

One Day Work Shop for PIUs on DRRP & PMGSY Issues

PUBLIC WORKS DEPARTMENT – BUILDINGS & ROADS (PWD-B&R),

GOVERNMENT OF PUNJAB

14th May, 2018

Presentation Agenda – 14th May, 2018

DRRP & Related Issues

PMGSY III – Draft Policy & State Comments

DRRP Formats (revised)

DRRP Maps

GIS

OMMAS

Maintenance Issues & New Technology Initiatives

Achievements in the State under PMGSY-I

Year	No. of Roads Completed	Length Completed (Kms.)	Expenditure (lacs)
Phase I	86	166.24	2269.62
Phase II	229	449.43	6505.13
Phase III	103	207.29	3157.96
Phase IV	58	418.51	7652.90
Phase V	17	272.21	7979.00
Phase VI	102	1252.95	43361.34
Phase VII	63	763.90	35003.23
Phase VIII	70	918.23	36102.93
Phase IX	36	499.37	21927.30
Phase X	61	715.92	31555.82
Phase XI (Batch-I)	124	637.64	29396.94
Phase XI (Batch-II)	46	452.94	22676.68
Phase XII	48	173.46	7080.81
Total	1043	6928.09	254669.66

Achievements under PMGSY-II

No. of roads	Total Length (kms.)	Sanctioned Cost (lac)	No. of roads completed	Length completed (Kms.)	Expenditure (lacs)
123 + 7 Bridges	1342.82	86537.02	47	1053.20	48920.89

District Rural Road Plans (DRRP)

Category of Roads	Road lengths as per available Data in Kms	Road lengths as per OMMAS entry in Kms
National Highway (NH)	3206	2610.73
State Highway (SH)	1103	1428.32
Major Distt. Roads (MDR)	1848	2178.16
Other Distt. Roads (ODR)	5156	65813.644
Village Roads/Link Roads	61436	
	66592	
Total	**72749**	**72030.854**

District Rural Road Plans (DRRP)

DRRP & Core Network (Year 2001-03)	• PMGSY-I Projects (Phase-I – Phase-XII)
DRRP (Year 2014)	• PMGSY-II Projects (only 1 Phase/Batch)
DRRP (Year 2018)	• PMGSY-III (likely to be 3-4 Phases/Batches)

District Rural Road Plans (DRRP)-2018 – 1/2

Necessity of DRRP (updation/revision)

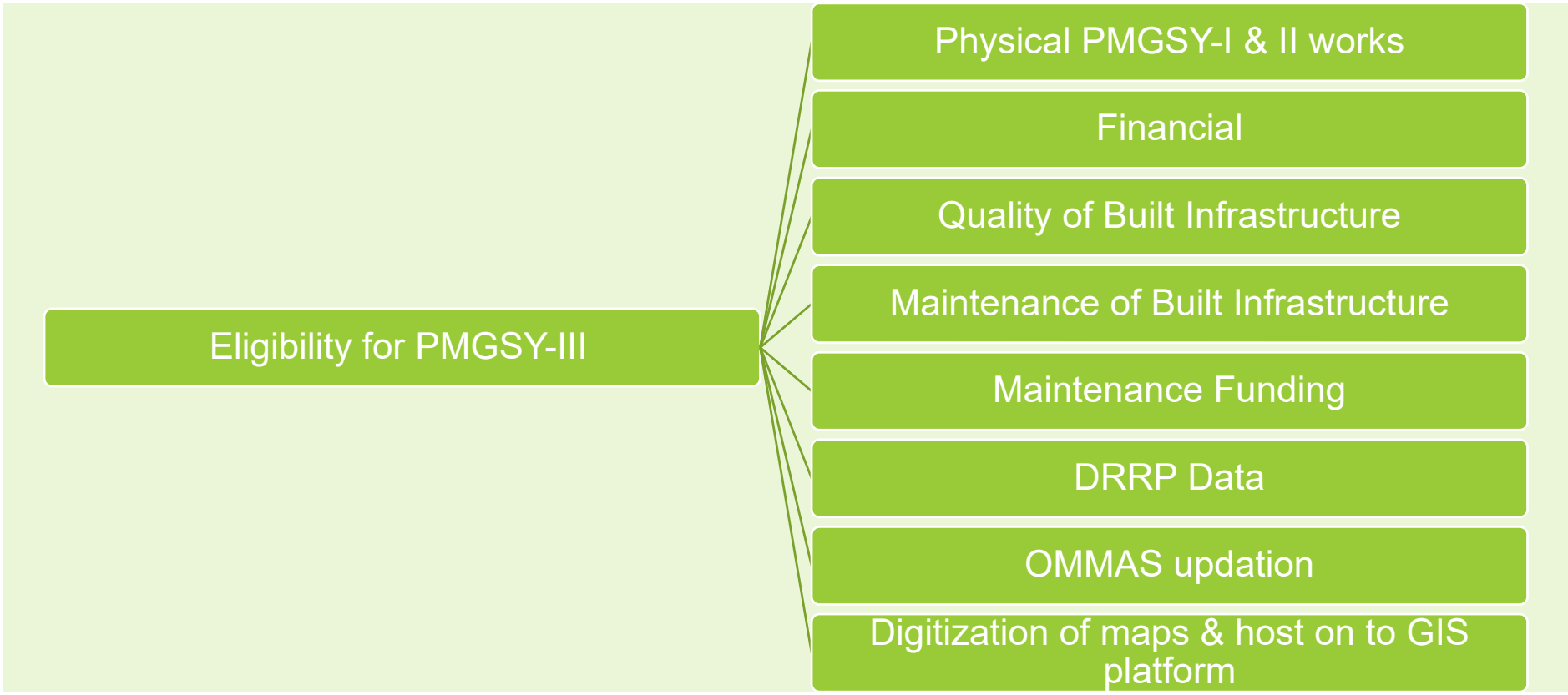
PMGSY-III – Draft Policy

Important parameters to be considered for score/weightage

- Population
- Market Facilities
- Educational Facilities
- Medical Facilities
- Transport Infrastructure

State Govt. comments on PMGSY-III Draft Policy

District Rural Road Plans (DRRP)-2018 – 2/2



District Rural Road Plans (DRRP) – 1/2

1. All roads to be included (NH, SH, MDR, ODR, VR/LR)

2. The maps should indicate roads constructed, roads to be constructed (New), roads upgraded and yet to be upgraded

3. Each Rural Roads in every block and district to be given a unique ID number just as Aadhaar Card for every citizen

4. This will facilitate that total information of the Rural Roads is available at one place.

District Rural Road Plans (DRRP) – 2/2

1. Structured Planning System PMGSY Channelled the interest of PRIs, MLAs & MPs
2. PR Involved in Comprehensive Block Level Master Plans & Distt. Level Plans (DRRPs)
3. Population based upon 2011 census.
4. Digitization of maps and host on a GIS platform (IT team)
5. Implementing agency or SRRDA through the GIS platform can monitor and track the progress of road activities including maintenance.

Proposed PMGSY- III Scheme – 1/2

PMGSY-I launched	• **December, 2000 (C N based)**
PMGSY-II	• **April, 2012 (DRRP – 2013-14 based)**

The Hon'ble Finance Minister of India in his budget speech for the year 2018-19 announced *"Task of connecting all eligible habitations with an all weather road has been substantially completed, with the target date forward to March, 2019 from March 2022. It is now time to strengthen and widen its ambit further to include major link routes which connect habitations to agricultural & rural markets (GrAMS), higher secondary schools & hospitals. Prime Minister Gram Sadak Yojana –III will include such linkages."*

Proposed PMGSY- III Scheme – 2/2

The task of connecting eligible habitations under PMGSY has been substantially completed.

Only about 10% habitations remain and target for connecting them is being brought forward to March 2019

Recently decided by GoI to launch PMGSY-III with focus to strengthen & widen the ambit of the programme to include Major Link Routes that connect habitations to

- **Agricultural and Rural Markets**
- **Higher Secondary Schools**
- **Hospitals.**

Few Areas of Concern requiring Continuing Attention – 1/3

(based upon the experiences while executing PMGSY-I & PMGSY-II Programme)

- Freezing of Rural Road Network in each Block/Distt. though finalization of DRRPs based on GIS platform & census 2011
- Assured maintenance funding and timely maintenance interventions comprising:-
  - Routine Maintenance
  - Periodic Renewal of Road Surface
  - Emergency/Special Repairs on the entire Rural Road Network
  - Assessment of additional funds required for Periodic Renewal treatment upon completion of 5 year defect liability period after construction

Few Areas of Concern requiring Continuing Attention – 2/3

- Embedding Safety Engineering measures in design of Rural Roads to reduce the accident risk and special priority to treatment of accident prone locations on existing Rural Road Network
- Initiating practice of Road Safety Audits during design and construction
- Construction of Bridges to open up backward areas for socio-economic development and all weather connectivity
- Possibility to be explored for including few Ropeway Suspension Bridges in remote hill areas to improve access
- Reconstruction of weak and damaged bridges & culverts on Through Routes having heavy traffic (showing heavy distress) as these will become a bottleneck in smooth movement of trucks and buses to agricultural hubs/mandies

Few Areas of Concern requiring Continuing Attention – 3/3

- Strengthening of pavement of roads that have crossed their designed life of ten years
- Upgradation of Rural Roads in areas that have witnessed high Agricultural growth, growth clusters under National Rurban Mission and development of social infrastructure by way of health care facilities, hospitals, schools, other educational centres, banks etc.
- Mainstreaming of technology initiatives to achieve resource efficiency reducing carbon footprint
  - Encourage green technologies
  - Environmentally optimized and climate resilient designs
  - Use of locally available materials e.g. industrial waste, construction and demolition waste, plastic wastes (PPCB)
- Enhanced use of IT and Geo-spatial technology to improve efficiency and governance in implementation of the programme
- Capacity building and skill development of rural road departments, consultants, contractors and PRIs in enhancing capability for planning, designs & effective delivery of the programme

Proposed Components & Financial Investments under PMGSY-III – 1/2

The components for the PMGSY-III are proposed keeping in view the areas of concern brought above. Table below gives a broad investment plan, looking at the progress under PMGSY-I & PMGSY-II.

Sr. No.	Components	Financial Investments (Rs. Crore)
1.	Upgradation of Through Routes comprising major link routes i) Widening and strengthening from single-lane to intermediate-lane width ii) Strengthening of pavement which have crossed the threshold of 10 year design life: a) Single lane width b) Intermediate/two lane width	72,000

Proposed Components & Financial Investments under PMGSY-III – 2/2

Sr. No.	Components	Fin. Invst. (Rs. Crore)
2	Construction of bridges i) Bridges required to open up backward areas ii) Replacing weak/dilapidated bridges iii) Ropeway/suspension bridges in hill areas	10,000
3.	Rectification of geometric deficiencies and treatment of hazardous locations (Black spots) with priority Through Routes under PMGSY	6,000
4	Improving riding quality on selected Through Routes to enhance energy efficiency and reducing pollution and carbon footprint (Renewal of road surface post 5 year construction)	8,000
	Total	**96,000**

For PMGSY-III also, current system of sharing const. cost (60:40) between Central Govt. & State Govt. is to continue.

Central Govt. Share for PMGSY-III is assessed to be around Rs. 64,000 Crore and that of States as Rs. 32,000 Crore

PMGSY-III - Component Relating to Upgradation of TR

Identify the Through Routes that connect the Agricultural & Rural Markets, Higher Secondary Schools & Hospitals

A suggestive matrix for PMGSY-III is given in Table below

Priority could be considered based on the score obtained by a particular Through Route

Suggestive Matrix for PMGSY-III – 1/3

Sr. No.	Parameter	Category Weight	Sub-category Weights
1	Population (census 2011) of the Habitation/Village connected by the Through Routes • 3000 and above • 1000 to 2999 • Less than 1000	30	 30 20 10
2	Market facilities (cumulative score) • Mandi (Min Turn over…) Rurban Growth Cluster • Warehouse, Cold Storage	30	 20 10
3	Educational Facilities (score of the highest category) • High School • Higher Secondary School • Degree College	15	 10 12 15

Suggestive Matrix for PMGSY-III – 2/3

Sr. No.	Parameter	Category Weight	Sub-category Weights
4	Medical facilities (score of the highest category) • Primary Health Centre, ANM Centre, Veterinary Hospital • Bedded Hospital, Community Health Centre	15	10 15
5	Transport Infrastructure (cumulative score) • Bus Stand • Administrative Centre (Block, Panchayat Hqr) • Bank, Fuel Station	10	4 4 2

Those Through Routes out of the road network as satisfy the matrix suggested in Table above may comprise the First Batch under the PMGSY-III for preparation of DPRs and according of sanctions

Suggestive Matrix for PMGSY-III – 3/3

1. In addition, those Through Routes which are found to have suffered serious damage due to heavy truck traffic or other reasons may also be considered for strengthening of pavement
2. This will help in reducing the otherwise heavy costs involved in rehabilitation/reconstruction due to accelerated rate of deterioration
3. Some of the existing single lane Through Routes may also require widening to intermediate-lane or two-lane where traffic growth has been high due to socio-economic and agricultural/industrial growth

PMGSY-III - Relating to Bridges

1. This component is proposed to provide for construction of bridges on streams/rivers on Through Routes connecting important agricultural mandis, rurban growth clusters
2. To ensure all-weather connectivity and opening up of the interior areas in the states.
3. In addition, proposed to include weak existing bridges in the Road Network showing signs of distress justifying immediate replacement
4. Necessary so that they do not constitute a bottleneck in the movement of goods and passenger vehicles in rural areas
5. There need not be any limit on the overall length of the bridge (as has been the case of PMGSY-I & II e.g. 25mtr/50mtr)
6. A small window is also proposed for construction of ropeways/suspension footbridges for pedestrians and animals across streams in hilly areas.

PMGSY-III - Road Safety Works

1. As brought out earlier, there is need now to pay increasing attention to provision of safety engineering measures on rural roads as well
2. Identification of stretches which are dangerous & suffering from geometric design deficiencies and to undertake rectification measures
3. Preference may be given to such stretches on the Network where no involvement of additional land acquisition or where additional land can be donated by the local communities in the interest of enhanced safety
4. The work of identification of such locations and proposed treatments can be got carried out with the help of road safety experts.

PMGSY-III - Riding Quality Improvement

1. Despite the continuing emphasis on maintenance of rural roads by the states, there is still lack of attention to the needs of periodic surface renewal which is due after 5 years of post construction in respect of PMGSY roads (NC/UG)
2. PMGSY-III may include one-time intervention of riding quality improvement covering profile correction and bituminous wearing course on selected Through Routes where the road surface is found to be hungry
3. This would help in not only reducing the vehicle operating costs but would also contribute to reduction in carbon footprint due to energy efficiency being achieved through improvement in riding quality.
4. Such a preventive treatment would also reduce the avoidable burden of demand for upgradation in immediate future.

PMGSY-III - Enhancements in OMMAS

1. A web-based electronic portal for Online Monitoring Management and Accounting System is already functional for management of PMGSY and has served as an instrument of good transparency and e-governance
2. The details regarding sanction of DPRs, release of funds and expenditure, progress, quality monitoring, payments to contractors are available online
3. Most of the information is in public domain & available to citizens
4. The citizen can also now use a mobile based “Meri Sadak” app to report on quality or road condition to the PIUs, SRRDAs and NRRDA
5. Enhancements may be planned under PMGSY-III towards management at multiple levels with generation of performance reports
6. Separate windows for uploading Geo tagged field laboratory photographs
7. Another window to upload Geo tagged photographs during construction or completion & photographs of technology used

PMGSY-III - Developing Green Technologies Framework – 1/2

1. The PMGSY-III may establish a green technologies framework building up from the technology initiatives undertaken on projects under the ongoing PMGSY-I & PMGSY-II for the last five years
2. Recently, with the help of World Bank, a document on Environmentally optimized design of Rural Roads has been finalized
3. Use of locally available marginal materials with or without stabilisation treatment
4. Promoting use of industrial wastes such as flyash, iron & steel slag, copper slag, zinc slag, marble slurry, construction & demolition waste, plastic waste in bitumen, soil stabilisation, cold mix emulsions
5. Promoting use of gabions as protection structures for breast/retaining walls on hill roads

PMGSY-III - Developing Green Technologies Framework – 2/2

6. Evolving fast construction technologies in execution of works on bridges and culverts
7. Evaluation of new materials used in the recent past and preparation of codes specifications for wider application. Providing support to IRC in accelerating the pace of revision of old codes and preparation of new codes and standards.
8. Promoting environmentally optimized and climate resilient designs
9. Green technologies to achieve resource efficiency on one hand and addressing the challenge of reducing carbon footprint on the other hand
10. The quantum of projects to be executed using technology initiatives may also be increased from 15% to 25% under PMGSY-III
11. More than one new technologies has to be adopted e.g. Stabilization Techniques, Waste Plastics, Cold Mixes, Modified Bitumen

Thank You

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