



कार्यालय प्रमुख अभियन्ता एवं विभागाध्यक्ष,
"प्रकीर्ण वर्ग"



लो०नि०वि०, उत्तराखण्ड, देहरादून

Website-<http://pwd.uk.gov.in>

E-Mail-eicpwwd@nic.in

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परिपत्र

MORD द्वारा जारी Specifications for Rural Roads (1st Revision -2014) एवं MORTH द्वारा जारी Specifications for Road and Bridge Works (5th Revision - 2013) में Traffic Signage एवं Road Furniture से सम्बन्धित मदों की विशिष्टियों को पुनरीक्षित किया गया है तथा कुछ नई मदों को भी सम्मिलित किया गया है।

Retro-Reflective Sheeting हेतु MORD की विशिष्टियों में Class A (Type I – Engineering Grade Sheeting एवं Type II- Super Engineering Grade Sheeting) तथा Class B (Type III- High Intensity Grade Sheeting एवं Type IV- High Intensity Micro Prismatic Grade Sheeting) का प्राविधान किया गया है। इसी प्रकार MORTH की विशिष्टियों में Retro-Reflective Sheeting हेतु High Intensity Grade (Type III) Sheeting, High Intensity Micro Prismatic Grade Sheeting (HIP) (Type IV), Prismatic Grade Sheeting (Type VIII, IX एवं XI) का प्राविधान किया गया है। इसके अतिरिक्त Road Furniture से सम्बन्धित कुछ नई मदें जैसे Road Studs, Solar Road Studs, Median Marker, Spring Post, Aluminium Prismatic Sheeting इत्यादि भी MORD एवं MORTH की विशिष्टियों में सम्मिलित की गई है।

परन्तु वर्तमान में लोक निर्माण विभाग के केन्द्रीय शेड्यूल ऑफ रेट्स में केवल Glass Beaded Sheeting से संबंधित मदों की दरें उपलब्ध है। चूँकि वित्तीय वर्ष 2017-18 हेतु केन्द्रीय शेड्यूल ऑफ रेट्स का पुनरीक्षण प्रस्तावित है, जिसके उपरान्त ही उपरोक्त नई मदों को केन्द्रीय शेड्यूल ऑफ रेट्स में सम्मिलित किया जाना संभव होगा। अतः तब तक उदाहरणार्थ उपरोक्तानुसार **Traffic Signage** हेतु नई **Sheetings** तथा **Road Furniture** की नई मदों के दर विश्लेषण एवं उनमें प्रयुक्त संसाधनों की मूल दरें संलग्न कर इस आशय से प्रेषित हैं कि केन्द्रीय शेड्यूल ऑफ रेट्स को वित्तीय वर्ष 2017-18 हेतु पुनरीक्षित किए जाने तक, आगणन गठित किये जाने हेतु संलग्न दर विश्लेषण का प्रयोग किया जाए।

संलग्न दर विश्लेषण में नवीन विशिष्टियों के अनुसार रायपुर विकासखण्ड के लिए दरें ली गई हैं। अन्य विकासखण्डों हेतु आगणन गठित करने के लिए संलग्न दर विश्लेषण में, केन्द्रीय शेड्यूल ऑफ रेट्स में उपलब्ध सम्बन्धित विकासखण्ड के संसाधनों की दरें प्रयुक्त कर दर विश्लेषण किया जाए।

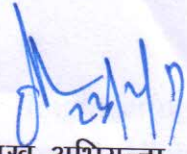
विभिन्न प्रकार की Sheetings के प्रयोग एवं विशिष्टियों के सम्बन्ध में MORTH एवं MORD द्वारा जारी विशिष्टियों के अतिरिक्त IRC द्वारा जारी IRC:67-2012 (Code of Practice for Road Signs), IRC:SP:73-2015 (Manual of Standards and Specifications for Two Laning of Highways with Paved Shoulders), एवं IRC:SP:84-2014 (Manual of Standards and Specifications for Two Laning of Highways through Public Private Partnership) का संज्ञान लिया जा सकता है।

प्रमुख अभियन्ता
लो०नि०वि०

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित:


1. मुख्य अभियन्ता, मुख्यालय, विभागाध्यक्ष कार्यालय, लो0 नि0 वि0 देहरादून।
2. समस्त मुख्य अभियन्ता, क्षेत्रीय कार्यालय/राष्ट्रीय राजमार्ग/ए0डी0बी0/वर्ल्ड बैंक/पी0एम0जी0एस0वाई, लोक निर्माण विभाग, उत्तराखण्ड देहरादून/पौड़ी/टिहरी/हल्द्वानी/पिथौरागढ़/अल्मोड़ा को इस आशय से प्रेषित कि अपने अधीनस्थ कार्यालयों को भी अपने स्तर से अवगत करायें।
3. वरिष्ठ स्टाफ ऑफिसर I \ II , विभागाध्यक्ष कार्यालय, लो0 नि0 वि0 देहरादून।
4. समस्त तकनीकी स्टाफ, विभागाध्यक्ष कार्यालय, लोक निर्माण विभाग, उत्तराखण्ड, देहरादून।
5. अधिशासी अभियन्ता, टी0ए0सी, वित्त विभाग, उत्तराखण्ड शासन।
6. प्राविधिक वर्ग, विभागाध्यक्ष कार्यालय, लो0 नि0 वि0 देहरादून।


संलग्न: उपरोक्तानुसार



प्रमुख अभियन्ता
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Basic Rates of Resources used for Traffic Signage and Road Furniture

Sl. No.	Name of Resource	Type	Unit	Basic Rate
1	Drilling Machine	Machine	Hour	50.00
2	Adhesive	Material	Kg.	1575.00
3	Road Studs	Material	No.	160.00
4	Solar Studs	Material	No.	2200.00
5	Spring Post (750 mm Height)	Material	No.	575.00
6	Spring Post (900 mm Height)	Material	No.	660.00
7	Bolt with washer	Material	No.	5.00
8	Road Delineator	Material	No.	500.00
9	PVC Traffic Cones (600 mm height, 3.0 kg weight)	Material	No.	525.00
10	PVC Traffic Cones (750 mm height, 3.5 kg weight)	Material	No.	615.00
11	PVC Traffic Cones (900 mm height, 4.0 kg weight)	Material	No.	660.00
12	Reflective Glass Beads	Material	Kg.	80.00
13	Hot Applied Thermoplastic Compound	Material	Litre	190.00
14	Median Marker	Material	No.	275.00
15	Aluminium Flexible Prismatic Sheeting / Hazard Marker	Material	Roll/ 145 Sq.ft.	67320.00
16	Type IV Retroreflective HIP Sheeting pasted on Aluminium Composite Panel (ACP) Sheet 3 mm thick inc. all for retro reflective signs	Material	Sq.m	5725.00
17	Type IV Retroreflective HIP Sheeting pasted on Aluminium Composite Panel (ACP) Sheet 4 mm thick inc. all for retro reflective signs	Material	Sq.m	6170.00
18	Type XI Retroreflective DG Sheeting pasted on Aluminium Composite Panel (ACP) Sheet 3 mm thick inc. all for retro reflective signs	Material	Sq.m	10170.00
19	Type XI Retroreflective DG Sheeting pasted on Aluminium Composite Panel (ACP) Sheet 4 mm thick inc. all for retro reflective signs	Material	Sq.m	10610.00


Rajbeer Singh Chauhan
A. E.


(रुचना थपलियाल)
अधीक्षक अभियन्ता


अधीक्षक अभियन्ता
नवम् ब्लाक, लो.नि.वि.
देहरादून


23/4/17

Rate Analysis for Retro Reflective Type IV Board (With 3 mm ACP)

Sr. No.	Description	UNIT	QTY	RATE	TOTAL
	Providing & fixing of retro reflective signs with a corrosion resistant 3mm thick aluminium composite panel face to be fully covered with High Intensity Prismatic sheeting Type IV as per IRC-67:2012 retro reflective sheeting with MS angle frame of 35X35X5 mm size				
	Unit - Sq. Mtr				
	Output - 1 Sq. Mtr				
a	Material				
a1	Aluminium Composite Panel, 3mm thick including 2% Freight, 2% CST & 5% wastage	sq.m	1.05	659.00	691.95
a2	HIP Grade Type IV sheeting (including 5% F&I & 2% CST)	sq.m	1.00	1317.00	1317.00
a3	Add for border, arrows, destination name, distance etc	sq.m	0.60	1317.00	790.20
a4	Angle Iron 35mm X 35mm X 5mm for framing and bracing including fabrication & wastage	Kg	14.56	40.40	588.22
a5	Stainless Steel nuts, Bolts, washers & rivets				100.00
				Total	3487.37
b	Miscellaneous				
b1	Plotting	L.S.			200.00
b2	Pasting	L.S.			200.00
b3	Riveting	L.S.			150.00
b4	Transfer Tape	L.S.			150.00
b5	Anti Corrosive Paint	L.S.			110.00
				Total	810.00
				Total (a+b)	4297.37
c	Add Excise Duty @12.36% on (a+b)				531.16
d	Add Freight Charges & Packing Charges @5% on (a+b)				214.87
e	Add VAT @ 13.5% on (a to d)				680.86
				Total cost per sq.m	5724.26
				Say	5725.00

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SE, NH
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9th circle

Rate Analysis for Retro Reflective Type IV Board (With 4 mm ACP)					
Sr. No.	Description	UNIT	QTY	RATE	TOTAL
	Providing & fixing of retro reflective signs with a corrosion resistant 4 mm thick aluminium composite panel face to be fully covered with High Intensity Prismatic sheeting Type IV as per IRC-67:2012 retro reflective sheeting with MS angle frame of 35X35X5 mm size				
	Unit - Sq. Mtr				
	Output - 1 Sq. Mtr				
a	Material				
a1	Aluminium Composite Panel, 4 mm thick including 5% wastage, F&I, CST but excluding VAT	sq.m	1.05	1090.00	1144.50
a2	HIP Grade Type IV sheeting (including 5% F&I & 2% CST)	sq.m	1.00	1317.00	1317.00
a3	Add for border, arrows, destination name, distance etc	sq.m	0.60	1317.00	790.20
a4	Angle Iron 35mm X 35mm X 5mm for framing and bracing including fabrication & wastage	Kg	14.56	40.40	588.22
a5	Stainless Steel nuts, Bolts, washers & rivets				100.00
				Total	3939.92
b	Miscellaneous				
b1	Plotting	L.S.			200.00
b2	Pasting	L.S.			200.00
b3	Riveting	L.S.			150.00
b4	Transfer Tape	L.S.			150.00
b5	Anti Corrosive Paint	L.S.			110.00
				Total	810.00
				Total (a+b)	4749.92
c	Add Excise Duty @12.36% on [(a+b)-a1]				445.63
d	Add Freight Charges & Packing Charges @5% on (a+b)				237.50
e	Add VAT @ 13.5% on (a to d)				733.46
				Total cost per sq.m	6166.51
				Say	6170.00

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5th Circle*

20/10/20

Rate Analysis for Retro Reflective Type XI Board (With 3 mm ACP)

Sr. No.	Description	UNIT	QTY	RATE	TOTAL
	Providing & fixing of retro reflective signs with a corrosion resistant 3 mm thick aluminium composite panel face to be fully covered with High Intensity Prismatic sheeting Type XI as per IRC-67:2012 retro reflective sheeting with MS angle frame of 35X35X5 mm size				
	Unit - Sq. Mtr				
	Output - 1 Sq. Mtr				
a	Material				
a1	Aluminium Composite Panel, 3 mm thick including 2% Freight, 2% CST & 5% wastage	sq.m	1.05	659.00	691.95
a2	DG Grade Type XI sheeting (including 5% F&I & 2% CST)	sq.m	1.00	3293.00	3293.00
a3	Electro Cut Film for arrows, destination name, distance etc	sq.m	1.00	1262.00	1262.00
a4	Angle Iron 35mm X 35mm X 5mm for framing and bracing including fabrication & wastage	Kg	18.20	40.40	735.28
a5	Stainless Steel nuts, Bolts, washers & rivets				100.00
				Total	6082.23
b	Miscellaneous				
b1	Plotting	L.S.			400.00
b2	Pasting	L.S.			400.00
b3	Riveting	L.S.			300.00
b4	Transfer Tape	L.S.			300.00
b5	Anti Corrosive Paint	L.S.			150.00
				Total	1550.00
				Total (a+b)	7632.23
c	Add Excise Duty @12.36% on (a+b)				943.34
d	Add Freight Charges & Packing Charges @5% on (a+b)				381.61
e	Add VAT @ 13.5% on (a to d)				1209.22
				Total cost per sq.m	10166.41
				Say	10170.00

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*SE, NH
10th circle*

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9th circle*

Rate Analysis for Retro Reflective Type XI Board (With 4 mm ACP)

Sr. No.	Description	UNIT	QTY	RATE	TOTAL
	Providing & fixing of retro reflective signs with a corrosion resistant 4mm thick aluminium composite panel face to be fully covered with High Intensity Prismatic sheeting Type XI as per IRC-67:2012 retro reflective sheeting with MS angle frame of 35X35X5 mm size				
	Unit - Sq. Mtr				
	Output - 1 Sq. Mtr				
a	Material				
a1	Aluminium Composite Panel, 4 mm thick including 5% wastage, F&I, CST but excluding VAT	sq.m	1.05	1090.00	1144.50
a2	DG Grade Type XI sheeting (including 5% F&I & 2% CST)	sq.m	1.00	3293.00	3293.00
a3	Electro Cut Film for arrows, destination name, distance etc	sq.m	1.00	1262.00	1262.00
a4	Angle Iron 35mm X 35mm X 5mm for framing and bracing including fabrication & wastage	Kg	18.20	40.40	735.28
a5	Stainless Steel nuts, Bolts, washers & rivets				100.00
				Total	6534.78
b	Miscellaneous				
b1	Plotting	L.S.			400.00
b2	Pasting	L.S.			400.00
b3	Riveting	L.S.			300.00
b4	Transfer Tape	L.S.			300.00
b5	Anti Corrosive Paint	L.S.			150.00
				Total	1550.00
				Total (a+b)	8084.78
c	Add Excise Duty @12.36% on [(a+b)-a1]				857.82
d	Add Freight Charges & Packing Charges @5% on (a+b)				404.24
e	Add VAT @ 13.5% on (a to d)				1261.82
				Total cost per sq.m	10608.66
				Say	10610.00

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ROAD SIGNAGE

Item Description		Rate	Unit		
8-4	Retro-Reflective Traffic Signs - Providing and fixing of corrosion resistant 2mm thick Type IV retro-reflective cautionary, mandatory, informative sign board with 7 year warranty as per IRC:67, made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 3 mm thick (including framing and bracing with fabrication, plotting, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing, issued in original by retro-reflective sheeting manufacturer having operations in India by their indian subsidiary. (Clause No. 801 of MORTH)				
98205	8-4-(i) 90 cm equilateral triangle		3,886.03 each		
S.No.		Qty.	Rate	Unit	Amount
Labour Group					
1	PL14 Mate	0.01	283.25	day	2.83
2	PL15 Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group					
1	PMC074 Tractor	0.01	345.00	hours	3.45
Material Group					
1	PM0101 MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2	Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.35	5,725.00	sq.m	2003.75
Total Resource Amount					2,842.01
S.No.		Qty.	Rate	Unit	Amount
1	3-5-1 Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2	11-4-2-2 PCC Grade M15	0.12	4897.27	cu.m	587.67
3	10-6 Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount					656.80
Over Heads					
14. Contractor's Profit +Overhead Charges 12.5% on (All Resource)					355.25
102. Labour Cess 1% on (Resource Cost + Over Head Cost)					31.97
Total OH Amount					387.22
Total Cost for	1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost			3,886.03
Item Rate Per each					3,886.03
Notes: 1. Any one area of aluminium/ACP/ACM sheeting given at (i) to (vii) may be adopted as per site requirement and in accordance with IRC : 67:2012					
2. Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters 3. The depth of foundation and quantity of cement concrete in the foundation are indicative. These may be increased for areas having higher wind velocities like in coastal areas. This is applicable to all road signs and directions boards.					

98206	8-4-(ii) 60 cm equilateral triangle			2,650.08	each
S.No.		Qty.	Rate	Unit	Amount
Labour Group					
1	PL14 Mate	0.01	283.25	day	2.83
2	PL15 Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group					
1	PMC074 Tractor	0.01	345.00	hours	3.45
Material Group					
1	PM0101 MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2	Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.16	5,725.00	sq.m	916.00
Total Resource Amount					1,754.26
S.No.		Qty.	Rate	Unit	Amount
1	3-5-1 Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2	11-4-2-2 PCC Grade M15	0.12	4897.27	cu.m	587.67
3	10-6 Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount					656.80
Over Heads					
14. Contractor's Profit +Overhead Charges 12.5% on (All Resource)					219.28
102. Labour Cess 1% on (Resource Cost + Over Head Cost)					19.74
Total OH Amount					239.02
Total Cost for	1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost			2,650.08
Item Rate Per each					2,650.08

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98207 8-4-(iii)

60 cm circular

		Qty.	Rate	Unit	3,430.68	each
Labour Group						
1	PL14	Mate	0.01	283.25	day	2.83
2	PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group						
1	PMC074	Tractor	0.01	345.00	hours	3.45
Material Group						
1	PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2		Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.28	5,725.00	sq.m	1603.00
Total Resource Amount						2,441.26
S.No.						
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2	11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3	10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount						656.80
Over Heads						
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)						305.16
102. Labour Cess 1% on (Resource Cost + Over Head Cost)						27.46
Total OH Amount						332.62
Total Cost for		1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost			3,430.68
Item Rate Per						each 3,430.68

98208 8-4-(iv)

80 cm x 60 cm rectangular

		Qty.	Rate	Unit	4,731.69	each
S.No.						
Labour Group						
1	PL14	Mate	0.01	283.25	day	2.83
2	PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group						
1	PMC074	Tractor	0.01	345.00	hours	3.45
Material Group						
1	PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2		Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.48	5,725.00	sq.m	2748.00
Total Resource Amount						3,586.26
S.No.						
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2	11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3	10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount						656.80
Over Heads						
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)						448.28
102. Labour Cess 1% on (Resource Cost + Over Head Cost)						40.35
Total OH Amount						488.63
Total Cost for		1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost			4,731.69
Item Rate Per						each 4,731.69

98209 8-4-(v)

60 cm x 45 cm rectangular

		Qty.	Rate	Unit	3,365.63	each
S.No.						
Labour Group						
1	PL14	Mate	0.01	283.25	day	2.83
2	PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group						
1	PMC074	Tractor	0.01	345.00	hours	3.45
Material Group						
1	PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2		Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.27	5,725.00	sq.m	1545.75
Total Resource Amount						2,384.01
S.No.						
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2	11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3	10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount						656.80
Over Heads						
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)						298.00
102. Labour Cess 1% on (Resource Cost + Over Head Cost)						26.82
Total OH Amount						324.82
Total Cost for		1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost			3,365.63
Item Rate Per						each 3,365.63

AE

EE

*SE, NH
low circle
C.S.*

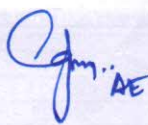

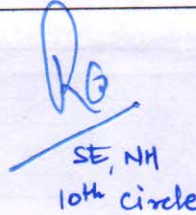
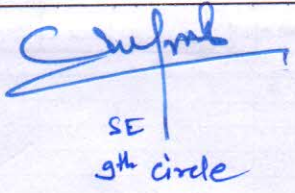
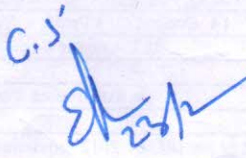

*SE
5th circle*

20/2

98210 8-4-(vi)		60 cm x 60 cm square		3,951.09		each
S.No.		Qty.	Rate	Unit	Amount	
Labour Group						
1	PL14	Mate	0.01	283.25	day	2.83
2	PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group						
1	PMC074	Tractor	0.01	345.00	hours	3.45
Material Group						
1	PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2		Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.36	5,725.00	sq.m	2061.00
Total Resource Amount						2,899.26
Child Items						
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2	11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3	10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount						656.80
Over Heads						
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)						362.41
102. Labour Cess 1% on (Resource Cost + Over Head Cost)						32.62
Total OH Amount						395.02
Total Cost for		1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost			3,951.09
Item Rate Per						each
						3,951.09

98211 8-4-(vii)		90 cm high octagon		5,967.64		each
S.No.		Qty.	Rate	Unit	Amount	
Labour Group						
1	PL14	Mate	0.01	283.25	day	2.83
2	PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group						
1	PMC074	Tractor	0.01	345.00	hours	3.45
Material Group						
1	PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2		Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.67	5,725.00	sq.m	3835.75
Total Resource Amount						4,674.01
Child Items						
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2	11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3	10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount						656.80
Over Heads						
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)						584.25
102. Labour Cess 1% on (Resource Cost + Over Head Cost)						52.58
Total OH Amount						636.83
Total Cost for		1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost			5,967.64
Item Rate Per						each
						5,967.64

Notes: 1. Any one area of ACP sheeting given at (i) to (vii) may be adopted as per site requirement and in accordance with IRC 67:2012. Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters 3. The depth of foundation and quantity of cement concrete in the foundation are indicative. These may be increased for areas having higher wind velocities like in coastal areas. This is applicable to all road signs and directions boards.

 AE
 EE
 SE, NH
 10th circle
 SE
 9th circle
 C.S.


Direction and Place Identification Signs upto 0.9 sqm Size Board.

Providing and erecting direction and place identification sign with corrosion resistant 2mm thick **Type IV** retro- reflective cautionary, mandatory, informatory sign board with 7 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 3 mm thick (including framing and bracing with fabrication, plotting, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing) with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing. (Clause No. 801 of MORTH)

S.No.	Qty.	Rate	Unit	sq.m Amount	
Labour Group					
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.20	257.50	day	51.50
Machine Group					
1 PMC074	Tractor	0.02	345.00	hours	6.90
Material Group					
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2	Retro reflective Type IV HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.90	5,725.00	sq.m	5152.50
Total Resource Amount					8,430.70
S.No.					
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount					656.80
Over Heads					
54. Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables 2% on (Material Group)					118.40
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)					762.47
102. Labour Cess 1% on (Resource Cost + Over Head Cost)					68.62
Total OH Amount					949.49
Total Cost for	0.90 sq.m	= Sub Items Cost + Resource Cost + Overhead Cost			7,587.63
				Item Rate Per sq.m	8,430.70

Notes: i) Lettering and arrow marks on sign board to be provided as per IRC 67:2012 requirement. Rates of these items have been considered in pricing ii) Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters

Direction and Place Identification Signs with size more than 0.9 sqm size Board.

Providing and erecting direction and place identification sign with corrosion resistant 2mm thick **Type IV** retro- reflective cautionary, mandatory, informatory sign board with 7 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 4 mm thick (including framing and bracing with fabrication, plotting, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing) with area exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing. (Clause No. 801 of MORTH)

S.No.	Qty.	Rate	Unit	sq.m Amount	
Labour Group					
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.30	257.50	day	77.25
Machine Group					
1 PMC074	Tractor	0.02	345.00	hours	6.90
Material Group					
1 PM0101	MS Flat / Structural Steel	38.00	40,400.00	M.T.	1,535.20
2	Retro reflective Type IV HIP sheeting pasted on 4mm thick ACP/ ACM including all	1.50	6,170.00	sq.m	9255.00
Total Resource Amount					10,877.18
S.No.					
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.43	114.42	cu.m	49.20
2 11-4-2-2	PCC Grade M15	0.24	4897.27	cu.m	1175.34
3 10-6	Painting on Steel Surfaces	0.86	102.23	sq.m	87.92
Total Child Item Amount					1312.46
Over Heads					
54. Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables 2% on (Material Group)					215.80
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)					1386.62
102. Labour Cess 1% on (Resource Cost + Over Head Cost)					124.80
Total OH Amount					1,727.22
Total Cost for	1.50 sq.m	= Sub Items Cost + Resource Cost + Overhead Cost			13,916.87
				Item Rate Per sq.m	9,277.91

Notes: i) Lettering and arrow marks on sign board to be provided as per IRC 67:2012 requirement. Rates of these items have been considered in pricing ii) Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters

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- Signature: AE
- Signature: EE
- Signature: SE, NH
- Signature: 10th circle
- Signature: SE
- Signature: 9th circle
- Signature: G's

Overhead Signs

Providing and erecting overhead signs with a corrosion resistant 2mm thick **Type IV HIP** retro-reflective sheeting with 07 year warranty made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 4 mm thick (including framing and bracing with fabrication, plotting, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), installed as per clause 802.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans issued in original by retro-reflective sheeting manufacturer having operations in India by their indian subsidiary. (Clause No. 802 of MORTH)

98214 8-7-A

Truss and Vertical Support

				93,497.01	tonne
				Unit	Amount
		Qty.	Rate		
Labour Group					
1	PL03	Blacksmith 1st class/Electrician	2.00	468.65	day
2	PL14	Mate	0.24	283.25	day
3	PL15	Beldar/mazdoor (unskilled)	4.00	257.50	day
Machine Group					
1	PMC033	Truck 10 t capacity	0.50	400.00	hours
2	PMC044	Cranes c) 3 tonnes	3.00	365.00	hours
Material Group					
1	PM0201	Aluminium alloy/galvanised steel	1.05	62,800.00	tonne
Total Resource Amount					69,270.28
S.No.					
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.86	114.42	cu.m
2	11-4-2-2	PCC Grade M15	0.48	4897.27	cu.m
3	10-6	Painting on Steel Surfaces	3.44	102.23	sq.m
Total Child Item Amount					2800.76
Over Heads					
55. Steel for Welding Consumables, Nuts & Bolts and Drilling Holes 1% on (Material Group)					659.40
54. Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables 15% on (Material Group)					9,891.00
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)					9,977.59
102. Labour Cess 1% on (Resource Cost + Over Head Cost)					897.98
Total OH Amount					21,425.97
Total Cost for	1.00 tonne	= Sub Items Cost + Resource Cost + Overhead Cost			93,497.01
Item Rate Per					tonne
					93,497.01

98215 8-7-B

Type IV HIP retro- reflective sheeting for Over Head Sign

				7,114.24	sq.m
				Unit	Amount
S.No.		Qty.	Rate		
Labour Group					
1	PL03	Blacksmith 1st class/Electrician	0.10	468.65	day
2	PL14	Mate	0.02	283.25	day
3	PL15	Beldar/mazdoor (unskilled)	0.15	257.50	day
Material Group					
1		Retro reflective Type IV HIP sheeting pasted on 4mm thick ACP/ ACM including all	1.00	6,170.00	sq.m
Total Resource Amount					6,261.16
Over Heads					
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)					782.64
102. Labour Cess 1% on (Resource Cost + Over Head Cost)					70.44
Total OH Amount					853.08
Total Cost for	1.00 sq.m	= Resource Cost + Overhead Cost			7,114.24
Item Rate Per					sq.m
					7,114.24

Notes: 1. The cost of excavation and foundation concrete for fixing of vertical support system to be worked out separately as per the approved drawing/design and to be included in the estimate. 2. Lettering and arrow marks on sign board to be provided separately as per actual requirement. Rates for these items have been included separately in this chapter.

AE
EE
SE, NH 10th circle
SE 9th circle
C.S.
22/2

Retro-Reflective Traffic Signs -

Providing and fixing of corrosion resistant 2mm thick DG Grade Type XI retro- reflective cautionary, mandatory, informatory sign board with 10 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 3 mm thick (including framing and bracing with fabrication, plotting of letters on Electro cut film, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing issued in original by retro-reflective sheeting manufacturer having operations in India by their indian subsidiary. (Clause No. 801 of MORTH)

98205 8-4-(i)		90 cm equilateral triangle			5,653.76	each
S.No.			Qty.	Rate	Unit	Amount
Labour Group						
1	PL14	Mate	0.01	283.25	day	2.83
2	PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group						
1	PMC074	Tractor	0.01	345.00	hours	3.45
Material Group						
1	PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T./Kg	767.60
2	PM2280	Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.35	10,170.00	sq.m	3559.50
Total Resource Amount						4,397.76
S.No.			Qty.	Rate	Unit	Amount
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2	11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3	10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount						656.80
Over Heads						
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)						549.72
102. Labour Cess 1% on (Resource Cost + Over Head Cost)						49.47
Total OH Amount						599.19
Total Cost for	1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost				5,653.76
Item Rate Per each						5,653.76
Notes: 1. Any one area of aluminium/ACP/ACM sheeting given at (i) to (vii) may be adopted as per site requirement and in accordance with IRC : 67:2012						
2. Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters 3. The depth of foundation and quantity of cement concrete in the foundation are indicative. These may be increased for areas having higher wind velocities like in coastal areas. This is applicable to all road signs and directions boards.						

98206 8-4-(ii)		60 cm equilateral triangle			3,458.18	each
S.No.			Qty.	Rate	Unit	Amount
Labour Group						
1	PL14	Mate	0.01	283.25	day	2.83
2	PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day	64.38
Machine Group						
1	PMC074	Tractor	0.01	345.00	hours	3.45
Material Group						
1	PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T./kg	767.60
2	PM2280	Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.16	10,170.00	sq.m	1627.20
Total Resource Amount						2,465.46
S.No.			Qty.	Rate	Unit	Amount
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2	11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3	10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount						656.80
Over Heads						
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)						308.18
102. Labour Cess 1% on (Resource Cost + Over Head Cost)						27.74
Total OH Amount						335.92
Total Cost for	1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost				3,458.18
Item Rate Per each						3,458.18

98207 8-4-(iii)

60 cm circular

		Qty.	Rate	Unit	4,844.86	each	Amount
Labour Group							
1	PL14	Mate	0.01	283.25	day		2.83
2	PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day		64.38
Machine Group							
1	PMC074	Tractor	0.01	345.00	hours		3.45
Material Group							
1	PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.		767.60
2	PM 2280	Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.28	10,170.00	sq.m		2847.60
Total Resource Amount							3,685.86
S.No.							
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m		25.17
2	11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m		587.67
3	10-6	Painting on Steel Surfaces	0.43	102.23	sq.m		43.96
Total Child Item Amount							656.80
Over Heads							
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)							460.73
102. Labour Cess 1% on (Resource Cost + Over Head Cost)							41.47
Total OH Amount							502.20
Total Cost for		1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost				4,844.86
Item Rate Per each							4,844.86

98208 8-4-(iv)

80 cm x 60 cm rectangular

		Qty.	Rate	Unit	7,155.99	each	Amount
S.No.							
Labour Group							
1	PL14	Mate	0.01	283.25	day		2.83
2	PL15	Beldar/mazdoor (unskilled)	0.25	257.50	day		64.38
Machine Group							
1	PMC074	Tractor	0.01	345.00	hours		3.45
Material Group							
1	PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.		767.60
2	PM 2280	Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.48	10,170.00	sq.m		4881.60
Total Resource Amount							5,719.86
S.No.							
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m		25.17
2	11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m		587.67
3	10-6	Painting on Steel Surfaces	0.43	102.23	sq.m		43.96
Total Child Item Amount							656.80
Over Heads							
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)							714.98
102. Labour Cess 1% on (Resource Cost + Over Head Cost)							64.35
Total OH Amount							779.33
Total Cost for		1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost				7,155.99
Item Rate Per each							7,155.99

AE

EE

*SE, NH
10th circle*

*SE
9th circle*

AS

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98209 8-4-(v)		60 cm x 45 cm rectangular		Qty.	Rate	Unit	4,729.30	each
S.No.								
Labour Group								
1	PL14	Mate		0.01	283.25	day		2.83
2	PL15	Beldar/mazdoor (unskilled)		0.25	257.50	day		64.38
Machine Group								
1	PMC074	Tractor		0.01	345.00	hours		3.45
Material Group								
1	PM0101	MS Flat / Structural Steel		19.00	40,400.00	M.T.		767.60
2	PM2280	Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all		0.27	10,170.00	sq.m		2745.90
							Total Resource Amount	3,584.16
S.No.								
1	3-5-1	Manual Means (Depth upto 1.5 m)		0.22	114.42	cu.m		25.17
2	11-4-2-2	PCC Grade M15		0.12	4897.27	cu.m		587.67
3	10-6	Painting on Steel Surfaces		0.43	102.23	sq.m		43.96
							Total Child Item Amount	656.80
Over Heads								
							14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)	448.02
							102. Labour Cess 1% on (Resource Cost + Over Head Cost)	40.32
							Total OH Amount	488.34
Total Cost for	1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost						4,729.30
							Item Rate Per each	4,729.30

98210 8-4-(vi)		60 cm x 60 cm square		Qty.	Rate	Unit	5,769.31	each
S.N								
Labour Group								
1	PL14	Mate		0.01	283.25	day		2.83
2	PL15	Beldar/mazdoor (unskilled)		0.25	257.50	day		64.38
Machine Group								
1	PMC074	Tractor		0.01	345.00	hours		3.45
Material Group								
1	PM0101	MS Flat / Structural Steel		19.00	40,400.00	M.T.		767.60
2	PM2280	Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all		0.36	10,170.00	sq.m		3661.20
							Total Resource Amount	4,499.46
S.No.								
1	3-5-1	Manual Means (Depth upto 1.5 m)		0.22	114.42	cu.m		25.17
2	11-4-2-2	PCC Grade M15		0.12	4897.27	cu.m		587.67
3	10-6	Painting on Steel Surfaces		0.43	102.23	sq.m		43.96
							Total Child Item Amount	656.80
Over Heads								
							14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)	562.43
							102. Labour Cess 1% on (Resource Cost + Over Head Cost)	50.62
							Total OH Amount	613.05
Total Cost for	1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost						5,769.31
							Item Rate Per each	5,769.31

98211 8-4-(vii)		90 cm high octagon		Qty.	Rate	Unit	9,351.57	each
S.No.								
Labour Group								
1	PL14	Mate		0.01	283.25	day		2.83
2	PL15	Beldar/mazdoor (unskilled)		0.25	257.50	day		64.38
Machine Group								
1	PMC074	Tractor		0.01	345.00	hours		3.45
Material Group								
1	PM0101	MS Flat / Structural Steel		19.00	40,400.00	M.T.		767.60
2	PM2280	Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all		0.67	10,170.00	sq.m		6813.90
							Total Resource Amount	7,652.16
S.No.								
1	3-5-1	Manual Means (Depth upto 1.5 m)		0.22	114.42	cu.m		25.17
2	11-4-2-2	PCC Grade M15		0.12	4897.27	cu.m		587.67
3	10-6	Painting on Steel Surfaces		0.43	102.23	sq.m		43.96
							Total Child Item Amount	656.80
Over Heads								
							14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)	956.52
							102. Labour Cess 1% on (Resource Cost + Over Head Cost)	86.09
							Total OH Amount	1042.61
Total Cost for	1.00 each	= Sub Items Cost + Resource Cost + Overhead Cost						9,351.57
							Item Rate Per each	9,351.57

Notes: 1. Any one area of aluminium sheeting given at (i) to (vii) may be adopted as per site requirement and in accordance with IRC 67.2012. Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters. 3. The depth of foundation and quantity of cement concrete in the foundation are indicative. These may be increased for areas having higher wind velocities like in coastal areas. This is applicable to all road signs and directions boards.

[Signature]

EE

66
SE, NH
10th circle

[Signature]
SE
9th Circle

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98212 8-5

Direction and Place Identification Signs upto 0.9 sqm Size Board.

Providing and erecting direction and place identification sign with corrosion resistant 2mm thick DG Grade Type XI retro- reflective cautionary, mandatory, informatory sign board with 10 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 3 mm thick (including framing and bracing with fabrication, plotting of letters on Electro cut film, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing. (Clause No. 801 of MORTH)

S.No.	Qty.	Rate	Unit	13,582.34	sq.m
Labour Group					
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.20	257.50	day	51.50
Machine Group					
1 PMC074	Tractor	0.02	345.00	hours	6.90
Material Group					
1 PM0101	MS Flat / Structural Steel	19.00	40,400.00	M.T.	767.60
2 PM2280	Retro reflective Type XI DG3 HIP sheeting pasted on 3mm thick ACP/ ACM including all	0.90	10,170.00	sq.m	9153.00
Total Resource Amount					9,981.83
S.No.					
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.22	114.42	cu.m	25.17
2 11-4-2-2	PCC Grade M15	0.12	4897.27	cu.m	587.67
3 10-6	Painting on Steel Surfaces	0.43	102.23	sq.m	43.96
Total Child Item Amount					656.80
Over Heads					
54. Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables 2% on (Material Group)					198.41
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)					1272.53
102. Labour Cess 1% on (Resource Cost + Over Head Cost)					114.53
Total OH Amount					1585.47
Total Cost for	0.90 sq.m	= Sub Items Cost + Resource Cost + Overhead Cost			12,224.11
Item Rate Per					13,582.34

Notes: i) Lettering and arrow marks on sign board to be provided as per IRC 67:2012 requirement. Rates of these items have been considered in pricing ii) Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters

98213 8-6

Direction and Place Identification Signs with size more than 0.9 sqm size Board.

Providing and erecting direction and place identification sign with corrosion resistant 2mm thick DG Grade Type XI retro- reflective cautionary, mandatory, informatory sign board with 10 year warranty as per IRC:67 made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 4 mm thick (including framing and bracing with fabrication, plotting of letters on Electro cut film, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), with area exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing. (Clause No. 801 of MORTH)

S.No.	Qty.	Rate	Unit	14,423.76	sq.m
Labour Group					
1 PL14	Mate	0.01	283.25	day	2.83
2 PL15	Beldar/mazdoor (unskilled)	0.30	257.50	day	77.25
Machine Group					
1 PMC074	Tractor	0.02	345.00	hours	6.90
Material Group					
1 PM0101	MS Flat / Structural Steel	38.00	40,400.00	M.T.	1,535.20
2 PM2281	Retro reflective Type XI DG3 HIP sheeting pasted on 4 mm thick ACP/ ACM including all	1.50	10,610.00	sq.m	15915.00
Total Resource Amount					17,537.18
S.No.					
1 3-5-1	Manual Means (Depth upto 1.5 m)	0.43	114.42	cu.m	49.20
2 11-4-2-2	PCC Grade M15	0.24	4897.27	cu.m	1175.34
3 10-6	Painting on Steel Surfaces	0.86	102.23	sq.m	87.92
Total Child Item Amount					1312.46
Over Heads					
54. Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables 2% on (Material Group)					349.00
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)					2235.77
102. Labour Cess 1% on (Resource Cost + Over Head Cost)					201.22
Total OH Amount					2,786.00
Total Cost for	1.50 sq.m	= Sub Items Cost + Resource Cost + Overhead Cost			21,635.64
Item Rate Per					14,423.76

Notes: i) Lettering and arrow marks on sign board to be provided as per IRC 67:2012 requirement. Rates of these items have been considered in pricing ii) Rate for excavation, cement concrete M-15 and painting may be taken from respective chapters

AE
 EE
 SE, NH
 10th circle
 SE
 9th circle
 23/2

Overhead Signs

Providing and erecting overhead signs with a corrosion resistant 2mm thick DG Grade Type XI retro- reflective sheeting with 10 year warranty made of high intensity sheeting fixed over ACP (Aluminium Composite Panel) 4 mm thick (including framing and bracing with fabrication, plotting of letters on Electro cut film, pasting, riveting, taping and nut, bolts, washers and rivets etc for fixing), installed as per clause 802.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans issued in original by retro-reflective sheeting manufacturer having operations in India by their indian subsidiary. (Clause No. 802 of MORTH)

98214 8-7-A		Truss and Vertical Support		93,497.01		tonne
S.N		Qty.	Rate	Unit	Amount	
Labour Group						
1	PL03	Blacksmith 1st class/Electrician	2.00	468.65	day	937.30
2	PL14	Mate	0.24	283.25	day	67.98
3	PL15	Beldar/mazdoor (unskilled)	4.00	257.50	day	1,030.00
Machine Group						
1	PMC033	Truck 10 t capacity	0.50	400.00	hours	200.00
2	PMC044	Cranes c) 3 tonnes	3.00	365.00	hours	1,095.00
Material Group						
1	PM0201	Aluminium alloy/galvanised steel	1.05	62,800.00	tonne	65,940.00
Total Resource Amount						69,270.28
S.No.						
1	3-5-1	Manual Means (Depth upto 1.5 m)	0.86	114.42	cu.m	98.40
2	11-4-2-2	PCC Grade M15	0.48	4897.27	cu.m	2350.69
3	10-6	Painting on Steel Surfaces	3.44	102.23	sq.m	351.67
Total Child Item Amount						2800.76
Over Heads						
55. Steel for Welding Consumables, Nuts & Bolts and Drilling Holes 1% on (Material Group)						659.40
54. Material for Drilling, Gripping, Fixing, Fabrication and Welding Consumables 15% on (Material Group)						9,891.00
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)						9,977.59
102. Labour Cess 1% on (Resource Cost + Over Head Cost)						897.98
Total OH Amount						21,425.97
Total Cost for	1.00 tonne	= Sub Items Cost + Resource Cost + Overhead Cost			93,497.01	
Item Rate Per						tonne
						93,497.01

98215 8-7-B		Type XI DG HIP retro- reflective sheeting for Over Head Sign		12,159.19		sq.m
S.No.		Qty.	Rate	Unit	Amount	
Labour Group						
1	PL03	Blacksmith 1st class/Electrician	0.10	468.65	day	46.87
2	PL14	Mate	0.02	283.25	day	5.67
3	PL15	Beldar/mazdoor (unskilled)	0.15	257.50	day	38.63
Material Group						
1	PM2291	Retro reflective Type XI DG3 HIP sheeting pasted on 4 mm thick ACP/ ACM including all	1.00	10,610.00	sq.m	10610.00
Total Resource Amount						10,701.16
Over Heads						
14. Contractor's Profit + Overhead Charges 12.5% on (All Resource)						1337.64
102. Labour Cess 1% on (Resource Cost + Over Head Cost)						120.39
Total OH Amount						1458.03
Total Cost for	1.00 sq.m	= Resource Cost + Overhead Cost			12,159.19	
Item Rate Per						sq.m
						12,159.19

Notes: 1. The cost of excavation and foundation concrete for fixing of vertical support system to be worked out separately as per the approved drawing/design and to be included in the estimate. 2. Lettering and arrow marks on sign board to be provided separately as per actual requirement. Rates for these items have been included separately in this chapter.

Handwritten signatures and notes:

- AE
- EE
- SE, NH 10th circle
- SE 9th circle
- C.S.

ROAD FURNITURE

1

Road Studs / Cat Eye:
 Providing and fixing Bi-directional Road Studs (Cat Eye) / Reflective Pavement Marker (RPM) with single body twin shank and plastic body moulded from ASA (Acrylic Styrene Acrylonitrile) or HIPS (Hi-impact Polystyrene) or ABS (Acrylonitrile Butadiene Styrene) or any other suitable material approved by Engineer in charge (Marker must support a load of 13635 kg tested in accordance with ASTM D 4280 and Reflective lenses conforming to ASTM D 788 or equivalent) bonded or anchored within the road surface for lane marking and delineation for night time visibility as per Clause No. 1707 of MORD and 804 of MORTH specifications.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour Group						
1	PL14	Mate	1.00	283.25	day	283.25
2	PL17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
3	PL18	Rock Hole Driller	1.00	283.25	day	283.25
Machine Group						
1		Drilling Machine	8.00	50.00	Hours	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
3	PMC074	Tractor	8.00	345.00	Hour	2760.00
Material Group						
1	PM2268	Adhesive	3.18	1575.00	Kg.	5008.50
2		Road Studs	100.00	160.00	Nos.	16000.00
Total Resource Amount						28,276.60
Over Heads						
Contractor's Profit Including Over Head @12.5%						3534.58
Labour Cess @1%						318.11
Total OH Amount						3852.69
Total Cost for	100 Nos.					32,129.29
Item Rate Per						No.
						321.29

Rate in DSR 243.00 Rate in MORTH 128.80

2

Solar Road Studs:
 Providing and fixing Solar Powered Road Studs of Rectangular / Circular shape (with super bright LEDs for long visibility from distance greater than 800 m) having twin shank and body made of aluminium alloy or poly carbonate material which shall be absolutely weather resistant and strong enough to support a load of 13635 kg tested in accordance with ASTM D 4280 and water resistance as per IP 65 in accordance with IS 12063:1987, fixed to the road surface using adhesives and the procedure recommended by the manufacturer as per Clause No. 804.6 and 804.7 of MORTH specifications.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour Group						
1	PL14	Mate	1.00	283.25	day	283.25
2	PL17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
3	PL18	Rock Hole Driller	1.00	283.25	day	283.25
Machine Group						
1	146	Drilling Machine	8.00	50.00	Hour	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
3	PMC074	Tractor	8.00	345.00	Hour	2760.00
Material Group						
1	PM2264	Solar Studs	100.00	2200.00	Nos.	220000.00
2	PM2268	Adhesive	3.18	1575.00	Kg.	5008.50
Total Resource Amount						232,276.60
Over Heads						
Contractor's Profit Including Over Head @12.5%						29034.58
Labour Cess @1%						2613.11
Total OH Amount						31647.69
Total Cost for	100 Nos.					263,924.29
Item Rate Per						No.
						2639.24

Rate in DSR NA Rate in MORTH NA

3

Spring Posts (750 mm height)
 Supply and fixing of Plastic Spring Post 750 mm high and 100 mm in dia (having 2 strips of 75mm wide Type IV retroreflective tape fixed around the post) with base dia 400 mm fixed to the ground with adhesive and nuts and bolts.

S.No .	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour Group						
1	PL14	Mate	1.00	283.25	day	283.25
2	PL17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
3	PL18	Rock Hole Driller	2.00	283.25	day	566.50
Machine Group						
1		Drilling Machine	8.00	50.00	Hour	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
3	PMC074	Tractor	8.00	345.00	Hour	2760.00
Material Group						
1	PM2268	Adhesive	6.36	1575.00	Kg.	10017.00
2		Spring Post	100.00	575.00	Nos.	57500.00
3		Bolt with Washer	200.00	5.00	Nos.	1000.00
Total Resource Amount						76,068.35
Over Heads						
Contractor's Profit Including Over Head @12.5%						9508.54
Labour Cess @1%						855.77
Total OH Amount						10364.31
Total Cost for 100 Nos.						86,432.66
Item Rate Per No.						864.33

Rate in DSR NA
 Rate in MORTH NA

4

Spring Posts (900 mm height):
 Supply and fixing of Plastic Spring Post 900 mm high and 100 mm in dia (having 2 strips of 75 mm wide Type IV retroreflective tape fixed around the post) with base dia 400 mm fixed to the ground with adhesive and nut and bolts.

S.No .	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour Group						
1	PL14	Mate	1.00	283.25	day	283.25
2	PL17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
3	PL18	Rock Hole Driller	2.00	283.25	day	566.50
Machine Group						
1		Drilling Machine	8.00	50.00	Hours	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
3	PMC074	Tractor	8.00	345.00	Hour	2760.00
Material Group						
1		Adhesive	6.36	1575.00	Kg.	10017.00
2		Spring Post	100.00	660.00	Nos.	66000.00
3		Bolt with Washer	200.00	5.00	Nos.	1000.00
Total Resource Amount						84,568.35
Over Heads						
Contractor's Profit Including Over Head @12.5%						10571.04
Labour Cess @1%						951.39
Total OH Amount						11522.44
Total Cost for 100 Nos.						96,090.79
Item Rate Per No.						960.91

Rate in DSR NA
 Rate in MORTH NA

AE

EE

*SE, NH
1st circle*

*SE,
3rd circle*

CS

5

Road Delineators / Vertical Guide Posts:

Supply and fixing of MS delineators 1000 mm long, having a diameter of 75 mm and thickness 4mm and having atleast 3 different colour strips of 75 mm wide Type IV retroreflective tape around the black painted pole attached with 150 mm x 25 mm x 6 mm MS flats welded at bottom to be fixed in M15 concrete base as directed by the Engineer in Charge as per IRC: 79 (Recommended Practice for Road Delineators) and Clause no. 806 of MORTH specifications.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour Group						
1	PL14	Mate	0.50	283.25	day	141.63
2	PL15	Beldar/mazdoor (unskilled)	1.00	257.50	day	257.50
Material Group						
1		Delineator	30.00	500.00	Nos.	15000.00
2		Concrete M- 15 (0.25 x 0.25 x 0.20)	0.38	4897.30	Cum.	1836.49
3		Excavation	0.38	244.40	Cum.	91.65
Total Resource Amount						17,327.26
Over Heads						
Contractor's Profit Including Over Head @12.5%						2165.91
Labour Cess @1%						194.93
Total OH Amount						2360.84
Total Cost for		30 Nos.				19,688.10
Item Rate Per						No.
						656.27

Rate in DSR 561.30
Rate in MORTH 548.70

6

PVC Traffic Cones (600 mm height):

Supply of PVC Traffic Cones of 600 mm height and 3 kg weight with square base and 2 strips of 10 mm wide reflective sheets around the cone.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Material Group						
1		PVC Traffic Cones	50.00	525.00	No.	26250.00
Total Resource Amount						26,250.00
Over Heads						
Contractor's Profit Including Over Head @12.5%						3281.25
Labour Cess @1%						295.31
Total OH Amount						3576.56
Total Cost for		50 Nos.				29,826.56
Item Rate Per						No.
						596.53

Rate in DSR NA
Rate in MORTH NA

7

PVC Traffic Cones (750 mm height):

Supply of PVC Traffic Cones of 750 mm height and 3.5 kg weight with square base and 3 strips of 10 mm wide reflective sheets around the cone.

S.No.	Resource Code	Resource	Quantity	Rate	Unit	Amount
Material Group						
1		PVC Traffic Cones	50.00	615.00	No.	30750.00
Total Resource Amount						30,750.00
Over Heads						
Contractor's Profit Including Over Head @12.5%						3843.75
Labour Cess @1%						345.94
Total OH Amount						4189.69
Total Cost for		50 Nos.				34,939.69
Item Rate Per						No.
						698.79

Rate in DSR NA
Rate in MORTH NA

AE

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22/2

SE, NH
10th Circle

SE
5th Circle

8

PVC Traffic Cones (900 mm height):						
Supply of PVC Traffic Cones of 900 mm height and 4.0 kg weight with square base and 3 strips of 10 mm wide reflective sheets around the cone.						
S.No .	Resource Code	Resource	Quantity	Rate	Unit	Amount
Material Group						
1	2297	PVC Traffic Cones	50.00	660.00	No.	33000.00
Total Resource Amount						33,000.00
Over Heads						
Contractor's Profit Including Over Head @12.5%						4125.00
Labour Cess @1%						371.25
Total OH Amount						4496.25
Total Cost for		50 Nos.				37,496.25
Item Rate Per					No.	749.93

Rate in DSR NA
Rate in MORTH 223.00

9

Hot Applied Thermoplastic Compound:						
Providing and laying of Hot Applied Thermoplastic Compound of ISI Mark Approved Quality of 2.5 mm thickness including reflectorising glass beads @ 250 gms per sqm area, as per IRC:35 . The finished surface to be level, uniform and free from streaks and holes.						
S.No .	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour Group						
1	PL14	Mate	1.00	283.25	day	283.25
2	PI15	Beldar/mazdoor (unskilled)	2.00	257.50	day	515.00
3	PI17	Beldar/mazdoor (skilled)	2.00	370.80	day	741.60
Machine Group						
1	PMC065	Road Marking Machine	10.00	80.00	Hours	800.00
2	PMC074	Tractor	0.50	345.00	Hours	172.50
Material Group						
1	Pm0246	Hot Applied Thermoplastic Compound	1500.00	190.00	Litre	285000.00
2	PM0272	Reflectorising Glass Beads	150.00	80.00	Kg.	12000.00
Total Resource Amount						299,512.35
Over Heads						
Contractor's Profit Including Over Head @12.5%						37439.04
Labour Cess @1%						3369.51
Total OH Amount						40808.56
Total Cost for		600 Sqm.				340,320.91
Item Rate Per					Sqm.	567.20

Rate in DSR 486.35
Rate in MORTH 680.70

Handwritten signatures and notes:

- Signature: *AE*
- Signature: *EE*
- Signature: *SE, NH 10th circle*
- Signature: *Chief SE 9th circle*
- Signature: *C.S.*

10

Median Markers:

Supply and fixing of Median markers made of tough high impact resistance injection moulded thermoplastic body having isosceles trapezoidal shape with dimensions not less than 120 mm X 100 mm X 100 mm and thickness not less than 18 mm. The marker must have fluorescent yellow colour Type XI retroreflective sheeting (with a warranty of 10 years by the original sheeting manufacturer) fixed on both sides with size not less than 85 mm X 85 mm fixed with epoxy adhesive and grouting to the surface complete in all respect as per IRC accreditation and the direction of Engineer in Charge.

S.No .	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour Group						
1	PI14	Mate	1.00	283.25	day	283.25
2	PL15	Beldar/mazdoor (unskilled)	2.00	257.50	day	515.00
Machine Group						
1	146	Drilling Machine	8.00	50.00	Hour	400.00
2	PMC095	Generator 33 KVA	8.00	350.00	Hour	2800.00
Material Group						
1	PM2268	Adhesive	3.18	1575.00	Kg.	5008.50
2	PM2266	Median Marker	100.00	275.00	No.	27500.00
Total Resource Amount						36,506.75
Over Heads						
Contractor's Profit Including Over Head @12.5%						4563.34
Labour Cess @1%						410.70
Total OH Amount						4974.04
Total Cost for		100 No.				41,480.79
Item Rate Per						414.81

Rate in DSR NA Rate in MORTH NA

11

AFP (Aluminum-backed flexible prismatic sheeting) Hazard Marker:

Providing and fixing Aluminum-backed flexible prismatic sheeting consisting of Yellow colored flexible prismatic sheeting with non-metallic prismatic lens as retro reflective elements and conforming to ASTM D 4956-09 Type VI specification values for reboundable sheeting. AFP sheeting shall be of 1ft width and laminated at the back with a 50 micron thick Aluminum (Al) foil with pressure sensitive adhesive and liner. AFP sheeting shall have screen printed arrow/slant line pattern in black color on top & shall not crack when tested for flexibility as per section S2.2.2 of ASTM D 4956-09. The AFP sheeting shall be applied with a neoprene contact adhesive with Polychloroprene as base & the edges of the product shall be sealed all around with a two-part epoxy based structural adhesive and shall be extremely resistant to peel-off & product specification shall confirm to IRC Accreditation.

S.No .	Resource Code	Resource	Quantity	Rate	Unit	Amount
Labour Group						
1	PI14	Mate	0.20	283.25	day	56.65
2	PL15	Beldar/mazdoor (unskilled)	5.00	257.50	day	1287.50
Material Group						
1	PM2269	Aluminium- backed flexible prismatic (AFP) sheeting	1.00	67320.00	Roll	67320.00
Total Resource Amount						68,664.15
Over Heads						
Contractor's Profit Including Over Head @12.5%						8583.02
Labour Cess @1%						772.47
Total OH Amount						9355.49
Total Cost for		1 Roll = 145 sq ft.				78,019.64
Item Rate Per					sq ft.	538.07
Item Rate Per					sq m	5789.60

Rate in DSR NA Rate in MORTH NA

Handwritten signatures and notes:
 - Signature: AE
 - Signature: EE
 - Signature: SE, NH 10th circle
 - Signature: SE 9th circle
 - Initials: US

Analysis for Rate of Hot applied thermoplastic compound

Assuming consumption = 5 kg / sqm (inc. 5 % wastage)

So for 600 sq.m area weight of compound required = 5 X 600 kg
= 3000 kg

As per MORTH

600 sq.m area requires = 1500 litres of thermoplastic paint

ie. 1500 litres = 3000 kg of compound
1 litre = 3000/1500 kg
= 2 kg / litre

Rate as quoted per kg = 95

So Rate per litre of thermoplastic paint = 95 X 2
= 190 / litre

AE

EE

Rb
SE, NH
10th circle

Chafab
SE
9th circle

C-5
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