

**OFFICE OF THE ENGINEER-IN-CHIEF
MADHYA PRADESH PUBLIC WORKS DEPARTMENT**

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**SCHEDULE OF RATES FOR ROAD & BRIDGE WORKS (w.e.f. 29-08-2017)
(ERRATA/AMMENDMENT/ ADDENDUM No. 4)**

The following Amendments are made in the SOR for Road & Bridge Works issued by The Engineer-in-Chief MP PWD w.e.f 29-08-2017

SOR Item No.	Existing			Amended		
	Description	Unit	Old Rate	Description	Unit	Amended Rate
6.12	Add extra in Item No.6.3, 6.4, 6.6 & 6.10 above for the cost of steel in dowel bar and tie rod including craddle, laps etc. complete required as per design.			Add extra in Item No.6.3, 6.4, 6.6 & 6.10 above for the cost of steel in dowel bar and tie rod including craddle, laps etc. complete required as per design.		
I)	Mild steel	MT	39259.00	Mild steel	MT	54837.00
ii)	Tor steel	MT	39259.00	Tor steel	MT	56083.00
12.31	Supplying, fitting and placing un-coated HYSD bar reinforcement in foundation complete as per drawing and technical specifications and as per relevant clauses of section 1600.	Tonne	49081.00	Supplying, fitting and placing un-coated HYSD bar reinforcement in foundation complete as per drawing and technical specifications and as per relevant clauses of section 1600.	Tonne	66069.00
12.32	Supplying, fitting and placing un-coated Mild steel reinforcement complete in foundation as per drawing and technical specification and as per relevant clauses of section 1600	Tonne	48797.00	Supplying, fitting and placing un-coated Mild steel reinforcement complete in foundation as per drawing and technical specification and as per relevant clauses of section 1600.	Tonne	64985.00
13.7	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications and as per relevant clause of section 1600.	Tonne	48936.00	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications and as per relevant clause of section 1600.	Tonne	66217.00
13.8	Supplying, fitting and placing Mild steel reinforcement complete in sub-structure as per drawing and technical specification and as per relevant clause of section 1600.	Tonne	48370.00	Supplying, fitting and placing Mild steel reinforcement complete in sub-structure as per drawing and technical specification and as per relevant clause of section 1600.	Tonne	64226.00
14.2	Supplying, fitting and placing HYSD bar reinforcement in super-structure complete as per drawing and technical specifications as per relevant clauses of section 1600	Tonne	50028.00	Supplying, fitting and placing HYSD bar reinforcement in super-structure complete as per drawing and technical specifications as per relevant clauses of section 1600	Tonne	67435.00
CHAPTER : 8.0 TRAFFIC SIGNS, MARKINGS & OTHER ROAD APPURTENANCES						
8.3	Retro- reflectorised Traffic signs Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign board as per IRC 67-2010 made of high intensity Micro-Prismatic Grade Sheeting (Type IV) vide clause 801.3.3 fixed over Aluminium composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminium with overall thickness of 4mm and aluminium skin of thickness 0.3 on both side, the ACM shall conform to Table 800-1 of specification and High Intensity Micro Prismatic Grade Sheeting shall conform to Table 800-3 of specification. The printing on the			Providing and fixing of retro-reflectorized cautionary, mandatory and informatory sign board as per IRC 67-2012 made of high intensity Micro-Prismatic Grade Sheeting (Type IV) vide IRC:67:2012 clause 6.7.3.2 & clause 801.3.3 of MoRT&H fixed over Aluminum composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminum with overall thickness of 4mm and aluminum skin of thickness 0.3 on both side, the ACM shall conform to Table 6.1 of IRC:67:2012 & table 800-1 of MORT&H specifications and High Intensity Micro Prismatic Grade Sheeting shall conform to Table 6.6 of IRC:67:2012 & table 800-3 of		

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SOR Item No.	Existing			Amended		
	Description	Unit	Old Rate	Description	Unit	Amended Rate
	high intensity grade sheeting shall conform to Clause 801.3.7 with water based latex optimized transparent ink as specified by the sheeting manufacturer, supported on composite sign post of size 75mmx33.55mmx34.99 mm (5mm thick) made of Aluminium composite material in accordance to IRC 67-2010 fixed to ground by means of properly designed foundation with M15 grade concrete 450x450x600mm The ACM sheet shall be fixed to the post with four minimum four number breakaway bolts.			MORT&H specifications. In line with clause 6.8 of IRC:67:2012 & clause 801.3.7 of MORT&H the messages (legends, numerals, letters etc..) & borders shall be screen printed or of cut out from transparent durable overlay or cut out from the same type of reflective sheeting for cautionary/ mandatory signs . Screen printing shall be processed & finished with materials and in a manner specified by the sheeting manufacturer supported on MS sign post of size 75mmx75mmx6mm fixed to ground by means of properly designed foundation of dimension 450x450x600mm with M15 grade concrete. The ACM sheet shall be fixed to the post with four minimum four number breakaway bolts & supported with a back support frame of 25mmx25mmx3mm angle. 7 years Warranty for Retro Reflective Sheeting to be provided from the original sheeting manufacturer as per clause 6.9 of IRC:67:2012 & a certified copy of three years outdoor exposure report from an independent test lab as per clause 6.7 of IRC:67:2012 for the product offered shall be submitted by the contractor.		
i)	90 cm equilateral triangle	Each	3291.00	90 cm equilateral triangle	Each	3291.00
ii)	60 cm equilateral triangle	Each	2340.00	60 cm equilateral triangle	Each	2340.00
iii)	60 cm circular	Each	2962.00	60 cm circular	Each	2962.00
iv)	80mmx60mm rectangular	Each	3928.00	80mmx60mm rectangular	Each	3928.00
v)	60cmx45 cm rectangular	Each	2899.00	60cmx45 cm rectangular	Each	2899.00
vi)	60cmx60 square	Each	3340.00	60cmx60 square	Each	3340.00
vii)	90 cm high octagon	Each	4869.00	90 cm high octagon	Each	4869.00
8.4	Providing and fixing of retro-reflecterised cautionary, mandatory and informatory sign board as per IRC 67-2010 made of high intensity Micro-Prismatic Grade Sheeting (Type XI) vide clause 801.3.3 fixed over Aluminium composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminium with overall thickness of 4mm and aluminium skin of thickness 0.3 on both side, the ACM shall conform to Table 800-1 of specification and High Intensity Micro Prismatic Grade Sheeting shall conform to Table 800-3 of specification. The printing on the high intensity grade sheeting shall conform to Clause 801.3.7 with water based latex optimized transparent ink as specified by the sheeting manufacturer, supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to ground by means of properly designed foundation with M15 grade concrete 450x450x600mm The ACM sheet shall be fixed to the post with four minimum four number breakaway bolts.			Providing and fixing of retro-reflecterised cautionary, mandatory and informatory sign board as per IRC 67-2012 made of high intensity Micro-Prismatic Grade cube corner sheeting (Type XI) vide IRC:67:2012 clause 6.7.4.3 & clause 801.3.4.3 of MORT&H fixed over Aluminium composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminum with overall thickness of 4mm and aluminum skin of thickness 0.3 on both side, the ACM shall conform to Table 6.1 of IRC:67:2012 & table 800-1 of MORT&H specifications and High Intensity Micro Prismatic Grade cube corner Sheeting shall conform to Table 6.9 of IRC:67:2012 & table 800-6 of MORT&H specifications. In line with clause 6.8 of IRC:67:2012 & clause 801.3.7 of MORT&H the messages (legends, numerals, letters etc..) & borders shall be screen printed or of cut out from transparent durable overlay or cut out from the same type of reflective sheeting for cautionary/ mandatory sign . Screen printing shall be processed & finished with materials and in a manner specified by the sheeting manufacturer supported on MS sign post of size 75mmx75mmx6mm fixed to ground by means of properly designed foundation		

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SOR Item No.	Existing			Amended		
	Description	Unit	Old Rate	Description	Unit	Amended Rate
				of dimension 450x450x600mm with M15 grade concrete. The ACM sheet shall be fixed to the post with four minimum four number breakaway bolts & supported with a back support frame of 25mmx25mmx3mm angle. 10 years Warranty for Retro Reflective Sheeting from the original sheeting manufacturer as per clause 6.9 of IRC:67:2012 & a certified copy of three years outdoor exposure report from an independent test lab as per clause 6.7 of IRC:67:2012 for the product offered shall be submitted by the contractor..		
i)	90 cm equilateral triangle	Each	3129.00	90 cm equilateral triangle	Each	3129.00
ii)	60 cm equilateral triangle	Each	2178.00	60 cm equilateral triangle	Each	2178.00
iii)	60 cm circular	Each	2800.00	60 cm circular	Each	2800.00
iv)	80 mm x 60 mm rectangular	Each	3766.00	80 mm x 60 mm rectangular	Each	3766.00
v)	60 cm x 45 cm rectangular	Each	2737.00	60 cm x 45 cm rectangular	Each	2737.00
vi)	60 cm x 60 cm square	Each	3178.00	60 cm x 60 cm square	Each	3178.00
vii)	90 cm high octagon	Each	4707.00	90 cm high octagon	Each	4707.00
8.5	<p>Direction and Place Identification signs up to 0.9 sqm size board.</p> <p>(Providing and erecting direction and place identification retroreflectorised sign as per IRC:67 made of high intensity Micro-Prismatic Grade Sheeting (Type XI) vide clause 801.3.3 fixed over Aluminium composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminium with overall thickness of 4mm and aluminium skin of thickness 0.3 on both side. the ACM shall conform to Table 800-1 of specification and High Intensity Micro Prismatic Grade Sheeting shall conform to Table 800-3 of specification. The printing on the high intensity grade sheeting shall conform to Clause 801.3.7 with water based latex optimized transparent ink as specified by the sheeting manufacturer, supported on composite sign post of size 75mmx33.55mmx34.99 mm (5mm thick) made of Aluminium composite material in accordance to IRC 67-2010 fixed to ground by means of properly designed foundation with M15 grade concrete 450x450x600mm. The ACM sheet shall be fixed to the post with minimum two number breakaway bolts.</p>	Sqm.	6641.00	Deleted	-	-
8.6	<p>Direction and Place Identification signs upto 0.9 sqm size board.</p> <p>Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign board as per IRC 67-2010 made of high intensity Micro-Prismatic Grade Sheeting (Type XI) vide clause 801.3.3 fixed over Aluminium</p>	Sqm.	6479.00	<p>Direction and Place Identification signs upto 0.9 sqm size board.</p> <p>Providing and fixing directional, informatory and place identification retro-reflectorized sign as per IRC:67:2012 made of high intensity Micro- Prismatic Grade cube corner sheeting (Type XI) vide IRC:67:2012 clause 6.7.4.3 & clause 801.3.4.3 fixed over Aluminum composite material sheet</p>	Sqm.	6479.00

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SOR Item No.	Existing			Amended		
	Description	Unit	Old Rate	Description	Unit	Amended Rate
	<p>composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminium with overall thickness of 4mm and aluminium skin of thickness 0.3 on both side, the ACM shall conform to Table 800-1 of specification and High Intensity Micro Prismatic Grade Sheeting shall conform to Table 800-3 of specification. The printing on the high intensity grade sheeting shall conform to Clause 801.3.7 with water based latex optimized transparent ink as specified by the sheeting manufacturer, supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to ground by means of properly designed foundation with M15 grade concrete 450x450x600mm. The ACM sheet shall be fixed to the post with four minimum four number breakaway bolts.</p>			<p>with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminium with overall thickness of 4mm and aluminium skin of thickness 0.3 on both side, the ACM shall conform to Table 6.1 of IRC:67:2012 & table 800-1 of MORT&H specifications and High Intensity Micro Prismatic Grade cube corner sheeting shall conform to Table 6.9 of IRC:67:2012 & table 800-6 of MORT&H specifications. In line with clause 6.8 of IRC:67:2012 & clause 801.3.7 of MORT&H, for the directional, informatory, place identification and other sign boards, the messages (legends, letters, numerals etc.) and borders shall be cut-out from durable transparent overlay film or cut-out from the same reflective sheeting only. Cut-outs shall be from durable transparent overlay materials as specified by the sheeting manufacturer and shall be bonded with the sheeting in the manner specified by the manufacturer and should be supported on MS sign post of size 75mmx75mmx6mm fixed to ground by means of properly designed foundation of dimension 450x450x600mm with M15 grade concrete. The ACM sheet shall be fixed to the post with four minimum four number breakaway bolts & supported with a back support frame of 25mmx25mmx3mm angle. 10 years Warranty for Retro Reflective Sheeting from the original sheeting manufacturer as per clause 6.9 of IRC:67:2012 & a certified copy of three years outdoor exposure report from an independent test lab as per clause 6.7 of IRC:67:2012 for the product offered shall be submitted by the contractor..</p>		
8.7	<p>Direction and Place Identification signs with size more than 0.9 sqm size board, (Providing and erecting direction and place identification retroreflectorised sign as per IRC:67 made of high intensity Micro-Prismatic Grade Sheeting (Type XI) vide clause 801.3.3 fixed over Aluminium composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminium with overall thickness of 4mm and aluminium skin of thickness 0.3 on both side, the ACM shall conform to Table 800-1 of specification and High Intensity Micro Prismatic Grade Sheeting shall conform to Table 800-3 of specification. The printing on the high intensity grade sheeting shall conform to Clause 801.3.7 with water based latex optimized transparent ink as specified by the sheeting manufacturer, supported on</p>	Sqm.	11603.00	Deleted.	-	-

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	composite sign post of size 75mmx33.55mmx34.99 mm (5mm thick) made of Aluminium composite material in accordance to IRC 67-2010 fixed to ground by means of properly designed foundation with M15 grade concrete 450x450x600mm. The ACM sheet shall be fixed to the post with minimum two number breakaway bolts.					
8.8	Direction and Place Identification signs with size more than 0.9 sqm size board. Providing and fixing of retro-reflectors cautionary, mandatory and informative sign board as per IRC 67-2010 made of high intensity Micro-Prismatic Grade Sheeting (Type XI) vide clause 801.3.3 fixed over Aluminium composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminium with overall thickness of 4mm and aluminium skin of thickness 0.3 on both side. the ACM shall conform to Table 800-1 of specification and High Intensity Micro Prismatic Grade Sheeting shall conform to Table 800-3 of specification. The printing on the high intensity grade sheeting shall conform to Clause 801.3.7 with water based latex optimized transparent ink as specified by the sheeting manufacturer, supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to ground by means of properly designed foundation with M15 grade concrete 450x450x600mm. The ACM sheet shall be fixed to the post with four minimum four number breakaway bolts.	Sqm.	11441.00	Direction and Place Identification signs with size more than 0.9 sqm size board. Providing and fixing directional, informative and place identification retro-reflectors sign as per IRC:67:2012 made of high intensity Micro- Prismatic Grade cube corner sheeting (Type XI) vide IRC:67:2012 clause 6.7.4.3 & clause 801.3.4.3 of MoRTH fixed over Aluminum composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminum with overall thickness of 4mm and aluminum skin of thickness 0.3 on both side. the ACM shall conform to Table 6.1 of IRC:67:2012 & table 800-1 of MORT&H specifications and High Intensity Micro Prismatic Grade cube corner sheeting shall conform to shall conform to Table 6.9 of IRC:67:2012 & table 800-6 of MORT&H specifications. In line with clause 6.8 of IRC:67:2012 & clause 801.3.7 of MORT&H, for the directional, informative, place identification and other sign boards, the messages (legends, letters, numerals etc.) and borders shall be cut-out from durable transparent overlay film or cut-out from the same reflective sheeting only. Cut-outs shall be from durable transparent overlay materials as specified by the sheeting manufacturer and shall be bonded with the sheeting in the manner specified by the manufacturer and should be supported on MS sign post of size 75mmx75mmx6mm fixed to ground by means of properly designed foundation of dimension 450x450x600mm with M15 grade concrete. The ACM sheet shall be fixed to the post with four minimum four number breakaway bolts & supported with a back support frame of 25mmx25mmx3mm angle. 10 years Warranty for Retro Reflective Sheeting from the original sheeting manufacturer as per clause 6.9 of IRC:67:2012 & a certified copy of three years outdoor exposure report from an independent test lab as per clause 6.7 of IRC:67:2012 for the product offered shall be submitted by the contractor.	Sqm.	11441.00
8.9	Providing and pasting on existing informative boards high intensity Micro-Prismatic Grade Sheeting (Type XI) vide clause 801.3.3 duly	Sqm.	5273.00	Providing and pasting on existing informative boards high intensity Micro-Prismatic Grade cube corner Sheeting (Type XI) vide clause IRC:67:2012	Sqm.	5273.00


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	Printed message with water based latex optimized transparent ink as directed by Engineer-in-Charge. Sheet shall be fixed on the existing board by de-greasing either by acid or hot alkaline etching and all scale/dirt removed to obtain smooth plain surface before application of high intensity grade retro reflective sheeting all complete.			clause 6.7.4.3 & clause 801.3.4.3 with messages (legends, numerals, letters etc..) & borders for the informatory & other sign boards shall be cut out from durable transparent overlay film or cut out from the same reflective sheeting only. Cut-outs shall be from durable transparent overlay materials as specified by the sheeting manufacturer and shall be bonded with the sheeting in the manner specified by the manufacturer and as directed by Engineer-in-Charge. Sheet shall be fixed on the existing board by de-greasing either by acid or hot alkaline etching and all scale/ dirt removed to obtain smooth plain surface before application of high intensity grade cube corner retro reflective sheeting (Type XI) all complete. 10 years Warranty for Retro Reflective Sheeting from the original sheeting manufacturer as per clause 6.9 of IRC:67:2012 & a certified copy of three years outdoor exposure report as per clause 6.7 of IRC:67:2012 for the product offered shall be submitted by the contractor.		
8.17	Road Delineators Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high above ground level, painted black and white in 15 cm wide stripes, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to IRC-79 and the drawings.	Each	224.00	Road Delineators Supplying and installation road delineators (road way indicators), as per MORT&H Clause 806. The structure shall be made in roll forming process having height of 80-100 cm above the ground level, width not less than 100 mm and shall extend not more than 300mm below the ground while being installed, buried or pressed in to the ground in confirmation with IRC:79: 1981, are as directed by the by the Engineer painted black with powder coat of minimum 40 microns thickness for protection against corrosion, on top of which Type XI retro reflective sheeting shall be pasted on both sides complying to IRC:79:1981. The delineator should consist of minimum retro reflective unit exposed area of 330 cm ² white color, full cube corner micro prismatic non-metallic retro reflective sheeting on each side conforming with IRC 67:2012 and meeting the coefficient of retro reflection values as per ASTM D 4956 Type XI table specification. The delineator shall have grooves across the length to make the reflective sheets vandal-proof.	Each	1248.00
8.28	Road Markers/Road Stud with Lense Reflector Providing and fixing of road stud 100x 100 mm, die cast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling hole 60 mm upto a depth of 60 mm and bedded in a suitable bituminous grout or epoxy mortar, all as per BS 873 part 4:1973	Each	545.00	Road Markers/Road Stud with Lense Reflector Providing and fixing single mould twin shanked molded Road Markers/Road Stud made of poly carbonate or ABS body and shall support a load of 13635 Kg tested in accordance to ASTM D 4280 and complying to specifications of Section-5 of IRC:35-2015 and clause 804 of MORTH. As per clause 804.2.2 of MoRTH and Section-5 of IRC:35-2015, the reflecting panels shall consist of number of lenses containing single or	Each	448.00

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SOR Item No.	Existing			Amended		
	Description	Unit	Old Rate	Description	Unit	Amended Rate
				dual prismatic cubes capable of providing total internal reflection of the light entering the lens face. The slope or retro-reflecting surface should be 35 +/- 5 degree to base. The reflective marker shall be fixed to the road surface using the epoxy/ adhesives and the procedure recommended by the manufacturer. No nails shall be used to affix the markers so that they do not pose safety hazard on the road. The contractor shall submit a two year replacement warranty for satisfactory field performance including stipulated retro-reflectance of the reflecting panel.		

The above amendment shall be effective from ~~01.09.2018~~ 01.09.2018.

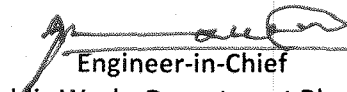

(Akhilesh Agrawal)
Engineer-in-Chief

Public Works Department Bhopal
Bhopal, dated 01/09/2018

Encl. No. SOR/Road/Comm./2016/ 2660

Copy is forwarded to:

1. PA to Hon'ble Minister, PWD Bhopal.
2. The Principal Secretary, Govt. of M.P. MP PWD, Bhopal.
3. The Director General (Road Development), Ministry of Road Transport & Highway (Road Wing), Transport, New Delhi.
4. The Secretary, Govt. of M.P. MP PWD, Bhopal.
5. The Chief Technical Examiner, Madhya Pradesh Bhopal.
6. The Commissioner, Housing & Environment, Bhopal.
7. The Accountant General, MP Gwalior/ Bhopal.
8. The Secretary, Lokayukta, MP Bhopal.
9. All Chief Engineers Madhya Pradesh Public Works Department.
10. The Engineer-in-Chief, M. P. Road Development Corporation Ltd., Bhopal.
11. The Chief Engineer, Rural Engineer Services Madhya Pradesh Bhopal.
12. The Commissioner, Bhopal.
13. The Superintending Engineer, Capital Project Circle, CPA Bhopal.
14. All Superintending Engineer Madhya Pradesh Public Works Department,
15. All Executive Engineer, Madhya Pradesh Public Works Department.


Engineer-in-Chief
Public Works Department Bhopal