towns Programme”**. The main objective of the programme is to improve the riding surface of the roads. The year-wise allocation and expenditure details under the scheme in the district are given here under in the tabular form.

Table No: -2.00				
S.No	Year	Financial Achievements		
		Funds released and utilization position under the Scheme (Rs in Lacs)		
		Funds Released	Funds Utilized	% age of Utilization
1	2	3	4	5
1	2016-17	7259.90	7259.90	100.00 %
2	2017-18	5432.71	5156.36	95.00 %
3	2018-19	2375.20	2181.90	92.00 %
Total		15067.81	14598.16	96.88%

Source: Chief Engineer, PWD(R&B)

The figures given in the table reveal that fund utilization efficiency of the department has been satisfactory as around **Rs.14598.16 lacs** i.e. **96.88%** out of funds released have been utilized during the reference period. Year-wise fund utilization has been satisfactory as around **100%** have been reported utilized during the year 2016-17, **95%** during 2017-18 and **92%** utilized during the year 2018-19. However funds released under the programme in the district during the reference period from 2016-17 to 2018-19 reveal a decreasing trend which is represented graphical alongside.

The year wise amount of funds released/expenditure incurred in the district under the programme is reflected below.



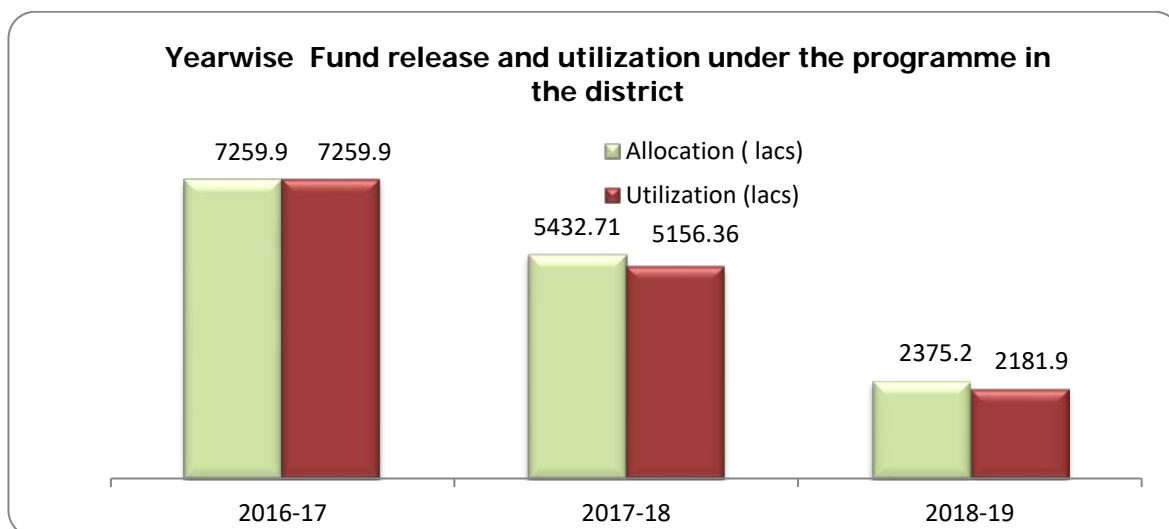


Table No:-2.01

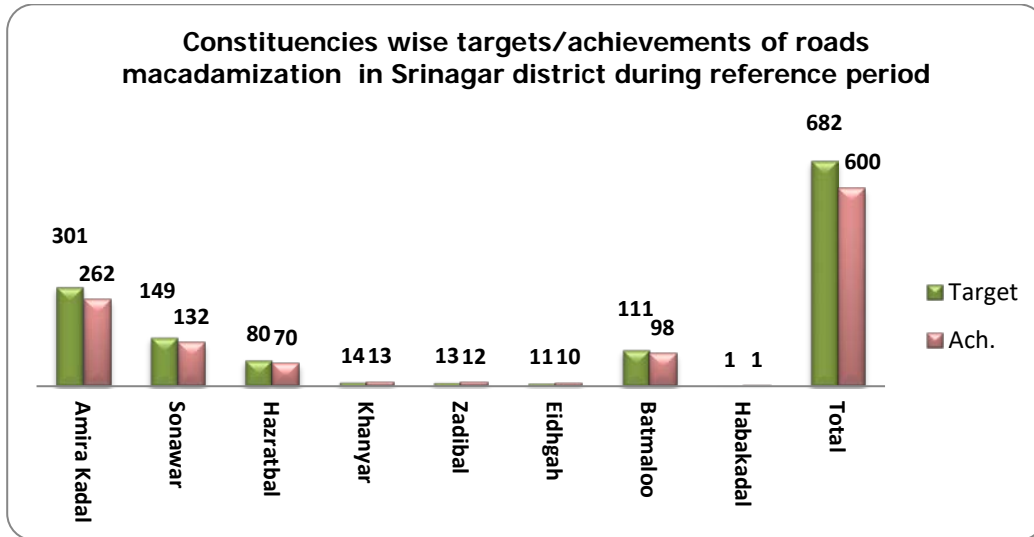
Year-wise/Constituency -wise Physical achievements

S. No	Name of the Constituency	2016-17		2017-18		2018-19		Total	
		No. of Roads /works Macadamized		No. of Roads Macadamized		No. of Roads Macadamized		No. of Roads Macadamized	
		Target	Ach.	Target	Ach.	Target	Ach.	Target	Ach.
1	2	3	4	5	6	7	8	9	10
1	AmiraKadal	91	85	149	121	61	56	301	262
2	Sonawar	51	47	47	38	51	47	149	132
3	Hazratbal	27	25	35	29	18	16	80	70
4	Khanyar	04	04	5	4	5	5	14	13
5	Zadibal	04	04	03	3	6	5	13	12
6	Eidhgah	03	03	05	4	3	3	11	10
7	Batmaloo	29	27	40	32	42	39	111	98
8	Habakadal	01	01	01	01	01	01	01	01
Total		210	196	285	232	187	172	682	600

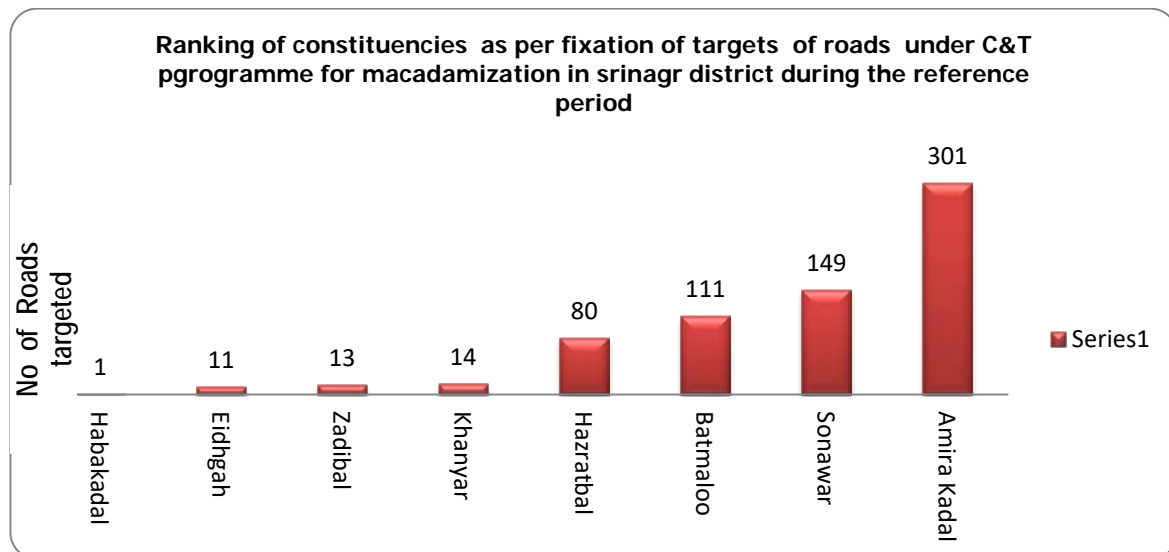
Source :Chief Engineer, PWD(R&B)

The above table shows the constituency-wise physical targets/achievements during the financial years 2016-17 to 2018-19. A target of **682** roads was set for macadamization in the district under programme during the reference period against which **600** road projects have been reported macadamized registering **88%** physical achievement in this behalf. In so far constituency-wise physical achievement of targets is concerned,

AmiraKadal constituency has completed **262** roads against a target of **301** registering **87%** achievement. In respect of Sonawar constituency, **132** roads have been macadamized against a target of **149** roads registering **89%**. This was followed by Hazratbal and Batmaloo constituencies with an achievement of **88%** each. Rest of the constituencies had very small targets.



Analysis of constituency-wise targets set under the programme in the district reveal a strange trend. Some constituencies have been given more coverage under the programme whereas others very less. The graph ranking the constituencies as per targets set under the programme for road macadamization in the district is given below to make phenomena easy to understand.



A minute look at constituency-wise targets set for macdamization reveal that some constituencies have altogether been neglected. No proportion appears to have been followed in selecting/taking roads from all the constituencies of the district.

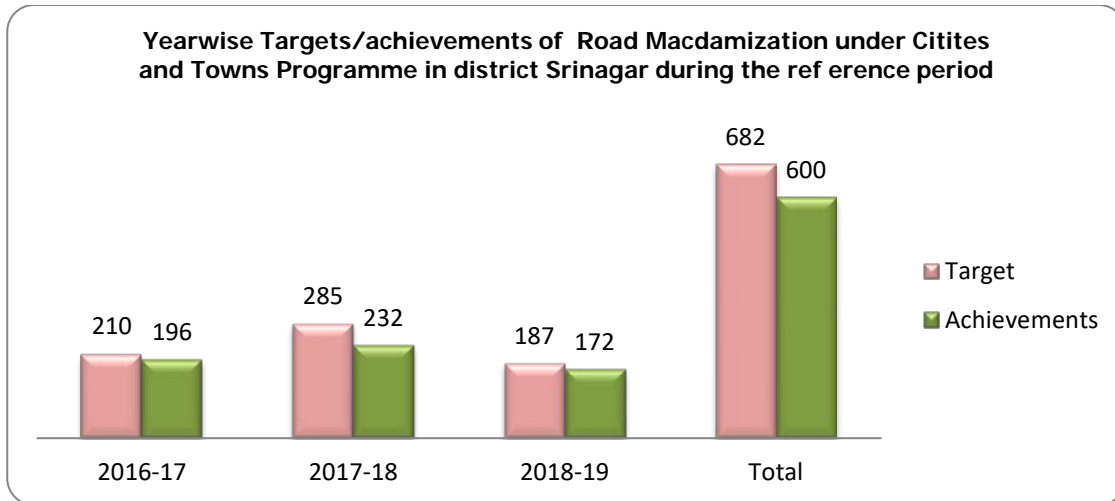
Less or negligible number of roads have been taken-up for macdamization during the reference period from Downtown constituencies like Khanyar, Zadibal, Eidgah and Habbakadal. On the other hand, civil lines constituencies like AmiraKadal, Sonwar and Batamaloo have got lions share from the programme resources.

To know the criteria the implementing department of the programme had followed in setting constituency-wise targets and taking-up roads for macdamization in the district during the reference period, the matter was taken-up with Superintending Engineer (R&B) Department, Srinagar for clarification. In response, the Superintending Engineer (R&B) Department, Srinagar vide letter No:SE/Plg/F-30/11220-24 dated: 06-09-2022 furnished following reasons with regard to the selection of targets for Macdamization of road under the programme in district Srinagar:

- **The Targets for carrying out macadamization of roads under Cities and Towns is based on actual rectification of damages to the roads which varies from roads of one constituency to another constituency.**
- **Secondly, in some rare cases, the roads whose surface have got minimal damages are not taken up for rectification immediately, but when the damages get increased, the macadamization of such roads become necessary so, the targets fixed earlier gets varied.**
- **Thirdly, the directions issued by the Government from time to time have to be implemented in letter and spirit.**

During the financial year 2016-17, 196(93%) roads have been macadamized against the physical targets of 210 roads. Similarly, during the financial years 2017-18, 232(81%) roads were macadamized against the target of 285 roads. In the financial year 2018-19, out of physical target of 187 roads, 172 (92%) roads were macadamized.

In respect of overall physical achievement during the financial years 2016-17 to 2018-19, 600 (88%) roads have been macadamized against the total physical target of 682 roads.



Financial details of Sample Roads

Funds released and expenditure booked in respect of sample road projects are reflected in the table given below: Unit- Rs in lacs

Table-2.02						
S. No	Name of the Constituency	No of Sample macadamized Roads	Road length macadamized (Km)	Funds Released	Funds Utilized	%age Utilization
1.	AmiraKadal	10	17.05	458.13	458.13	100%
2	Sonawar	7	17.35	82.40	82.40	100%
3	Hazratbal	4	9.99	166.26	166.26	100%
4	Khanyar	1	3.00	34.46	34.46	100%
5	Zadibal	1	2.04	49.39	49.39	100%
6	Eidgah	1	2.05	44.00	44.00	100%
7	Batmaloo	5	7.00	240.10	240.10	100%
8	HabaKadal	1	1.00	35.00	35.00	100%
Total		30	59.48	1109.70	1109.70	100%

Source: Chief Engineer, PWD(R&B)

An amount of Rs. 1109.70 lacs were released in respect of the 30 sample road projects which has been reportedly utilized fully by the implementing agency. A linear road length of 59.48 Kms has been reportedly macadamized under 30 sample roads drawn from all the eight constituencies of the district. The individual sample road-wise financial details in respect of 30 sample roads which were taken for the Evaluation study is given in the following tables:

Table No:-2.03					
Sample roads of Amira Kadal Constituency					
S No	Name of the constituency	Reference Year	Name of Road Macadamized	Fund released(Lacs)	Expenditure(Lacs)
1	Amirakadal	2016-17 To 2018-19	Macadamization of approach road to Zero bridge both sides	20.00	20.00
2			Road at Convent Square	120.00	120.00
3			Upgradation of Natipora chowk and Zamzum Hotel main Srinagar Charishrief Road	99.99	99.99
4			MA Road from MA bridge to Badshah bridge Jahangir chowk	8.57	8.57
5			Roads at Wazirbagh ,Tulsibagh, Gugjibagh	15.29	15.29
6			KursooAramwari Road	42.66	42.66
7			Improvement/Up-gradation of road from Hanif motors to MA Bridge including Polo view and Womens College to Regal link.	47.92	47.92
8			Improvement/Upgradation of road from Budshah bridge to Hanief Motors to Hari Singh High Street	36.92	36.92
9			Improvement/Upgradation of road at Hari Singh High Street	32.00	32.00
10			Improvement/Upgradation of road at Amira kadal to Ghantaghar	34.78	34.78
Total				458.13	458.13

Source :Chief Engineer, PWD(R&B)

The above table shows that 10 sample road projects of Amira Kadal Constituency have been macadamized at a cost of Rs. 458.13 lacs. Full amount of Rs. 458.13 lacs has been released in respect of 10 sample road projects and the same has been reportedly utilized in full registering thereby 100% utilization percentage.

Table No:-2.04					
Sample Roads of Sonwar Constituency					
S No	Name of the constituency	Reference years	Name of Road Macadamized	Fund released (Rs. in lacs)	Expenditure incurred (Rs. in lacs)
1	Sonawar	2016-17 To 2018-19	Nishat Shalimar Road	3.28	3.28
2			Cheshmashahi-Parimal road including Shankerachariya road	21.45	21.45
3			Improvement/Upgradation of road at old Gagribal	2.00	2.00
4			Improvement/Upgradation of Exchange road at Ishbar Zeal link.	10.00	10.00
5			Improvement/Upgradation of road from MA Bridge to Sonawar including Ram munshi side.	22.57	22.00
6			Improvement/Upgradation of ghat (2 tubes) at Shalimar.	21.10	21.10
7			Improvement of Buchwara old Gagribal road	2.00	2.00
Total				82.40	82.40

Source: Chief Engineer, PWD(R&B)

Table 2.04 given above shows that an amount of Rs 82.40 lacs has been released in respect of 7 sample road projects of Sonawar constituency during the reference years 2016-17 to 2018-19 under the Scheme which have been reportedly utilized in full i.e. 100%.

Table No:-2.05					
Sample Roads of Hazratbal constituency					
S No	Name of the constituency	Reference years	Name of Road Macadamized	Fund released (Rs. in lacs)	Expenditure (Rs. in lacs)
1	Hazratbal	2016-17 to 2018-19	Buchpora Ellahi-Bagh Hazratbal road	70.00	70.00
2			Improvement of roads from NFR crossing to Zakoora Srinagar	65.47	65.47
3			Up gradation of road surface of Gousia colony at Umer Colony A Lalbazar	21.94	21.94
4			Improvement of road at Chinar avenue Colony Gulabbagh	8.85	8.85
Total				166.26	166.26

Source: Chief Engineer, PWD(R&B)

Table 2.05 given above reveal that it is clear that an amount of Rs 166.26 lacs have been released in favour of four sample roads of Hazratbal Constituency during the

reference years 2016-17 to 2018-19 under the Scheme which too have been reportedly utilized in full.

Table No:-2.06					
Sample Roads of Khanyar constituency					
S No.	Name of the constituency	Reference years	Name of Road Macadamized	Fund released (Lacs)	Expenditure (Lacs)
1	Khanyar	2018-19	Improvement/Upgradation of Nallahmar Road from Khanyar to RajouriKadal	34.46	34.46
Total				34.46	34.46

Source: Chief Engineer, PWD(R&B)

From Table 2.06 given above, it is clear that 100% expenditure has been made in respect of the above mentioned one sample road of Khanyar constituency of district Srinagar. An amount of Rs 34.46 lacs(100%) has been utilized against the available funds of Rs 34.46 lacs during the reference years 2018-19 under the Scheme.

Table No:-2.07					
Sample Roads of Zadibal Constituency					
S No.	Name of the constituency	Reference years	Name of Road Macadamized	Fund released (Lacs)	Expenditure (Lacs)
1	Zadibal	2018-19	Improvement of Road surface of BAM Khan Hazratbal road	49.39	49.39
Total				49.39	49.39

Source: Chief Engineer, PWD(R&B)

The above reveals that an amount of Rs 49.39 lacs has been released in respect of above mentioned sample road of Zadibal Constituency which has been reportedly utilized in full registering thereby 100% utilization percentage.

Table No:-2.08					
Sample Roads of Eidgah constituency					
S No.	Name of the constituency	Reference years	Name of Road Macadamized	Fund released (Lacs)	Expenditure (Lacs)
1	Eidgah	2018-19	Improvement/Upgradation of Safakadal to GassiMohalla road	44.00	44.00
Total				44.00	44.00

Rs. 44.00 lacs have been released in respect of one above mentioned sample road project of Eidgah Constituency. From above table it is clear that 100% expenditure have been made in respect of the above-mentioned one sample roads of Eidgah constituency of district Srinagar.

Table No: -2.09					
Sample Roads of Batamaloo constituency					
S No	Name of the constituency	Reference years	Name of Road Macadamized	Fund released (Lacs)	Expenditure (Lacs)
1	Batmaloo	2016-17 To 2018-19	Firdousabad main road from Tengpora to Batmaloo via Reckchowk	178.56	178.56
2			Roads leading towards PCR & Batmaloo Rec chowk		
3			Batmaloo bridge to Qamarwari including ShamshaanBhoomi	53.04	53.04
4			Upgradation of roads at Dyarwani Batmaloo by way of Macadamization	4.00	4.00
5			Upgradation of roads surface at Batmaloo Srinagar	4.50	4.50
Total				240.10	240.10

The above table shows that an amount of Rs 240.10 lacs(100%) have been released in respect of above mentioned five sample roads of Batamaloo constituency during the reference years 2016-17 to 2018-19 under the Scheme. Funds released against the sample roads have been reportedly utilized in full i.e. 100%.

Table No:-2.10					
Sample Roads of Habba Kadal constituency					
S. No	Name of the constituency	Reference years	Name of Road Macadamized	Fund released (Lacs)	Expenditure (Lacs)
1	Habbakadal	2018-19	Improvement/Upgradation of road from Khanyar Police Station to Eastern foreshore road	35.00	35.00
Total				35.00	35.00

Only one road project has been reported taken-up for macadamization under the programme during the reference period in respect of HabbaKadal constituency. The above reveals that an amount of Rs 35.00lacs has been released in respect of this road of Habba Kadal Constituency which has been reported utilized in full registering thereby 100% utilization percentage.

Analysis regarding expenditure per Kilometer of black topping at district level:

The expenditure per kilometer of road length blacktopped in Srinagar district of sample road projects as per information furnished by CE R&B Kashmir is reflected in the table given below:-

Table No:-2.11				
Expenditure per Kilometer of sample road projects				
District	No of sample road projects	No of Kms blacktopped	Expenditure incurred(Rs in lacs)	Expenditure Per Km(Rs in lacs)
Srinagar	30	59.48	1109.74	18.66

The data given above table reveal that on an average Rs.18.66 lacs had been incurred for macadamization per kilometer of sample road projects.

Chapter III

Field Findings

The roads are enormously important to all countries. Road transport is the perhaps the oldest and most widely adopted mode of transport by the human kind. The vital sector of transportation is indeed the backbone of any nation in its economic growth and development. That is why all the governments place a great deal of emphasis on road infrastructure.

The roads in Srinagar are of the prime importance to support modern traffic needs of the city. The maintenance and upkeep of roads is carried every year by R&B department. The **“Macadamization of Roads under Cities and Towns Programme”** is one of the schemes under which roads in the city and towns are maintained and looked after regularly. During the last three reference years viz 2016-17 to 2018-19, 600 roads were macadamized in district Srinagar. The details of sample drawn from each constituency are given in following table:

Table No:-3.00			
Constituency-wise Sample Selection of roads macadamized during 2016-17, 2017-18 and 2018-19			
S no	Name of the Constituency	No. of Roads Macadamized	5% sample taken for Evaluation (Maximum of 10 Roads from a constituency)
1	AmiraKadal	262	10
2	Sonawar	132	7
3	Hazratbal	70	4
4	Khanyar	13	1
5	Zadibal	12	1
6	Eidhgah	10	1
7	Batmaloo	98	5
8	Habakadal	03	1
	Total	600	30

As per TAC approved sampling,30 roads have been taken for evaluation study out of a total of 600 macadamized roads during the financial years 2016-17 to 2018-19 in Srinagar city.

During the course of physical verification, the status of the sample roads as observed in the field is reflected in the table given below:-

Table No: - 3.01						
S.No.	Name of the constituency	No of sample Roads physically verified	No of sample roads located in the field		No of sample roads in respect of which Macadamization was found completed	
			Located	Not Located	Complete	In-complete
1	AmiraKadal	10	10	0	10	0
2	Sonawar	7	7	0	7	0
3	Hazratbal	4	4	0	4	0
4	Khanyar	1	1	0	1	0
5	Zadibal	1	1	0	1	0
6	Eidhgah	1	1	0	1	0
7	Batmaloo	5	5	0	5	0
8	Habbakadal	1	1	0	1	0
Total		30	30	0	30	0

It is clear from the above table that all the sample roads were in district Srinagar were identified and physically verified. During field verification/evaluation it has been found that macadamization of all the 30 (thirty) sample roads were completed.

Table No:-3.02													
Constituency wise Status of Roads													
S No.	Name of the Constituency	No. of Sample Macadamized Roads verified	Sample Roads Macadamized			Material used			Present condition of Macadamized Roads			Whether any cuts seen in M.Roads	
			Fully	Partially	Not taken up	Good	Average	Poor	Good	Average	Poor	Yes	No
1	Amirakadal	10	10	0	0	8	2	0	8	2	0	3	7
2	Sonawar	7	7	0	0	2	5	0	2	5	0	5	2
3	Hazratbal	4	4	0	0	3	1	0	3	1	0	4	0
4	Khanyar	1	1	0	0	0	1	0	0	1	0	1	0
5	Zadibal	1	1	0	0	0	1	0	0	0	1	1	0
6	Eidhgah	1	1	0	0	1	0	0	1	0	0	1	0
7	Batmaloo	5	5	0	0	3	2	0	3	1	1y	5	0
8	Habakadal	1	1	0	0	1	0	0	1	0	0	1	0
Total		30	30	0	0	18	12	0	18	10	2	21	9

The above table shows that out of 30 sample macadamized roads, all 30(100%) were fully macadamized. As regards the condition of sample roads, 18(60%) roads were found in good condition whereas road condition in 10(33%) roads were found average and the road condition in 2(7%) road seems to be poor. It was also seen that 21(70%) roads have either small cuts or potholes and 9(30%) roads were found without

cuts/patholes. The maintenance of roads is a prime issue and the concerned department should take necessary steps to maintain the roads properly and regularly.

The condition of sample roads observed in the field is depicted graphically below. In Amirakadal constituency out of 10 roads, 80% (8) roads were found in good condition and material used seems to be good. Similarly, in Sonawar constituency out of 7 roads, 2(29%) roads were found in good conditions and 5(71%) roads were found in fair condition. Out of 4 roads in Hazratbal constituency, 3(75%) roads were found in good condition and 1(25%) roads were in normal condition. In Batmaloo constituency, out of 5 macadamized roads, 3(60%) roads were in good shape and 2 (40%) roads were found in average shape. In respect of Eidgah and Habbakadal constituencies, the condition of roads seems to be good whereas in Khanyar and Zadibal constituencies the condition of roads was found average and poor respectively.

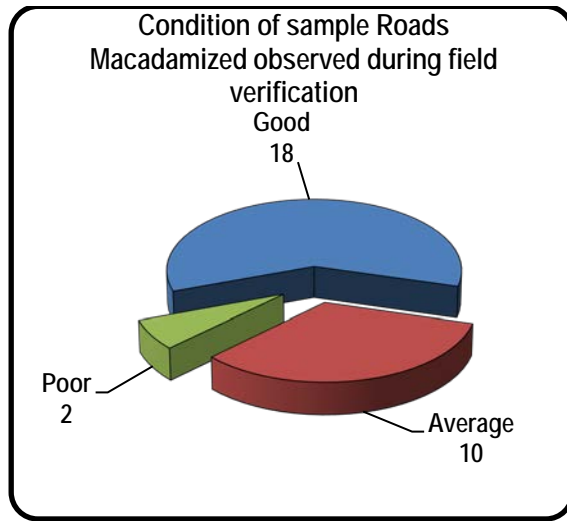


Table No :- 3.03						
Follow-up of codal formalities like formulation of DPR, AAA						
S.No.	Name of the Constituency	No of Sample Road verified	No of sample roads in respect of which			
			DPR/estimate were formulated		AAA accorded	
			Yes	No	Yes	No
1	Amirakadal	10	10	0	10	0
2	Sonawar	07	07	0	07	0
3	Hazratbal	04	04	0	04	0
4	Khanyar	01	01	0	01	0
5	Zadibal	01	01	0	01	0
6	Eidgah	01	01	0	01	0
7	Batmaloo	05	01	0	01	0
8	Habbakadal	01	01	0	01	0
Total		30	30	0	30	0

As per information received from the implementing agency which is reflected in the above table, Detailed project Report/estimates for all the 30 (Thirty) sample roads for Macadamization have been formulated and Administrative Accord of Approval (AAA) has been accorded to all of them.

Table No: - 3.04								
Follow-up of Codal Formalities like floating of NIT, technical clearance etc.								
S No.	Name of the Constituency	No of sample roads verified	No of sample macadamized roads in respect of which					
			NIT were floated		Macadamization done as per NIT Guidelines		Clearance/NOC received from line Deptt. viz PHE, PDD, P&T, SMC, etc.	
			Yes	No	Yes	No	Yes	No
1	Amirakadal	10	10	0	10	0	10	0
2	Sonawar	07	07	0	07	0	07	0
3	Hazratbal	04	04	0	04	0	04	0
4	Khanyar	01	01	0	01	0	01	0
5	Zadibal	01	01	0	01	0	01	0
6	Eidgah	01	01	0	01	0	01	0
7	Batmaloo	05	05	0	05	0	05	0
8	Habbakadal	01	01	0	01	0	01	0
Total		30	30	0	30	0	30	0

As per the information received from the implementing agency, Notice Inviting tenders (NIT) has been floated and work has been executed as per the NIT guidelines in respect of all the 30 (Thirty) sample roads of district Srinagar.

Table No:-3.05									
S No.	Name of the Constituency	No. of Sample Macadamized Roads verified	No of sample roads whose riding surface improved		If riding surface improved, No of sample roads in respect of volume of traffic increased		If increased, type of traffic increased		Total
			Yes	No	Yes	No	Light passenger vehicles & light commercial vehicles only	All types of vehicles	
1	Amirakadal	10	10	0	7	0	4	6	10
2	Sonawar	7	7	0	4	0	4	3	7
3	Hazratbal	4	4	0	1	0	2	2	4
4	Khanyar	1	1	0	1	0	0	1	1
5	Zadibal	1	1	0	1	0	0	1	1
6	Eidgah	1	1	0	5	0	1	0	1
7	Batmaloo	5	5	0	1	0	3	2	5
8	Habakadal	1	1	0	0	0	1	0	1
Total		30	30	0	30	0	15	15	30

Table No:-3.06						
Impact of Macadamization of Roads						
S No.	Name of the Constituency	No. of Sample Macadamized Roads verified	No of sample macadamized roads where air pollution observed reduced		No of sample macadamized roads where traffic congestion/ Jams observed reduced	
			Yes	No	Yes	No
1	Amirakadal	10	10	0	10	0
2	Sonawar	7	7	0	7	0
3	Hazratbal	4	4	0	4	0
4	Khanyar	1	1	0	1	0
5	Zadibal	1	1	0	1	0
6	Eidgah	1	1	0	1	0
7	Batmaloo	5	5	0	5	0
8	Habakadal	1	1	0	1	0
Total		30	30	0	30	0

During the field verification/survey of 30 sample macadamized roads in district Srinagar, it was found that due to macadamization of roads, the air pollution caused by the dust has reduced considerably. Reduction in traffic congestion/traffic jams was also noticed in respect of all the 30(100%) sample macadamized roads during the physical verification.

Beneficiary Feedback

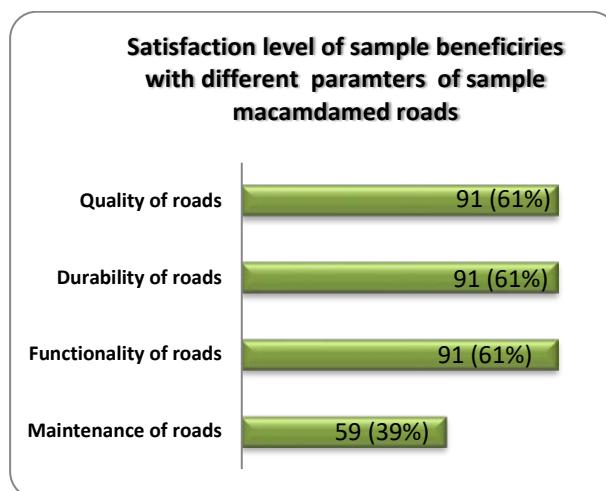
As per approved sampling design of the study, five local beneficiaries comprising of locals living with the vicinity of the sample roads and traders/shopkeepers operating on and around the sample macadamized roads were contacted to get their feedback about the macadamization of sample roads. The feedback received from them is reflected in the following tables:

Table No: -3.07						
Beneficiary opinion about surface of sample roads						
S No	Name of the Constituency	No. of Sample beneficiaries contacted	No. of beneficiaries satisfied with the riding surface and safety of roads		No. of beneficiaries reported travelling time was reduced due to Macadamization	
			Yes	No	Yes	No
1	Amirakadal	50	34	16	34	16
2	Sonawar	35	15	20	15	20
3	Hazratbal	20	10	10	11	10
4	Khanyar	5	4	1	4	1
5	Zadibal	5	5	0	5	0
6	Eidgah	5	5	0	5	0
7	Batmaloo	25	13	12	13	12
8	Habakadal	5	5	0	5	0
Total		150	91	59	91	59

During the field verification/survey of 30 sample macadamized road in district Srinagar, a total of 150 sample beneficiaries were contacted, out of which 91(61%) were satisfied with the riding surface of the roads, whereas 59(39%) were unsatisfied with the riding surface and safety of roads. Furthermore 91(61%) sample beneficiaries were of the opinion that due to macadamization of sample roads travelling time reduced whereas 59(39%) were of the opinion that due to cuts and potholes travelling was not reduced. In AmiraKadal constituency, out of 50 sample beneficiaries contacted, 34(68%) were satisfied with the riding surface and safety of roads whereas 16(32%) were unsatisfied. Regarding the reduction in travelling time, 34(68%) sample beneficiaries were of the opinion that travelling time reduced due to macadamization of roads whereas 16(32%) were of the opinion that the travelling time was not reduced due to the present condition of roads. Similarly, in Sonawar constituency, out of 35 sample beneficiaries contacted, only 15(43%) were satisfied with the riding and safety of roads and regarding the reduction in travelling time, only 15(42%) sample beneficiaries reported that travelling time was saved. In Hazratbal constituency, out of 20 sample beneficiaries contacted, 10(50%) were satisfied with the riding surface of the road and safety of roads and in respect of reduction in travelling time 11(55%) sample beneficiaries reported that travelling time was reduced. In Batmaloo constituency, out of 25 sample beneficiaries contacted, 13(52%) were satisfied with the riding surface whereas 12(48%) were dissatisfied and regarding the reduction in travelling time 13(52%) sample beneficiaries reported travelling time was saved. Similarly in Zadibal and Eidgah 100% beneficiaries were satisfied with the riding surface of the roads and were of the opinion that travelling time was saved.

Table No: -3.08										
Beneficiary opinion about quality/durability/maintenance of sample roads										
S N o .	Name of the Constitu ency	No. of Sample benefic iaries contact ed	No. of beneficiaries satisfied with							
			Quality of roads		Durability of roads		Functionali ty of roads		Maintenance of roads	
			Satisfied	Unsatisfied	Satisfied	Unsatisfied	Satisfied	Unsatisfied	Satisfied	Unsatisfied
1	Amirakadal	50	34	16	34	16	34	16	21	29
2	Sonawar	35	15	20	15	20	15	20	15	20
3	Hazratbal	20	10	10	10	10	10	10	5	15
4	Khanyar	5	4	1	4	1	4	1	3	2
5	Zadibal	5	5	0	5	0	5	0	3	2
6	Eidgah	5	5	0	5	0	5	0	4	1
7	Batmaloo	25	13	12	13	12	13	12	5	20
8	Habakadal	5	5	0	5	0	5	0	3	2
Total		150	91	59	91	59	91	59	59	91

The above table reveals that out of 150 sample beneficiaries contacted in district Srinagar, 91 (61%) sample beneficiaries were satisfied with the quality, durability and functionality of the roads. Furthermore 59 (39%) sample beneficiaries were satisfied with the maintenance of the road and 91 (61%) were of the opinion that roads are not properly maintained resulting in the cuts and patholes.



In AmiraKadal constituency, out of 50 sample beneficiaries contacted, 34 (68%) were satisfied with the quality, durability and functionality of the roads whereas 16 (32%) were unsatisfied. In respect of maintenance of the roads, only 21 (42%) sample beneficiaries were satisfied whereas 29(58%) were of the opinion that the roads are not properly maintained. Similarly, in Sonawar constituency, out of 35 sample beneficiaries contacted, only 15 (43%) were satisfied with the quality, durability and functionality of the roads and 20 (57%) were dissatisfied and regarding the maintenance of roads, only 15 (42%) were satisfied. In Hazratbal constituency, out of 20 sample beneficiaries contacted, 10(50%) were satisfied with the quality, durability and functionality of the roads and in respect of maintenance of the roads only 5 (25%) sample beneficiaries were satisfied while as 15 (75%) were of the opinion that roads are maintained poorly. In Batmaloo constituency, out of 25 sample beneficiaries contacted, 13 (52%) were satisfied with the quality, durability and functionality of the roads whereas 12 (48%) were dissatisfied and regarding the maintenance of the roads only 5 (20%) were satisfied. Similarly, in Zadibal and Eidgah 100% beneficiaries were satisfied with the quality, durability and functionality of the roads, but mostly were unsatisfied with the maintenance of the road.

Table No: -3.09						
Beneficiary opinion about impact of sample roads on common masses						
S.No	Name of the Constituency	No. of Sample beneficiaries contacted	No of sample beneficiaries reporting Macadamization of Roads have any impact on common masses		If yes, type of impact	
			Yes	No	Positive	Negative
1	Amirakadal	50	50	0	50	0
2	Sonawar	35	35	0	35	0
3	Hazratbal	20	20	0	20	0
4	Khanyar	5	5	0	5	0
5	Zadibal	5	5	0	5	0

6	Eidgah	5	5	0	5	0
7	Batmaloo	25	25	0	25	0
8	Habakadal	5	5	0	5	0
Total		150	150	0	150	0

The above table shows that macadamization of roads have positive impact on common masses in district Srinagar. Out of 150 sample beneficiaries contacted, 100% of them have reported that macadamization of roads have positive impact on common masses.

In all the 08 constituencies in district Srinagar, 100% sample beneficiaries reported that macadamization of roads has positive impact on common masses.

Table No: 3.10						
Beneficiary opinion about impact of sample roads on business/trade						
S. No	Name of the Constituency	No. of Sample beneficiaries contacted	No of sample beneficiaries reporting Macdamization of Roads in their localities have any impact on commercial business/General trade		If yes, type of impact	
			Yes	No	Increased Business activity	Increased flow of carrying of raw material and finished goods
1	Amirakadal	50	50	0	50	50
2	Sonawar	35	35	0	35	35
3	Hazratbal	20	20	0	20	20
4	Khanyar	5	5	0	5	5
5	Zadibal	5	5	0	5	5
6	Eidgah	5	5	0	5	5
7	Batmaloo	25	25	0	25	25
8	Habakadal	5	5	0	5	5
Total		150	150	0	150	150

The data in above table elucidates that macadamization of roads in district Srinagar have created substantial impact on commercial businesses. Out of 150 sample beneficiaries contacted in 08 constituencies, 100% of them have reported that macadamization of roads have increased the business activity besides increased flow of carrying raw material and finished goods.

Table No: -3.11								
Beneficiary opinion about air pollution, accidents/traffic jams								
S. No	Name of the Constituency	No. of Sample beneficiaries contacted	No of sample beneficiaries reporting					
			Macadamization of roads have reduced air pollution		Macadamization of roads have reduced accidents		Macadamization of roads have reduced traffic congestion	
			Yes	No	Yes	No	yes	No
1	Amirakadal	50	50	0	50	0	50	0
2	Sonawar	35	35	0	35	0	35	0
3	Hazratbal	20	20	0	20	0	20	0
4	Khanyar	5	5	0	5	0	5	0
5	Zadibal	5	5	0	5	0	5	0
6	Eidgah	5	5	0	5	0	5	0
7	Batmaloo	20	20	0	20	0	20	0
8	Habakadal	5	5	0	5	0	5	0
Total		150	150	0	150	0	150	0

It is clear from the above table that, out of 150 sample beneficiaries contacted in 08 constituencies of district Srinagar, 150(100%) have reported that macadamization of roads have reduced the air pollution caused by the dust. Furthermore 100% sample beneficiaries have reported that there was considerable reduction in the traffic congestion and accidents due the bad condition of roads.

Table No: -3.12								
Beneficiary opinion drainage system of sample macadamized roads and maintenance								
S. No.	Name of the Constituency	No. of Sample beneficiaries contacted	No of sample beneficiaries reporting					
			Surface Drains to macadamized roads provided		Water gets accumulated on the macadamized roads		Satisfied with the monitoring of roads by the concerned agencies	
			Yes	No	Yes	No	Yes	No
1	Amirakadal	50	10	40	35	15	21	29
2	Sonawar	35	25	10	10	25	5	30
3	Hazratbal	20	10	10	15	05	5	15
4	Khanyar	5	0	5	5	0	0	5
5	Zadibal	5	0	5	5	0	0	5
6	Eidgah	5	0	5	5	0	1	4
7	Batmaloo	25	5	20	20	5	5	20
8	Habakadal	5	5	0	5	0	3	2
Total		150	55	95	100	50	40	110

The data in above table elucidates that out of 150 sample beneficiaries contacted in 08 constituencies of district Srinagar, 95(63%) reported that no side/surface drains were provided to avoid water accumulation on the roads. Due to non-availability of side drains, 100(67%) of sample beneficiaries reported that there is water accumulation on

the roads. Furthermore 110 (73%) were of the opinion that monitoring of the roads does not exist at all.

In Amirakadal constituency, out of 50 sample beneficiaries contacted, 35(70%) reported that there is water accumulation on the roads whereas 40(80%) were of the opinion that there are no side drains to avoid the water accumulation. Besides 29(58%) sample beneficiaries reported that the monitoring by the concerned agencies is poor. Similarly, in Sonawar and Batmaloo constituencies 10(29%) and 20(80%) sample beneficiaries reported that there is water logging on the roads. In Khanyar, Zadibal and Eidgah constituencies 100% sample beneficiaries reported that there is water logging on the roads.

Knowledgeable Persons Feedback about sample macadamized roads

As per approved sampling design of the study, two knowledgeable persons per sample macadamized road were contacted to get their feedback about the Macadamization of sample roads. The feedback received from them is reflected in the following tables:

Table No: -3.13							
Occupation of Knowledgeable Persons							
S No	Name of the Constituency	No. of Knowledgeable Persons contacted	Occupational Status of the Knowledgeable Persons				
			Govt. Employee	Pvt. Employee	labour	Shopkeeper	Any other
1	Amirakadal	20	0	5	0	15	0
2	Sonawar	14	0	1	0	12	1
3	Hazratbal	8	0	0	0	8	0
4	Khanyar	2	0	0	0	2	0
5	Zadibal	2	0	0	0	1	1
6	Eidgah	2	0	0	0	1	1
7	Batmaloo	10	0	0	0	8	2
8	Habakadal	2	0	0	0	2	0
Total		60	0	6	0	49	5

Majority of the knowledgeable persons enquired i.e. 49(82%) were shopkeepers followed by 6 (10%) as private Employees and 5(8%) as others.

Table No: -3.14						
Opinion of Knowledgeable Persons about impact on common masses						
S. No	Name of the Constituency	No. of Knowledgeable Persons contacted	Whether the Macadamization of Roads have any impact on common masses		If yes, type of impact	
			Yes	No	Positive	Negative
1	Amirakadal	20	20	0	20	0
2	Sonawar	14	14	0	14	0
3	Hazratbal	8	8	0	8	0
4	Khanyar	2	2	0	2	0
5	Zadibal	2	2	0	2	0
6	Eidgah	2	2	0	2	0

7	Batmaloo	10	10	0	10	0
8	Habakadal	2	2	0	2	0
Total		60	60	0	60	0

The above table depicts that all 60 Knowledgeable persons i.e 100% contacted on representative basis from all 08 constituencies of district Srinagar reported that macadamization of roads under C&T programme have positive impact on common masses in district Srinagar.

Table No: -3.15							
Opinion of Knowledgeable Persons about benefits of roads macadamized							
S. No	Name of the Constituency	No. of Knowledgeable Persons contacted	No of KPs reporting Macadamization of Roads have been beneficial to the local people		If Yes, type of benefits		
			Yes	No	Reduced Travelling time	Increased the road safety	Reduced the accidents
1	Amirakadal	20	20	0	20	20	20
2	Sonawar	14	14	0	14	14	14
3	Hazratbal	8	8	0	8	8	8
4	Khanyar	2	2	0	2	2	2
5	Zadibal	2	2	0	2	2	2
6	Eidgah	2	2	0	2	2	2
7	Batmaloo	10	10	0	10	10	10
8	Habakadal	2	2	0	2	2	2
Total		60	60	0	60	60	60

The figures in the above table reveal that all 60(100%) of the knowledgeable Persons contacted reported the C&T programme is beneficial to the local people. The benefits of road macadamization have been specified as of reduction in travelling time, increase in road safety and decline in road accidents.

Table No: -3.16						
Opinion of Knowledgeable Persons						
S. No.	Name of the Constituency	No. of Knowledgeable Persons contacted	No of KPS reporting Macadamization of Roads in localities have any impact on commercial business/General trade		If yes, type of benefits	
			Yes	No	Increased Business activity	Increased flow of carrying of raw material & finished goods
1	Amirakadal	20	20	0	20	20
2	Sonawar	14	14	0	14	14
3	Hazratbal	8	8	0	8	8
4	Khanyar	2	2	0	2	2
5	Zadibal	2	2	0	2	2
6	Eidgah	2	2	0	2	2
7	Batmaloo	10	10	0	10	10
8	Habakadal	2	2	0	2	2
Total		60	60	0	60	60

The figures in the above table reveal that macadamization of roads in district Srinagar under C&T programme had substantial effect on the trade in the locality. Out of 60 knowledgeable Persons contacted in all 08 constituencies, all of them (100%) have reported that the business increased as well as flow of carrying raw material and finished goods also increased.

Table No: -3.17								
Satisfaction of Knowledgeable Persons								
S. No	Name of the Constituency	No. of Knowledgeable Persons contacted	No. of Knowledgeable persons satisfied with					
			Quality of roads		Durability of road		Maintenance of roads	
			Satisfied	Unsatisfied	Satisfied	Unsatisfied	Satisfied	Unsatisfied
1	Amirakadal	20	14	6	14	6	8	12
2	Sonawar	14	6	8	6	8	6	8
3	Hazratbal	8	4	4	4	0	2	6
4	Khanyar	2	2	0	2	0	1	1
5	Zadibal	2	2	0	2	0	1	1
6	Eidgah	2	2	0	2	0	1	1
7	Batmaloo	10	5	5	5	5	2	8
8	Habakadal	2	2	0	2	0	1	1
Total		60	37	23	37	23	22	38

Regarding quality of roads macadamized, 37(62%) of Knowledgeable persons have reported that they are satisfied with the quality and durability of roads in their locality whereas only 22(37%) were satisfied with the maintenance of roads in district Srinagar.

Chapter IV

Summary of Main Findings and suggestions

- The maintenance and upkeep of roads is being carried out every year by PWD(R&B) in district Srinagar under the programme titled “Macadamization of Roads under Cities and Towns Programme”.
- The main aim of the programme is to improve the riding surface of the roads and improve road network.
- The State Level Evaluation Committee in its 9th meeting held on 12-4-2019 decided to get the programme evaluated and assigned the job to the District Statistics and Evaluation office Srinagar.
- As per information furnished by the implementing department of the programme, an amount of **Rs.15067.81 lacs** has been released for macadamization of roads under the programme in district Srinagar during the reference period out of which **Rs.14598.16 lacs** have been reported utilized registering 96.88% fund utilization percentage.
- Against the target of macadamizing **682** roads, **600** roads have been reported macadamized in all the **08** constituencies of district Srinagar during the reference period 2016-17 to 2018-19 registering **88%** physical achievement.
- Year-wise funds released under the programme in the district during the three years of reference period from 2016-17 to 2018-19 shows a constant decreasing trend. The funds released under the programme during the year 2016-17 were Rs. 7259.90 which have been decreased to Rs.5432.71 lacs in 2017-18 and finally to Rs.2375.20 lacs in the year 2018-19.
- Analysis of Constituency-wise targets set for macdamization under the scheme in the district reveal that some constituencies have altogether been neglected. No proportion appears to have been followed in taking-up the roads from the constituencies of the district.
- Less or negligible number of roads have been taken-up for macdamization from Downtown constituencies like Khanyar, Zadibal, Eidgah and Habbakadal. Whereas, civil lines constituencies like AmiraKadal, Sonwar and Batamaloo have got lions share from the programme resources.
- Regarding criteria followed by the implementing department in setting constituency-wise targets and taking-up roads for macadamization in the district during the reference period, the matter was taken-up with Superintending Engineer (R&B) Department, Srinagar for clarification. In response, the Superintending Engineer (R&B) Department, Srinagar furnished following reasons with regard to the selection of targets for Macadamization of road under the programme in district Srinagar:-

- a) The Targets for carrying out macadamization of roads under Cities and Towns is based on actual rectification of damages to the roads which varies from roads of one constituency to another constituency.
 - b) Secondly, in some rare cases, the roads whose surface has got minimal damages are not taken up for rectification immediately, but when the damages get increased, the macadamization of such roads become necessary so, the targets fixed earlier gets varied.
 - c) Thirdly, the directions issued by the Government from time to time have to be implemented in letter and spirit.
- For field verification, 5% roads macadamized subject to maximum of 10 roads from each constituency were taken as sample as per design approved by TAC. Therefore, 30 roads following proportionate simple random sampling technique were selected as sample from all 08 constituencies of district Srinagar.
 - During field verification, all the 30 sample roads were located and macadamization of all of them was found done. All 30(100%) sample roads were found fully macadamized.
 - As regards the condition of sample roads, 18(60%) roads were found in good condition whereas road condition in 10(33%) roads were found average and the road condition in 2(7%) road seems to be poor.
 - 21(70%) roads were observed to have either small cuts or potholes during field verification. The maintenance of roads is a prime issue and the concerned department should take necessary steps to maintain the roads properly and regularly.
 - As regards follow-up of codal formalities, DPR/estimates for all the 30 (Thirty) sample roads for macadamization have been formulated and Accord of Administrative Approval (AAA) has been accorded to all of them.
 - NIT has been floated for all the 30 sample roads and all sample works have been executed as per the NIT in respect of all them.
 - During physical verification the riding surface of all the 30 sample roads was observed improved. Smooth movement of traffic with less congestion/jams and pollution like dust were observed on sample roads.
 - As per design approved by TAC, 5 sample beneficiaries from each Macadamized road have been taken for investigation in order to know their views regarding the programme. Furthermore 2 Knowledgeable persons from the locality of each Macadamized Road have also been taken to know their opinion regarding the scheme.
 - 91(61%) sample beneficiaries were satisfied with the riding surface of the roads, whereas 59 (39%) were unsatisfied with the riding surface and safety of roads.

Furthermore 91(61%) sample beneficiaries were of the opinion that due to macadamization of sample roads travelling time reduced whereas 59(39%) were of the opinion that due to cuts and potholes travelling was not reduced.

- 150(100%) sample beneficiaries reported that macadamization of roads has positive impact on common masses living within the vicinity of the sample roads.
- 100% of the sample beneficiaries have reported that macadamization of roads have positive impact on trade as it has increased the business activity besides increasing the flow of carrying raw material and finished goods.
- 60 Knowledgeable persons were contacted in order to know their views regarding the Scheme, out of which 49(82%) were shopkeepers,6(10%) were private employees and 5(8%) were from other sectors.
- 100% knowledgeable persons reported that the macadamization of roads had positive impact on common masses with respect to increase in business activities etc.
- The field study also revealed that out of 60 Knowledgeable persons contacted, 37(62%) were satisfied with the quality and durability of roads.
- Only 22 (37%) knowledgeable persons were satisfied with the maintenance of Macadamized roads.

Recommendations / Suggestions

The Evaluation study of the scheme revealed that C&T programme needs to be more effective and efficient. Recommendations / Suggestions in this direction are set down here under: -

- While devising macadamization plan for the year, proper representation needs to be given to all the constituencies of the district as per the requirement.
- Overall, the infrastructures created under C&T have increased the safety of the common masses, improved riding surface, and reduced the travelling time, traffic congestions and traffic accidents. However, regular maintenance and proper utilization of these assets would go a long way in enhancing the productive life of these assets and would ensure continuation of the outflow of the intended benefits much longer.
- Separate Maintenance mechanism /Maintenance cell should be put in place in order to monitor the roads after the Macadamization.
- Before Macadamization of roads other infra-structure developing agencies of government viz PHE, PDD, SMC should be contacted in order to know their plans so that digging and ditching of Macadamized roads could be avoided in future.
- Surface drains alongside of the roads be constructed so as to avoid accumulation of water on roads macadamized.
- Vehicular density should be one of the key parameter while allocating funds for upkeep and maintenance of the road.
- Proper sloping of roads during the macadamization be ensured so that water logging is minimized which led to creation of pot holes created in the roads.
- Most of the dividers on Srinagar/ Jammu city roads are not having the reflectors to alert the drivers in night. Installation of reflectors must be made part of the project.
- Most of the one way roads in Srinagar city has no sign boards. Installation of Sign boards for such roads be considered.

Appendix-1

Response of the Implementing Department

As per terms of reference of the State Level Evaluation Committee (SLEC) the Draft Evaluation Report on Macadamization of Roads under Cities and Towns Programme Srinagar, was forwarded to the Chief Engineer, PWD (R&B) Kashmir for departmental response on the findings of the study.

The Chief Engineer, PWD (R&B) Kashmir vide letter No:CE/R&B/Plg/K/28/22 dated:01/04/2023 has furnished following clarification on the findings of the report

S. No	Finding	Departmental Response
1.	The funds released under the programme in the district during the reference period (2016-17 to 2018-19) shows a constant decreasing trend. The funds released under the programme during the year 2016-17 were Rs. 7259.90 lacs which have been decreased to Rs.5432.71 lacs in 2017-18 and finally to Rs.2375.20 lacs in the year 2018-19.	The allocation varies from year to year due to the fact that roads were severely damaged during the September 2014 flood and were restored/macadamized during the year 2015-16 & 2016-17, having caused the government to increase allocation.
2.	Constituency-wise targets set for macadamization under the scheme in the district reveal that some constituencies have altogether been neglected. No proportion appears to have been followed in taking-up the roads from the constituencies of the district.	Targets for macdamization are set at the constituency level based on the actual road restoration requirements. the construct is liable for rectification for the next three years after the road has been macadamized according to Defect liability Period (DLP) clause. Technically macdamization is not road construction rather it is a resurfacing process on an existing road networks pavement. However, any constituency receiving a lower allocation for macdamization may be indicative of well-maintained roads as well as fewer drainage issues, which are primarily responsible for road surface damage.
3.	It was suggested in the report that before Macadamization of roads, other infrastructure developing agencies of government viz PHE, PDD, SMC should be contacted in order to know their plans so that digging and ditching of Macadamized roads could be avoided in future.	The recommendations given in the study are for the benefit of the department and general public. The concerned department is notified prior to macadamization of roads to ensure that no damage to the macadamized road occurs.

Schedules of the study

**Schedule- III
(Evaluators Schedule)**

1. Name of the constituency -----
2. Name of the Road -----
3. Year of Macadamization -----
4. Whether DPR for the Road project formulated(yes /No)-----
5. Estimated cost of the Road Macadamization (Rs in lacs)-----
6. Expenditure booked cumulative (Rs in lacs)-----
7. Linear Length of the Macadamized Road(Kms) as per DPR/Tender-----
8. Whether length of the road macadamized as per DPR/Tender(Yes/ No)-----
9. Average width of the Road macadam(Fts) as per DPR/Tender-----
10. Whether width of the road macadamized as per DPR/Tender(Yes/ No)-----
11. Whether AAA accorded to the Estimates-----
12. Main components of the DPR-----
13. Date of start of the work on Road macadamization-----
14. Schedule date of completion of Road macadamization-----
15. Actual date of completion of the road macadamization_____
16. Reasons for time over run(if any)-----
17. Whether any deviation from DPR-----
18. If yes whether approval sought and received for deviation-----
19. Whether Road macadamization completed within the approved cost-----
20. If no reason for cost overrun -----
21. Present physical Status of the Road macadamized:
 - a) Completed fully
 - b) Partially completed
 - c) Macadamization not taken up at all
22. Material used in the macadamization of Road:
 - a) Good
 - b) Average
 - c) Poor
23. Present condition of the macadamized Road:
 - a) Good
 - b) Average
 - c) Poor

24. Whether road macadam has any cut
 Yes No
25. If yes, no of cuts observed _____
26. Population benefited -----
27. Due to road macadamization whether volume of traffic increase in the area.
 Yes No
28. If, yes then the type of traffic increased:-
 (I) Light passenger vehicle
 (II) Light commercial vehicles
 (III) Heavy commercial vehicles
 (IV) All types of vehicles.
29. Quality of the construction. _____
30. Did Macadamization of Roads have any impact on the living of common masses;
 a. Yes (b) No
31. If yes, what type of impact:
 a). Positive
 b) Negative
32. Did Macadamization of Roads have any impact on the Commercial life/business;
 a. Yes (b) No
33. If yes, what type of impact:
 a). Positive
 b) Negative
34. Whether Macadamization of roads helped in reducing difficulties faced by the people
 (a) Yes (b) No
35. Whether Macadamization of roads was done by using modern techniques
 (a) Yes (b) No
36. Whether Macadamization of road helped in reducing air pollution;
 (a) Yes (b) No
37. Whether Macadamization of road helped in reducing traffic congestion;
 (a) Yes (b) No
38. Whether Macadamization of road helped in reducing accidents;
 (a) Yes (b) No
39. Are you satisfied with overall monitoring by the concerned Department
 (a) Yes (b) No
40. Whether water gets accumulated on the road
 (a)Yes (b) No
41. Whether any patholes/cuts have been seen on the road
 (a)Yes (b) No
42. Whether road has been maintained during the last three years
 (a)Yes (b) No
43. Are people satisfied with the Macadamization of Road

a) Yes

(b) No

44. If no, any problem report_____

45. Observations of the Evaluation Team_____

Signature of Investigator
Name_____

Designation_____

Signature of Supervisor
Name _____

Designation_____

Schedule - IV
(Beneficiary Schedule)

1. Name of the Road /location of the road -----

2. Name of the Respondent-----
3. Residence of the respondent -----
4. Name of the city/town-----
5. Whether Macadamization of road in the locality has any impact on the lives of common masses:
a) Yes
b) No
6. Whether Macadamization of road in the locality has any impact on the commercial/business in the Area:
a) Yes b)No
7. Whether the Macadamization of roads have reduced travelling time
a) Yes b) No
8. Whether the Macadamization of road has increased road safety and improved its riding surface.
a) Yes b) No
9. Whether the Macadamization of road has reduced accidents:
a) Yes b) No
10. Whether the road mechanized being maintained properly:
a) Yes b) No
11. Whether the defects of the macadamized road have been cleared under the funds kept for the purpose under DLP. Yes b) No
12. Are you satisfied with the road macadamized:
a) Yes
b) No
13. If no, what are the reasons_____
14. What are your suggestions, if any regarding the scheme to improve the functioning of the scheme_____

Signature of Supervisor
Name _____
Designation _____

Signature of Investigator_____
Name _____
Designation _____

Schedule- V
(Knowledgeable person Schedule)

1. Name of the Knowledgeable Person -----


2. Name of the Parent-----
3. Residence -----
4. Occupation_____
5. Whether Macadamization of road in the locality has effect on the lives of common masses:
c) Yes
d) No
6. Whether Macadamization of road in the locality has effect on the commercial/business in the area
a) Yes b)No
7. Whether the Macadamization of roads have reduced travelling time
a) Yes b) No
8. Whether the Macadamization of road has increased road safety
a) Yes b) No
9. Whether the Macadamization of road has reduced accidents:
a) Yes b) No
10. Whether the road Macadamized being maintained properly:
a) Yes b) No
11. Are you satisfied with the road macadamization:
a) Yes
b) No
12. If no, what are the reasons_____
13. What are your suggestions, if any regarding the scheme to improve the functioning of the scheme_____

Signature of Supervisor
Name _____
Designation _____

Signature of Investigator
Name _____
Designation _____



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