

Annexure I
Format I- Part I

Format for information to SQM for Inspection of MMGSY Work
PART I- Work Information (To be filled-up by PIU)

Work is ☒ Ongoing ☐ Completed

GENERAL:

1.1. Date of Inspection DD MM YY 28-12-2018

1.2. Name of State Quality Monitor: DIP Abhayan Prasad

1.3. District: Saran Block: Sonpur

1.4. Name of Road: From NH-19 Telephone exchange To Gularia Ghat Road.

1.5. Package No.: BR-09R-282

1.6. Length: 1.475 Km Flexible Pavement, 0.425 Km CC/other Pavement, Total 1.90 Km

1.7. Estimated Cost (As cleared by GOI): Rs. 136.28 Lakh

1.8. Technical Sanction Cost: Rs. 136.28 Lakh

1.9. The Work is a Case of: ☒ New connectivity ☐ Up gradation

1.10. Terrain ☒ Plain ☐ Rolling ☐ Hilly

1.11. Date of Start of the Work: 9 11 2017

1.12. Stipulated Date of Completion: 8 11 2018

1.13. Actual Date of Completion (if work completed):

2. PHYSICAL PROGRESS: (In case of On going works only) Construction Programme and Physical Progress:

Item	Completed percentage of Item	Dates for completion	Start Date	Completion Date	Delay in Months
Earth Work	80%	Due			
		Actual			
CD Works	100%	Due			
		Actual			
Sub base i/c Shoulders	100%	Due			
		Actual			
Base Course (Non	100%				
Base Course (Wear					
Base Course (Burr					
CC Pavement	100%				

3. **QUALITY CONTROL:**

3.1. Location of Field Laboratory: —

3.2. Quality Control Register Part-I is maintained by: *Contractor*

3.3. Quality Control Register Part-II is maintained by: *P.I.U.*

4. **INSPECTIONS BY NQM, SQM or SENIOR OFFICERS AND ACTION TAKEN:**

Inspection by NQMs, SQMs and senior (i.e. SE or CE) departmental officers and action taken statement:

Date of Visit	Inspected By	Observations	Action Taken by PIU with Date
14.3.18	NQM	— 'S' —	
27.11.18	SQM	— 'S' —	—

[Signature]
29/12/18

Name and Signature of the Head of PIU, Date:.....

Report of National Quality Monitor (NQM)
PART II- Observations of NQM for Ongoing/Completed Work

(To be filled-up by NQM, use additional sheets, if required.)

1. QUALITY ARRANGEMENTS-OBSERVATIONS (In Case of ongoing works only):

Observations:

#	Whether laboratory (Y/N)	Field Established	Whether Equipments (Y/N)	necessary available	Whether Equipments have been used (Y/N)
	Y		Y		Y

Grading: Grade: ☒ S ☐ RI ☐ U If this item is graded RI/U, write clear reasons and suggestions for improvement:

2. ATTENTION TO QUALITY: (In Case of ongoing works only):

Observations – Item 2a: Maintenance of QC Registers:

#	Based on executed quantities whether all mandatory tests conducted.	Whether QC Register Part I maintained as per provisions.	Whether QC Register Part II maintained and test results monitored as per provisions.
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Partly <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Partly <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Partly <input type="checkbox"/> No

Observations – Item 2b: Verification of Test Results (P – conforms, F – does not conform):

#	Name of Test	Results of the test conducted by NQM at a defined location.(P/F)	Test result as per QC Register at the same location. (Mention the Page No. of QC Register also)(P/F)	Whether the test results recorded in QC register found correct? (Y/N)

Grade ☒ S ☐ RI ☐ U

If this item is graded RI/U, write clear reasons and suggestions for improvement:

3. **GEOMETRICS:** The NQM should take at-least two measurements in 1 Km length and if it is found that the roadway and carriageway is inadequate NQM may take more observations:

Observations – Item 3 a, b and c: Road way width, Carriage way and Camber.

Ref. RD	Roadway Width (m)	Carriageway Width (m)	Ref. RD	Roadway Width (m)	Carriageway Width (m)
1200	6.00	3.75	1600	6.00	3.75

Observations – Item 3 d: Superelevation and Extra Widening at curves.

Ref. RD	Super Elevation	Extra Widening provided (Y/N)	Ref. RD	Super Elevation	Extra Widening provided (Y/N)

Observations – Item 3 e: Longitudinal Gradient in case of road in hilly/rolling terrain:

Ref. Between RD...& RD...	Longitudinal Gradient	S/U	Ref. Between RD...& RD...	Longitudinal Gradient	S/U

Grade: ☒ S ☐ U
improvement:

If this item is graded U, write clear reasons and suggestions for

OBSERVATIONS REGARDING THE QUALITY OF ITEMS OF WORK:

4 Earthwork:

Observations – Item 4 a Quality of Material for Embankment/ Sub-grade:

#	Location (RD)	On Visual Classification identify the Group Symbol and write	Quality of material is acceptable. (Y/N)
	200	SG	Y
	800	SG	Y
	1200	SG	Y
	1600	SG	Y

Grade: ☒ S ☐ U
suggestions for improvement:

If this item is graded U, write clear reasons and

Observation – Item No. 4 b: Workmanship for Embankment and Sub-grade Construction:

#	Location (RD)	MDD kN/m ³ (As per record)	Field Moisture Content	Degree of Compaction		
				Field Density kN/m ³	Dry Density kN/m ³	Compaction adequate. (Y/N)

Grade: ☐ S ☐ U If this item is graded U, write clear reasons and suggestions for improvement:

Observation – Item No. 4 c, Side slopes and profile:

#	Location (RD)	Whether Side Slopes Satisfactory (Y/N)	Whether profile is Satisfactory (Y/N)

Observations- Item No. 4 d and e, Earth work in Hilly/Rolling terrain or high Embankments:

#	Location (RD)	Cut Slopes & Profile, whether appears to be stable. (Y/N)	Adequate slope protection works executed. (Y/N)	Formation is properly dressed and traffic worthy. (Y/N)

Grade: ☐ S ☒ U If this item is graded U, write clear reasons and suggestions for improvement:

5. Sub-Base:

Observations- Item No. 5 a, b, c and d, Quality of Material and Workmanship:

#	Location (RD)	Confirms to Grading. (Y/N)	Suitable from plasticity angle. (Y/N)	Whether compaction is adequate. (Y/N)	Observed Thickness of Layer (in mm)	Prescribed Thickness provided (Y/N)

Grade: ☐ S ☒ U If this item is graded U, write clear reasons and suggestions for improvement:

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6. **Base Course:**

Observations- Item No. 6 a, b, c and d, Quality of Material and Workmanship of WBM:

#	Location (RD)	Thickness of each layer of WBM (mm)	Thickness is adequate (Y/N)	Aggregate confirms to Grading (Y/N)	Filler material is non-plastic to desired extent. (Y/N)	Volume of filler material percent of course aggregate	Whether adequate compaction is done. (Y/N)

Grade:

If this item is graded U, write clear reasons and suggestions for improvement:

7. **Bituminous Course: Premix Carpet/Surface Dressing/ BM/ MPM etc including Seal Coat: Observations- Item No. 7 a, b, and c, Quality of Material and Workmanship of BT Layer (in case of ongoing works):**

#	Location (RD)	Whether Course Aggregate confirms to grading. (Y/N)	Whether the binder is of approved grade. (Y/N)	Write Mixing Temperature and whether it is in permissible limits. (Y/N)	Write Laying Temperature and whether it is in permissible limits. (Y/N)

Grade ☐ S ☐ U If this item is graded U, write clear reasons and suggestions for improvement:

Observations- Item No. 7 d and e, Workmanship of BT layer (in case of completed works):

#	Location (RD)	Thickness		Whether surface evenness is within acceptable limits. (Y/N)
		Thickness in mm	Whether thickness is adequate. (Y/N)	
		yet	not done	

Grade: ☐ S ☐ U If this item is graded U, write clear reasons and suggestions for improvement:

8. Observations- Item No. 8 a and b, Quality of Shoulders (in case of completed works):

#	RD of observation	Whether general quality of the material is acceptable. (Y/N)	Whether general quality of workmanship is acceptable. (Y/N)	Whether Camber in Shoulders is adequate (Y/N)
		In Progress		

9. Cross Drainage Works: Observations Item No. 9 a and b, Quality of CDs:

#	RD at which CD is located	Type of CD	Whether general quality of the material is acceptable. (Y/N)	Whether general quality of workmanship is acceptable. (Y/N)
	400	HP(1x1000)	Y	Y

Grade: ☒ S ☐ RI ☐ U
If this item is graded RI/U, write clear reasons and suggestions for improvement:

10. Side Drains and Catch water Drains: Observations:

#	Reference of RDs where side drain constructed.	RD at which observation made.	Whether general quality of the side drains/ catch-water drains is acceptable. (Y/N)	Whether side drains are integrated to cross drains. (Y/N)

Grade: ☐ S ☐ RI ☐ U
If this item is graded RI/U, write clear reasons and suggestions for improvement:

11. CC/ Semi-Rigid (SR) Pavements and Associated Pucca Side Drains: Item No. 11 a, b, c and d:

#	Reference of RDs, CC/SR Pavements provided.	RD at which observati on made.	Thickness		General quality material of acceptable. (Y/N)	General quality of workmanship acceptable(Y/ N)
			Thickness in mm	Acceptable (Y/N)		
		1600	190	Y	Y	Y

Grade: ☒ S ☐ U

If this item is graded U, write clear reasons and suggestions for improvement:

12. Road Furniture and Markings

Observations - Item No. 12 a: Quality Road Furniture and Markings (in case of ongoing/completed works):

Main Informatory Board Fixed:

☒ Yes ☐ No

Citizen Information Board Fixed:

☒ Yes ☐ No

Grade: ☒ S ☐ U

If this item is graded U, write clear reasons and suggestions for improvement:

Observations - Item No. 12 b: Quality Road Furniture and Markings (in case of completed works):

- Logo Boards Fixed:
- 200m. Stones fixed:
- 1 Km. Stone fixed:
- Guard Stones fixed on Curves:
- Mandatory and Cautionary Signage

Yes No
Yes No
Yes No

Yes No
Yes No

yet to be done

Grade:

S	U
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 If this item is graded U, write clear reasons and suggestions for improvement:

13. General Observations of NQM, (including the observations made during the interaction with PIU staff and Contractor/ Consultant Engineers):

a. Observations about deficiency in project preparation (Give detailed observations about deficiencies in general and items which have been left but are required as per site conditions):

b. Whether the work has been completed/is in progress as per work programme or the delay has occurred. If delay has occurred, whether the liquidated damages have been withhold or recovered:

c. Whether the work has been completed within the sanctioned cost, if not, what is the action taken by the PIU (*in case of complete works*):

d. Observations about the action taken by the PIU on the observations of inspecting officers including SQMs and NQMs. (Clearly offer comments about the action taken on the observations of Departmental Officers, State Quality Monitors and National Quality Monitors).

e. Comments about difference in observations made by NQMs/SQMs in earlier inspections (the NQM shall study the earlier inspection reports of NQMs / SQMs, if any and offer his clear comments about the differences in observations, if any).

14. Other observations, if any: - In flexible part, according to J.E., road profile has been badly damaged due to heavy loaded traffic. Before B.T. work, it is advised to maintain road profile. Parapet wall of C.D. work₄₀ require repair.

15. **Quality Grading of items and sub-items of work:** The grading of every sub-item and item of work is given below.

#	Sub item for observation	In case of work	Awardable Grades	Awarded Grade
1	2	3	4	5
Item 1 - Quality Arrangements				
	Quality Arrangements	On-going	S/RI/U	S
	Item Grading		S/RI/U	S
Item 2 - Attention to Quality				
a	Maintenance of QC Registers	On-going	S/RI/U	S
b	Verification of test results	On-going/ Complete	S/U	-
	Item Grading		S/RI/U	S
Item 3 - Geometrics				
a	Road way width	Ongoing or complete	S/U	S
b	Carriageway width		S/U	S
c	Camber		S/U	-
d	Superelevation & Extra Widening at Curves		S/U	-
e	Longitudinal Gradient in case of road in hilly/ rolling terrain.	Ongoing/ complete	S/U	-
	Item Grading		S/U	S
Item 4 - Earth Work and Sub-grade in Embankment/ Cutting				
a	Quality of Material for Embankment/ Sub-grade	Ongoing or complete	S/U	S
b	Compaction		S/U	-
c	Side Slopes and Profile	Complete	S/U	-
d	Stability and Workmanship of Cut Slopes (in case of hilly/ rolling terrain)	Ongoing or complete	S/U	-
e	Adequacy of Slope Protection (in case of high embankments/hilly/ rolling terrain)		S/U	-
	Item Grading		S/U	S
Item 5 - Sub-Base				
a	Grain Size	Ongoing or complete	S/U	-
b	Plasticity		S/U	-
c	Compaction	Ongoing or complete	S/U	-
d	Total Thickness of Layer	Ongoing or complete	S/U	-
	Item Grading		S/U	-

Item 6 - Base Course – Water Bound Macadam				
a	Grain Size of Course Aggregate	Ongoing or complete	S/U	—
b	Plasticity of Crushable Aggregate used as fillers.		S/U	—
c	Adequacy of Compaction through volumetric analysis.		S/U	—
d	Thickness of every layer of WBM.		S/U	—
	Item Grading		S/U	—
Item 7 - Bituminous Layer – Premix Carpet (PMC)/ Surface Dressing (SD)				
a	Gradation of Aggregate	Ongoing	S/U	—
b	Mixing Temperature of Mix.	Ongoing	S/U	—
c	Laying Temperature of Mix.	Ongoing	S/U	—
d	Thickness of layer	Ongoing or complete	S/U	—
e	Surface Evenness	Ongoing or complete	S/U	—
	Item Grading		S/U	—
Item 8 – Shoulders				
a	Quality of material for shoulders	Complete	S/RI/U	—
b	Degree of compaction	Complete	S/RI/U	—
c	Camber.	Complete	S/RI/U	—
	Item Grading		S/RI/U	—
Item 9 - Cross Drainage Works				
a	Quality of Material – Concrete, Stone/ brick masonry, Hume pipes including size etc.	Ongoing or complete	S/RI/U	S
b	Quality of Workmanship such as positioning of pipes, wing walls, cushion over H Pipes etc.		S/RI/U	S
	Item Grading		S/RI/U	S
Item 10 - Side Drain and Catch Water Drain				
	General quality of Side Drains/ Catch Water Drains and their integration with CDs.	Ongoing or complete	S/RI/U	—
	Item Grading		S/RI/U	—
Item 11 - CC/ Semi Rigid Pavements and Associated Pukka Drains				
a	Quality of Material – Concrete, Stone/ Concrete Block Pavement etc.	Ongoing or complete	S/U	S
b	Strength of CC in Concrete Pavement/ Concrete Block Pavement		S/U	—

c	Quality of Workmanship – Wearing surface texture, Adequacy of setting of concrete, Joints, Edges etc.		S/U	S
d	Thickness of Layer		S/U	S
	Item Grading		S/U	S
Item 12 - Road Furniture and Markings				
a	Citizen Information Board, Main Informatory Board, Quality and whether fixed during construction.	Ongoing	S/U	S
b	Logo boards, 200 m stones and Km stones, quality and whether fixed after completion.	Complete	S/U	-
c	Whether the information in boards is given in local language.	Complete/ Ongoing	S/U	S
	Item Grading		S/U	S

16. **Overall Grading of Work:** The overall grading calculated on the basis of item and sub-item wise grading is given below:

#	Item	Awarded Grade
1	Quality Control Arrangements	S
2	Attention to Quality	S
3	Geometrics	S
4	Earthwork and Sub-grade in Embankment/Cutting	S
5	Granular Sub base	-
6	Base Course Non-Bituminous and shoulders	-
7	Bituminous Surfacing	-
8	Shoulders	-
9	CD Works	S
10	Side Drains and Catch Water Drains	-
11	CC/Semi-Rigid Pavement and Associated Pukka Drains	S
12	Road Furniture and Markings	S
	Overall Grading	S

Signature: 

Name: (DIP NARAYAN PRASAD)

Date: 28/12/18