No.1-8-05/SSW-PWD/Vol-I/2025-26/530
Government of Goa
Office of the Suptdg. Surveyor of works,
Public Works Department,
Altinho-Panaji-Goa

Date: - 31/03/2026

CIRCULAR

Subject: Inclusion of maintenance charges in Roads and Bridges works.

In a continuous effort to improve the quality, durability, and accountability of road infrastructure within the State of Goa, it has been decided to revise the existing maintenance protocols. Accordingly, with immediate effect, all future tenders for asphalting / bituminous works with only hot mixed material and Bridges/ Culverts under the State Public Works Department (PWD) shall be governed by a mandatory Defect Liability Period (DLP) of five (05) years including Maintenance which is defined in clause no. 2. This shall be applicable for works taken up through "Capital Account" under Demand No.21 of the Public Works Department.

To ensure contractor compliance and sustained road quality, the following financial and operational guidelines are hereby prescribed for immediate implementation:

1. **The provisions of this circular shall apply to all works involving asphalting/bituminous items with only hot mixed material, including strengthening, resurfacing, construction of new roads, widening works, Bridges and Culverts.**

2. **All such works shall have an inbuilt component of 2.5% of the total Civil Works including allied works which come under the road stretch and will be mentioned as "Maintenance Charges" to be shown separately in the estimate. This amount shall be inclusive of all types of repair and maintenance works, including road furniture items, irrespective of whether such items form part of the Contractor's original scope of work or not.**

3. No other estimate under the "Revenue Account" orseparate estimate for other items of maintenance to be executed shall be prepared in view of applicability of maintenance charges and in case of any lapses are noticed then the concerned Assistant Engineer and Technical Assistant / Junior Engineer shall be responsible as the same would amount to duplication of works.

4. The maintenance charges of 2.5% (of Contract Price) will be paid to the Contractor over the Defect Liability Period of 5(five) years in a phased manner subject to satisfactory performance of maintenance obligations, as detailed below:

   1st year of maintenance – Nil
   2nd year of maintenance – 0.5%
   3rd year of maintenance – 0.5%
   4th year of maintenance – 0.5%
   5th year of maintenance – 1.0%

5. For already proposed works and yet to be tendered involving flexible pavements with only hot mixed material / Bridges/ Culverts, the provisions of this circular shall also apply.

6. No other capital or revenue expenditure to be incurred for the work road stretches which have maintenance charges for a period of 5 years from the date of completion of the work and no road cutting or any other work to be taken up by any other agency/ contractor during the mandatory 5 years period other than the contractor awarded with the work.

7. The Contractor shall submit to the concerned Executive Engineer a "Monthly Maintenance Statement"through online mode only viz., MAPFLOW by the 7th (seventh) day of each month in the standard format for the Maintenance of the Project stretch during the previous month. The monthly lump sum amount payable for Maintenance shall be 1/12th (one-twelfth) of the annual cost of Maintenance as mentioned above.

8. The Contractor shall, at all times maintain the Project stretch in accordance with provisions of the Contract Agreement, Applicable Laws and Applicable Permits.

9. All materials, works and construction operations shall conform to the MoRTH specifications for Road and Bridge works and the relevant IRC publications. Where the specifications for any work are not given, Good Industry Practices shall be adopted.

10. Not withstanding anything to the contrary contained in this circular, if any defect, deficiency or deterioration in the Project stretch posses a Hazard to safety or risk of damage to property, the Contractor shall promptly take all reasonable measures for eliminating or minimizing such danger.

11. The Contractor shall, through its Engineer, undertake a daily visual inspection of the Project stretch and maintain a record thereof in a register to be kept in such form and manner as the Executive Engineer may specify. Such record shall be kept in safe custody of the Contractor and shall be

open to inspection by the Executive Engineer at any time during office hours.

12. The Contractor shall carry out a detailed pre-monsoon inspection of overall Project stretch including structures like bridges, culverts and drainage system if any before [1st June] every year in accordance with the guidelines contained in IRC: SP35. Report of this inspection together with details of proposed maintenance works as required on the basis of this inspection shall be sent to the Executive Engineer before the [10th June] every year. The Contractor shall complete the required repairs before the onset of the monsoon and send to the Executive Engineer a compliance report. Post monsoon inspection shall be done by the [30th September] and the inspection report together with details of any damages observed and proposed action to remedy the same shall be sent to the Executive Engineer.

13. The Contractor shall repair and rectify the defects and deficiencies specified within the time limit set forth in the table mentioned in **Annexure A.** Any failure in this shall constitute non-fulfilment of the Maintenance Obligations by the Contractor. Upon occurrence of any breach hereunder, the Executive Engineer shall be entitled to effect reduction in payments set forth in **Annexure B** of this circular without prejudice to the rights of the Executive Engineer under the Contract Agreement, including termination thereof.

14. In addition to payment reductions, the concerned Executive Engineer shall have the authority to carry out repairs and maintenance through a third party, at the risk and cost of the original Contractor, in accordance with the Contract Agreement and enlistment rules. The Executive Engineer shall be at liberty to utilize the Security Deposit, Bank Guarantee and Maintenance Charges for executing such works.

15. Any deductions made on account of non-compliance with the Maintenance Requirements shall not be paid even after compliance subsequently. The deductions shall continue to be made each month until compliance is made.

16. The Executive Engineer shall process final bill including recording of completion certificate as per the prevalent practice and on satisfactory completion of original contract scope. The maintenance charges of 2.5% of the Contract Price shall be paid separately to the Contractor over the Defect Liability Period (DLP) as per the Sl. No. 4 above and the expenditure shall be debited to the original sanctioned work. A sample format for incorporating maintenance charges is as per **Annexure C.**

17. All Executive Engineers are hereby directed to incorporate the provisions of this circular in the Notice Inviting Tenders (NITs) and Standard Bidding Documents (SBDs) with immediate effect.

This issues with the approval of the Government vide U.O. No. 1446/F, dated 18.03.2026 for immediate implementation.

- Sd -
Sandip K. Prabhu Chodnekar,
Principal Chief Engineer,
PWD, Altinho, Panaji-Goa.

Authorized for issue,

31/3/26
Sanjay Gaude,
Superintending Surveyor of works,
PWD, Altinho, Panaji-Goa.

To,
The Executive Engineer,
II, VI, VII (NH), XIII, XIV (NH), XV(NH), XVIII, XXIII, XXV, XXVIII,
Panaji, Fatorda, Mapusa, Ponda, PWD- Goa.

Copy to;
1. The Superintending Surveyor of Work, PWD, Altinho Panaji Goa.
2. The Superintendent Engineer, C.O.III, IV, IX(NH), Altinho, Fatorda, PWD, Goa.
3. The Superintendent Engineer, Monitoring, PWD, Altinho Panaji Goa.
4. Guard File & Concerned file.

Copy with compliments to;
1. The Chief Secretary, Secretariate, Porvorim Goa.
2. The Principal Chief Engineer, PWD, Altinho Panaji Goa.
3. OSD to Hon'ble Chief Minister, Secretariate, Porvorim Goa.
4. OSD to Hon'ble Minister of PWD, Secretariate, Porvorim Goa.

ANNEXURE A

Maintenance Criteria for Pavements

Asset Type	Performance Parameter	Level of Service (LOS)		Frequency of Inspection	Tools/ Equipment	Standards and References for Inspection and Data Analysis	Time limit for Rectification/ Repair	Maintenance Specifications
		Desirable	Acceptable					
Flexible Pavement (Pavement of MCW, Service Road, approaches of Grade structure, approaches of connecting roads, slip roads, lay byes etc. as applicable)	Potholes	Nil	< 0.1% of area and subject to limit of 10 mm in depth	Daily	Length Measurement Unit like Scale, Tape, odometer etc.	IRC 82: 2015 and Distress Identification Manual for Long Term Pavement Performance Program, FHWA 2003 (http://www.tfhrc.com/pavement/lttp/reports/03031/)	24-48 hours	MORT&H Specification 3004.2
	Cracking	Nil	< 5% Subject to limit of 0.5 sqm for any 50m length	Daily			7-15 Days	
	Rutting	Nil	< 5mm	Daily	Streight Edge		15-30 Days	
	Corrugations and Shoving	Nil	< 0.1% of Area	Daily	Length Measurement Unit like Scale, Tape, odometer etc.		2-7 Days	IRC:82-2015
	Bleeding	Nil	< 1% of Area	Daily			3-7 Days	MORT&H Specification 3004.2
	Ravelling/ Stripping	Nil	< 1% of Area	Daily			7-15 Days	IRC:82-2015, Read with IRC SP 81
	Edge Deformation/ Breaking	Nil	< 1m for any 100m section and width < 0.1m at any location, restricted to 30cm from edge	Daily		-	7-15 Days	IRC:82-2015
	Roughness	2000 mm/km	2400 mm/km	Bi-Annually	Class 1 Profilometer	Class 1 Profilometer: ASTM E950 (98): 2004 - Standard Test Method for measuring Longitudinal Profile of Travelled Surfaces with Accelerometer Established Inertial Profiling Reference ASTM E1656-	180 Days	IRC:82-2015
	Skid Number	60SN	50SN	Bi-Annually	SCRIM (Sideway-Force Coefficient Routine		180 Days	BS: 7941-1: 2006

	Pavement Condition Index	3	2.1	Bi-Annually	Investigation Machine or Equivalent)	94:2000 - Standard Guide for classification of Automatic Pavement Condition Survey Equipment	180 Days	IRC:82-2015
	Other Pavement Distresses			Bi-Annually			2-7 Days	IRC:82-2015
	Deflection/ Remaining Life			Annually	Falling Weight Deflectometer	IRC 115: 2014	180 Days	IRC:115-2014

Maintenance Criteria for Safety Related Items and Other Furniture Items

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
Highway	Availability of Safe Sight Distance	As per IRC SP :84-2014, a minimum of safe stopping sight distance shall be available throughout. Design Speed Kmph: 100 — Desirable Min Sight Distance (m): 360 — Safe Stopping Sight Distance (m): 180 80 — 260 — 130	Monthly	Manual Measurements with Odometer along with video/ image backup	Removal of obstruction within 24 hours, in case of sight line affected by temporary objects such as trees, temporary encroachments. In case of permanent structure or design deficiency: Removal of obstruction/improvement of deficiency at the earliest Speed Restriction boards and suitable traffic calming measures such as transverse bar marking, blinkers, etc. shall be applied during the period of rectification.		IRC:SP 84-2014
Pavement Marking	Wear	<70% of marking remaining	Bi- Annually	Visual Assessment as per Annexure-F of IRC:35-2015	Re-Painting	Cat-1 Defect - within 24 hours Cat-2 Defect - within 2 months	IRC:35- 2015
	Day time Visibility	During expected life Service Time Cement Road - 130mcd/m2/lux Bituminous Road - 100mcd/m2/lux	Monthly	As per Annexure-D of IRC:35-2015	Re-Painting	Cat-1 Defect - within 24 hours Cat-2 Defect - within 2 months	IRC:35- 2015
	Night Time Visibility	Initial and Minimum Performance for Dry Retro reflectivity during night time:	Bi-Annually	As per Annexure-E of IRC:35-2015	Re-Painting	Cat-1 Defect - within 24 hours Cat-2 Defect - within 2 months	IRC:35- 2015

		Design Speed (RL) Retro Reflectivity (mcd/m2/lux) Initial 7 days Min. Threshold level (T1) & warranty period required upto 2 years Upto 65 200 80 65-100 250 120 Above 100 350 150 Initial and minimum performance for Night Visibility under wet condition (Retro Reflectivity) Initial 7 days Retro Reflectivity : 100 mcd/m2/lux Min. Threshold Level: 50 mcd/m2/lux					
	Skid Resistance	Initial and Minimum performance for Skid Resistance: Initial (7days): 55BPN Min. Threshold: 44BPN *Note: shall be considered under urban/city traffic condition encompassing the locations like pedestrian crossings, bus bay, bus stop, cycle track intersection delineation, transverse bar markings etc	Bi-Annually	As per Annexure-G of IRC:35-2015		Within 24 hours	IRC:35-2015
Road Signs	Shape and position	Shape and Position as per IRC:67-2012. Signboard should be clearly visible for the design speed of the section.	Daily	Visual with video/image backup	Improvement of shape, in case if shape is damaged. Relocation as per requirement	48 hours in case of Mandatory Signs, Cautionary and Informatory Signs (Single and Dual post signs) 15 Days in case of Gantry/Cantilever Sign boards	IRC:67-2012

	Retro reflectivity	As per specifications in IRC:67-2012	Bi-Annually	Testing of each signboard using Retro Reflectivity Measuring Device. In accordance with ASTM D 4956-09.	Chainage of Signboard	48 hours in case of Mandatory Signs, Cautionary and Informatory Signs (Single and Dual post signs). 1 Month in case of Gantry/Cantilever Sign boards	IRC:67-2012
Kerb	Kerb Height	As per IRC 86:1983 depending upon type of Kerb	Bi-Annually	Use of distance measuring tape	Raising Kerb Height	Within 1 Month	IRC 86:1983
	Kerb Painting	Functionality: Functioning of Kerb painting as intended	Daily	Visual with video/image backup	Kerb Repainting	Within 7-days	IRC 35:2015
Other Road Furniture	Reflective Pavement Markers (Road Studs)	Numbers and Functionality as per specifications in IRC:SP:84-2014 and IRC:35-2015, unless specified in Contract Agreement.	Daily	Counting	New Installation	Within 2 months	IRC:SP:84- 2014, IRC:35-2015
	Pedestrian Guardrail	Functionality: Functioning of guardrail as intended	Daily	Visual with video/image backup	Rectification	Within 15 days	IRC:SP:84- 2014
	Traffic Safety Barriers	Functionality: Functioning of Safety Barriers as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84- 2014, IRC:119-2015
	End Treatment of Traffic Safety Barriers	Functionality: Functioning of End Treatment of Safety Barriers as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84- 2014, IRC:119-2015
	Attenuators	Functionality: Functioning of Attenuators as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84- 2014, IRC:119-2015
	Guard Posts and Delineators	Functionality: Functioning of Guard Posts and Delineators as intended	Daily	Visual with video/image backup	Rectification	Within 15 days	IRC:79 -1981
	Overhead Sign Structure	Overhead sign structure shall be structurally adequate	Daily	Visual with video/image backup	Rectification	Within 15 days	IRC:67-2012

	Traffic Blinkers	Functionality: Functioning of Traffic Blinkers as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84- 2014
Highway Lighting System	Highway Lights	Illumination: Minimum 40 Lux illumination on the road surface	Daily	The illumination level shall be measured with luxmeter	Improvement in Lighting System	24 hours	IRC:SP:84- 2014
		No major failure in the lighting system	Daily	-	Rectification of failure	24 hours	IRC:SP:84- 2014
		No minor failure in the lighting system	Monthly	-	Rectification of failure	8 hours	IRC:SP:84- 2014
	Toll Plaza Canopy Lights	Minimum 40 Lux illumination on the road surface	Daily	The illumination level shall be measured with luxmeter	Improvement in Lighting System	24 hours	IRC:SP:84- 2014
		No major/minor failure in the lighting system	Daily	-	Rectification of failure	8 hours	IRC:SP:84- 2014
Trees and Plantation including median plantation	Obstruction in a minimum head-room of 5.5 m above carriageway or obstruction in visibility of road signs	No obstruction due to trees	Monthly	Visual with video/image backup	Removal of trees	Immediate	IRC:SP:84- 2014
	Deterioration in health of trees and bushes	Health of plantation shall be as per requirement of specifications & instructions issued by Authority from time to time	Daily	Visual with video/image backup	Timely watering and treatment. Or Replacement of Trees and Bushes.	Within 90 days	IRC:SP:84- 2014
	Vegetation affecting sight line and road structures	Sight line shall be free from obstruction by vegetation	Daily	Visual with video/image backup	Removal of Trees	Immediate	IRC:SP:84- 2014
Rest Areas	Cleaning of toilets	-	Daily	-	-	Every 4 hours	

	Defects in electrical, water and sanitary installations	-	Daily	-	Rectification	24 hours	
Other Project Facilities and Approach roads	damage or deterioration in Approach Roads, pedestrian facilities, truck lay-bys, bus-bays, bus-shelters, cattle crossings, Traffic Aid Posts, Medical Aid Posts and other works		Daily	-	Rectification	15 days	IRC:SP:84- 2014
Pipe/box/ slab culverts	Free waterway/ unobstructed flow section	85% of culvert normal flow area to available.	2 times in a year (before and after rainy season)	Inspection by Bridge Engineer as per IRC SP: 35-1990 and recording of depth of silting and area of vegetation.	Cleaning silt up soils and debris in culvert barrel after rainy season, removal of bushes and vegetation, U/s of barrel, under barrel and D/s of barrel before rainy season.	15 days before onset of monsoon and within 30 days after end of rainy season.	IRC 5-2015, IRCSP:40-1993 and IRCSP:13- 2004
	Leak-proof expansion joints if any	No leakage through expansion joints	Bi-Annually	Physical inspection of expansion joints as per IRC SP: 35- 1990 if any, for leakage strains on walls at joints.	Fixing with sealant suitably	30 days or before onset of rains whichever comes earlier	IRC SP:40- 1993 and IRC SP:69-2011
	Structurally sound	Spalling of concrete not more than 0.25 sqm	Bi-Annually	Detailed inspection of all components of culvert as per IRC SP:35-1990 and recording the defects	Repairs to spalling, cracking, delamination, rusting shall be followed as per IRC:SP:40-1993.	15 days	IRC SP 40-1993 and MORTH Specifications clause 2800
		Delamination of concrete not more than 0.25 sq.m.					
		Cracks wider than 0.3 mm not more than 1m aggregate length					

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	Protection works in good condition	Damaged of rough stone apron or bank revetment not more than 3 sqm, damage to solid apron (concrete apron) not more than 1 sqm	2 times in a year (before and after rainy season)	Condition survey as per IRC SP:35-1990	Repairs to damaged aprons and pitching	30 days after defect observation or 2 weeks before onset of rainy season whichever is earlier.	IRC: SP 40-1993 and IRC:SP:13- 2004.

Payment Reduction for Non-Compliance with the Maintenance Requirements

(i) Monthly lump sum payments for maintenance shall be reduced in the case of non- compliance with the Maintenance Requirements set forth in Annexure A.

(ii) Any deduction made on account of non-compliance with the Maintenance Requirements shall not be paid even after compliance subsequently. The deductions shall continue to be made every month until compliance is done.

(iii) The Executive Engineer shall calculate the amount of payment reduction on the basis of weightage in percentage assigned to non-conforming items as given below.

The following percentages shall govern the payment reduction:

Sl. No.	Item/Defect/Deficiency	Percentage
(a)	**Carriageway/Pavement**	
(i)	Potholes, cracks, other surface defects	15%
(ii)	Repairs of Edges, Rutting	5%
(b)	**Road, Embankment, Cuttings, Shoulders**	
(i)	Edge drop, inadequate cross fall, undulations, settlement, potholes, ponding, obstructions	10%
(ii)	Deficient slopes, rain cuts, disturbed pitching, vegetation growth, pruning of trees	5%
(c)	**Bridges and Culverts**	
(i)	Desilting, cleaning. vegetation growth, damaged pitching, flooring, parapets, wearing course, footpaths, any damage to foundations	20%
(ii)	Any Defects in superstructures, bearings and sub-structures	10%
(iii)	Painting, repairs/replacement kerbs, railings, parapets, guideposts/crash barriers	5%
(d)	**Roadside Drains**	
(i)	Cleaning/desilting and repair of drains	5%
(e)	**Road Furniture**	
(i)	Cleaning, painting, replacement of road signs, delineators, road markings, 200 m/km/5th km stones	5%
(f)	**Miscellaneous Items**	
(i)	Removal of dead animals, broken down/accidented vehicles, fallen trees, road blockades or malfunctioning of mobile crane	10%
(ii)	Any other Defects in accordance with paragraph 1.	5%

(g)	Defects in Other Project Facilities	5%

(i) The amount to be deducted from monthly lump-sum payment for non-compliance of particular item shall be calculated as under:

$$R = (P / 100) \times M \times (L1 / L)$$

Where,

P = Percentage of particular item/Defect/deficiency for deduction

M = Monthly lump-sum payment as per Clause No. 2 & 3 of this Circular

L1 = Non-complying length

L = Total length of the project stretch,

R = Reduction (the amount to be deducted for non-compliance for a particular item/Defect/deficiency

The total amount of reduction shall be arrived at by summation of reductions for such items/Defects/deficiency or non-compliance.

For any Defect in a part of one kilometer, the non-conforming length shall be taken as one kilometre.

ANNEXURE C

Sample format for incorporating maintenance charges.

1	Total Civil Cost	A
2	Add GST on total civil cost	B=A*18%
3	QCA Charges @1.1% of Civil cost only	C=A*1.1%
4	Service charges on QCA	D=C*18%
5	Add contingencies as Applicable	E
6	Total Cost	F =A+B+C+D+E
7	Add Centage charges @7.25%	G = F*7.25%
8	Add Maintenance Charges @ 2.5% over A	H = A*2.5%
9	Add GST on Maintenance Charges	I = H*18%
10	**Grand Total**	**J=F+G+H+I**