

Sl. No.	Ref. to DAR , MORD / MoRTH	DESCRIPTION OF WORK	UNIT
1	2	3	4
1	MoRTH - 805 (8.15)	<p>Road Delinator</p> <p>Delineator: Supply & Fixing of M S Delineator made of Mild steel with pure polyester powder coating with the minimum thickness of powder coating of not less than 40 micron for protection against corrosion. The surface should be concealed so that there should not be any exposed surface without powder coating. Alternatively, these metal guide poles can be concealed with thermoplastic body. The posts shall have an ellipsoidal or circular design with the height of the pole shall be 800 to 900 mm above the ground with about 200 to 300 mm base which can be anchored onto the ground. Mild steel Guide Poles shall conform to Type XI sheeting specifications as per IRC:67 upto date and ASTM D4956 which would ensure to obtain clear visibility of the road alignment during night time. The Retro reflective sheeting shall be tested for A certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory / Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer / Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date & Proof of the same Report shall be uploaded with quoting tender. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p>	No
2	MoRTH - 803 (8.13)	<p>Road Marking with Hot Applied Thermoplastic Compound with Reflectorsing Glass Beads on Bituminous Surface.</p> <p>Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorsing glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 upto date The finished surface to be level, uniform and free from streaks and holes. Material shall be free from all skins, dirt and foreign objects and shall comply with requirements as per Table 800-9 of (MORTH SPECIFICATION) Thermoplastic Material when tested in accordance with ASTM D36/BS-3262-(Part 1) daylight Luminance shall be AASHTO M 249 for white 45° -4 min. and for yellow 45% min. , Drying time not more than 15 minutes, skin resistance not less than 45 as per BS-6044, material shall show no cracks on application to concrete blocks at Low Temperature, softening point 102.5°C ± 9.5°C as per ASTM D36 and yellowness index for white thermoplastic paint not more than 0.12 as per AASHTO M 249. Container of the thermoplastic material shall be clearly and indelibly marked with Name, Trade mark or other means of identification of manufacturer, Batch No., Date of manufacturer, Colour, Maximum application temperature and maximum safe heating temperature. Glass beads shall meet the gradation requirement as per Table 800-10 of MORTH SPECIFICATION. The Glass beads shall have a minimum Reflective Index of 1.5 and 70% Roundness. The Pavement Temperature shall not be less than 10°C during application of Hot thermoplastic paint. The Contractor shall furnish to the Engineer a copy of certified test reports from the manufacturer of the thermoplastic material/glass beads showing results of all test specified in MORTH SPECIFICATION and shall certify that the material meet all requirement of specification.</p>	Sqm

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1	2	3	4
3	MoRTH - 803 (8.13) -Base	<p>Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface. (Repeated / Transvers bar)</p> <p>Providing and laying of hot applied thermoplastic compound 5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 5 mm is exclusive of surface applied glass beads as per IRC:35 upto date. The finished surface to be level, uniform and free from streaks and holes. Free from streaks and holes and shall comply with requirements as per Table 800-9 of (MORTH SPECIFICATION) Thermoplastic Material when tested in accordance with ASTM D36/BS-3262-(Part 1) daylight Luminance shall be AASHTO M 249 for white 45^o-65% min and for yellow 45% min. , Drying time not more than 15 minutes, skin resistance not less than 45 as per BS-6044, material shall show no cracks on application to concrete blocks at Low Temperature, softening point 102.5°C ± 9.5°C as per ASTM D36 and yellowness index for white thermoplastic paint not more than 0.12 as per AASHTO M 249. Container of the thermoplastic material shall be clearly and indelibly marked with Name, Trade mark or other means of identification of manufacturer, Batch No., Date of manufacturer, Colour, Maximum application temperature and maximum safe heating temperature. Glass beads shall meet the gradation requirement as per Table 800-10 of MORTH SPECIFICATION. The Glass beads shall have a minimum Reflective Index of 1.5 and 70% Roundness. The Pavement Temperature shall not be less than 10°C during application of Hot thermoplastic paint. The Contractor shall furnish to the Engineer a copy of certified test reports from the manufacturer of the thermoplastic material/glass beads showing results of all test specified in MORTH SPECIFICATION and shall certify that the material meet all requirement of specification.</p>	Sqm
4	MoRTH - 802	<p>6M Span over head Cantilever Structure with 300 dia M S one vertical post</p> <p>Supply, fixing & erection of built up Cantilever Structure 6 m span comprising of one vertical posts of 6.00 M height made up of 300 mm NB heavy class MS pipe as vertical member welded with 10 mm MS plate at top & 12 mm M S plate at bottom. The horizontal Truss shall comprise of 50 mm dia heavy class M.S. pipe and 40 mm dia heavy M S pipe as bracing & 10 mm MS plate at bottom for fixing to vertical post as per structure design & drawing with one of steel primer and two coats of synthetic enamel plant. The work includes construction of RCC Foundation of size 0.90x0.90x1.50 m of required depth as per site condition for built up structure including Earth work in excavation 100 mm thick Lean Concrete in 1:3:6 (cement coarse sand and 40 mm gauge stone ballast) and grade of Concrete RCC - M25 including supply and fixing of 25 mm dia Foundation Bolts 600 mm long as per provision of structure design including cost of reinforcement & shuttering. The lateral vertical clearances and complete. Installation work shall be as per relevant clauses of MORT&H specification section 800 and IRC 67 upto date complete in all respect The Rates shall include cost of design fabrication, supply, transportation, Local shifting Erection of Signage structure using crane, inclusive of all taxes etc. all T&P machine, material and labour required for proper completion of work as per direction of Engineer-in-charge.</p>	No
5	MoRTH - 804 (8.35) - Suggestive	<p>Reflective Raised Pavement Markers (Cat Eye/ Road Stud)</p> <p>Supply and fixing of raised pavement marker with Made of Plastic body of RPM/ Road Stud shall be moulded from ASA (Acrylic Styrene Acrylonitrile) or HIPS (High-Impact Polystyrene) or Acrylonitrile Butadien Styrene (ABS) or Any other suitable material approved by the Engineer. The Marker shall support a load of 13,635 kg tested in accordance with ASTM D4280. The Reflective panels shall consist of number of lenses containing single or dual prismatic cubes capable of providing total internal reflection of the light entering the lens face. Lenses shall be moulded of methyl methacrylate conforming to ASTM D788 or equivalent. The slop or retro-reflecting surface shall preferably be 35+/-5 degree to base and the area of each retro -reflecting surface shall not be less than 13.00 sq.cm. marker height shall not be less than 10 mm and shall not exceed 20 mm & Width shall not exceed 130 mm. The base of the marker shall be flat within 1.3 mm all road studs shall be legibly marked with the name , trade or other means of identification of the manufacture. epoxy installations, excess adhesive around the edge of the marker, excess adhesive on the pavement and adhesive on the exposed surfaces of the markers shall be immediately removed. The contractor shall submit a two year warranty for satisfactory field performance including stipulated retro-reflectance of the reflecting panel , to the Engineer . In addition , a two year warranty for satisfactory infield performance of the finished road marker shall also be given by the contractor who carries out the work of fixing of reflective road markers. In case the markers are displaced , damaged , get worn out or lose their reflectivity compared to stipulated standards , the contractor would be required to replace all such markers within 15 days of the intimation from the Engineer , at his own cost. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p> <p>RPM (without shank)</p> <p>RPM (with shank)</p>	NO NO

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6	IRC:79-2019	<p>Flexible Median Marker As Per IRC 79:2019:</p> <p>Flexible Median Marker (FMM) should be used for improving median visibility during dark hours. , Use of Median Marker provides safety against collision happening with medians during night time , or severe weather. Flexible Median Markers shall be provided with fluorescent yellow colour retro-reflective sheeting Type XI as per IRC:67 upto date. Flexible Median Marker shall be of tough, high impact resistant, injection-molded, thermoplastic body with property of flexibility to provide high durability 'and U shape structure having rebound / bounce back property. the sheeting shall be of Type XI conforming to IRC:67 upto date and it should be on both .the faces whereby providing maximum reflectivity at longer distances with adequate durability. The logo of the manufacturer shall be embossed on either side of the body during the injection molding process. FMM shall be fixed by a combination of epoxy adhesive and grouting/ drilling on concrete medians or properly constructed solid medians. Height: The marker height shall be a minimum of 180 mm. width 120 mm & Body Thickness: 6.5 mm. the shanks shall not be less than 20 mm and depth shall not be less than 30 mm Reflective Area: Shall not be less than 90 cm square . Proof of the same Report shall be uploaded which quoting tender. The body of FMM shall bounce back to its original position of after 750 number of hits using pendulum of 1.8 kg conforming 40 ASTM D256 adhesion between the body and outer casing body of FMM shall with stand 50 kg f Tensile loads conforming to ASTM D638 method. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p>	No
7	MoRTH - 802	<p>12 m-15 m Span Over Head Structure with 300 dia M S - two vertical post</p> <p>Supply, fixing & erection of built up Overhead Structure of 12M-15M span comprising of two vertical posts of 6.00 M height made up of 300 mm NB heavy class MS pipe as vertical member welded with 10 mm MS plate at top & 12 mm M S plate at bottom. The horizontal Truss shall comprise of 50 mm dia heavy class M.S. pipe and 40 mm dia heavy M S pipe as bracing & 10 mm MS plate at bottom for fixing to vertical post as per structure design & drawing with one of steel primer and two coats of synthetic enamel plant. The work includes construction of RCC Foundation of size 0.90x0.90x1.50 m of required depth as per site condition for built up structure including Earth work in excavation 100 mm thick Lean Concrete in 1:3:6 (cement coarse sand and 40 mm gauge stone ballast) and Grade of Concrete RCC M-25 including supply and fixing of 25 mm dia Foundation Bolts 600 mm long as per provision of structure design including cost of reinforcement & shuttering. The lateral vertical clearances and complete. Installation work shall be as per relevant clauses of MORT&H specification section 800 and IRC 67 upto date complete in all respect. The Rates shall include cost of design, fabrication, supply, transportations, Local shifting Erection of Signage structure using crane, inclusive of all taxes etc. all T&P machine, material and labour required for proper completion of work as per direction of Engineer-in-charge.</p>	No
8	MoRTH - 803 (8.11 & 8.12)	<p>Painting Lines, Dashes, Arrows, etc. on Roads in Two Coats on new work.</p> <p>Painting lines, dashes, arrows, etc. on roads in two coats on new work with ready mixed road marking paint conforming to IS:164 on bituminous surface, including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control.</p> <p>I). Upto 10 cm in width II) Over 10 cm. in width</p>	Sqm Sqm
9	IRC:79-2019	<p>Linear Delineator System (LDS)</p> <p>Supply & fixing of Linear Delineator System (LDS) panels made of Micro Prismatic Retro Reflective sheeting type XI duly laminated on thin aluminium foil to a unique corrugated shape to provide Retro Reflection across wide range of observations and external angles. Each LDS panel should be of nominal length of 33 inch and each ridge shall be approximately 0.34 inch high. Each LDS panel is to be firmly fixed on existing concrete/brick work with 16 Nos fastner/ screw .</p>	No.

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10	MoRTH - 801	<p>Retro-ReflectiveSheeting type-IV with 4 mm thick ACM Single Face</p> <p>Providing & fixing of reflective signs with a corrosion resistant 4 mm thick with 0.4 to 0.5 mm both side aluminium skin aluminium composite panel face to be fully covered with High Intensity prismatic sheeting type IV as per IRC-67 upto date retro reflective sheeting with back frame MS angle of 35x35x5 mm and size of foundation (0.45x0.45x0.60)m with PCC M-25 grade of concrete. Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 .The sheeting shall have a pressure - sensitive adhesive of the aggressive - tack type requiring no heat , solvent other preparation for adhesion to a smooth clean surface, in a manner recommended by the sheeting manufacturer. The ACM (Aluminium Composite Materials) shall be fixed on the Back frame MS Angle with riveting. Micro prismatic type IV Retro reflective sheeting confirming to ASTM D4956-09 shall be Pressure fixed. The Retro reflective sheeting shall be tested for a certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/ Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D 4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer/Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date & Proof of the same Report shall be uploaded which quoting tender. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p>	Sqm
11	MoRTH - 801	<p>Retro-ReflectiveSheeting type-IV with 4 mm thick ACM Double Face</p> <p>Providing & fixing of reflective signs with a corrosion resistant 4 mm thick with 0.4 to 0.5 mm both side aluminium skin aluminium composite panel face to be fully covered with High Intensity prismatic sheeting type IV as per IRC-67 upto date retro reflective sheeting with back frame MS angle of 35x35x5 mm and size of foundation (0.45x0.45x0.60)m with PCC M-25 grade of concrete. Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 .The sheeting shall have a pressure - sensitive adhesive of the aggressive - tack type requiring no heat , solvent other preparation for adhesion to a smooth clean surface, in a manner recommended by the sheeting manufacturer. The ACM (Aluminium Composite Materials) shall be fixed on the Back frame MS Angle with riveting. Micro prismatic type IV Retro reflective sheeting confirming to ASTM D4956-09 shall be Pressure fixed. The Retro reflective sheeting shall be tested for a certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/ Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D 4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer/Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date & Proof of the same Report shall be uploaded which quoting tender. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p>	Sqm

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12	MoRTH - 801	<p>Retro-Reflective Sheeting type-XI with 4 mm thick ACM Single Face Providing & fixing of reflective signs with a corrosion resistant 4 mm thick with 0.4 to 0.5 mm both side aluminium skin aluminium composite panel face to be fully covered with High Intensity prismatic sheeting type XI as per IRC-67 upto date retro reflective sheeting with back frame MS angle of 35x35x5 mm and size of foundation (0.45x0.45x0.60)m with PCC M-25 grade of concrete. Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 .The sheeting shall have a pressure - sensitive adhesive of the aggressive - tack type requiring no heat , solvent other preparation for adhesion to a smooth clean surface, in a manner recommended by the sheeting manufacturer. The ACM (Aluminium Composite Materials) shall be fixed on the Back frame MS Angle with riveting. Micro prismatic type XI Retro reflective sheeting confirming to ASTM D4956-09 shall be Pressure fixed. The Retro reflective sheeting shall be tested for a certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/ Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D 4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer/Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date & Proof of the same Report shall be uploaded which quoting tender. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge</p>	Sqm
13	MoRTH - 801	<p>Retro-Reflective Sheeting type-XI with 4 mm thick ACM Double Face Providing & fixing of reflective signs with a corrosion resistant 4 mm thick with 0.4 to 0.5 mm both side aluminium skin aluminium composite panel face to be fully covered with High Intensity prismatic sheeting type XI as per IRC-67 upto date retro reflective sheeting with back frame MS angle of 35x35x5 mm and size of foundation (0.45x0.45x0.60)m with PCC M-25 grade of concrete. Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 .The sheeting shall have a pressure - sensitive adhesive of the aggressive - tack type requiring no heat , solvent other preparation for adhesion to a smooth clean surface, in a manner recommended by the sheeting manufacturer. The ACM (Aluminium Composite Materials) shall be fixed on the Back frame MS Angle with riveting. Micro prismatic type XI Retro reflective sheeting confirming to ASTM D4956-09 shall be Pressure fixed. The Retro reflective sheeting shall be tested for a certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/ Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D 4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer/Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date & Proof of the same Report shall be uploaded which quoting tender. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge</p>	Sqm
14	IRC-67:2012	<p>Bollard (Single Face) Supply & fixing of Bollard made(Single Side) out of 2mm thick aluminium sheet face to be covered with high intensity prismatic grade type IV sheeting , Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 . Welded poly shaped to make it monolithic pillar size 1200 mm high Bollard is having a frame 900x600 mm and 600 mm dia for fixation made out of 35 x 35 x 5 mm angle iron and from side is fully cover with PCC M-25 grade of concrete. (size of foundation 0.45x0.45x0.60m).</p>	No
15	IRC-67:2012	<p>Bollard (Double Face) Supply & fixing of Bollard made (Double Side) out of 2mm thick aluminium sheet face to be covered with high intensity prismatic grade type IV sheeting , Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 . Welded poly shaped to make it monolithic pillar size 1200 mm high Bollard is having a frame 900x600 mm and 600 mm dia for fixation made out of 35 x 35 x 5 mm angle iron and from side is fully cover with PCC M-25 grade of concrete. (size of foundation 0.45x0.45x0.60m).</p>	Sqm

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19	MoRTH - 801 (8.5)	<p>Direction and place Identification signs up to 0.90 sqm size Board</p> <p>Providing and erecting direction and place identification retro-reflectorised sign as per IRC-67 upto date made of high intensity grade sheeting The Retro reflective sheeting shall be tested for a certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/ Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D 4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer / Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date. Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 . Sheet fixed over aluminium sheeting ,2 mm thick with area not exceeding 0.9 sqm.Supported on a mild steel single angle iron post 75x75x6 mm firmly fixed to the ground by means of property designed foundation with PCC M-25 grade cement concrete 45x45x60cm, 60cm below ground level as per approved drawing, complete.</p>	Sqm
20	MoRTH - 801 (8.6)	<p>Direction and place Identification signs with size more than 0.90 sqm size Board</p> <p>Providing and erecting direction and place identification retro-reflectorised sign as per IRC-67 upto date made of high intensity grade sheeting The Retro reflective sheeting shall be tested for a certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/ Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D 4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer / Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date. Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 . Sheet fixed over aluminium sheeting ,2 mm thick with area exceeding 0.9 sqm.Supported on a mild steel double angle iron post 75x75x6 mm firmly fixed to the ground by means of property designed foundation with PCC M-25 grade cement concrete 45x45x60 cm,60cm below ground level as per approved drawing, complete.</p>	Sqm
21	IRC-67:2012	<p>Tree Plate</p> <p>Supply & Fixing of Retro reflective Tree Plate having size 15cm x15cm, consisting Type XI Retro reflective Sheeting fixed Over 1.50 mm thick aluminium sheet including labour, Material T&P etc for proper completion of the work. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p>	No
22	IRC:SP-55-2014	<p>Traffic cone</p> <p>Traffic Cone: Supply of red fluorescent with with reflective sleeve traffic cone a square base of 300 to 500 mm & Thickness 35 mm and a height of 100/750/500 mm. They shall be brilliant red / orange / yellow and shall be made of LDPE material that can be struck without causing damage to impacting vehicles. Retro-Reflection of cone shall be provided by a 150 mm wide white band located 75 to 100 mm from the top of the cone and additional 100 mm wide white band located approximately 50 mm below the 150 mm band. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p> <p>(1) 1000 mm Height</p> <p>(2) 750 mm Height</p> <p>(3) 500 mm Height</p>	No No No
23	IRC:SP-55-2014	<p>Tubular Markers (Spring post or Spring Bollard)</p> <p>S/F of plastic Tubular bollards having 450/700 mm Height, shall be attached to the pavement to display the minimum 50 mm width of reflective bands to the approaching road users including labour, material, T&P etc. for proper completion of the work.</p> <p>700 mm Height</p> <p>450 mm Height</p>	No No

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24	IRC:79-2019	<p>Aluminum-backed flexible prismatic sheet</p> <p>Aluminum-backed flexible prismatic sheeting shall be made of yellow colored flexible prismatic sheeting with non-metallic prismatic lens formed in a transparent, synthetic resin as retro reflective elements. This flexible prismatic sheeting shall have black and yellow stripes with aluminum backed flexible prismatic Type VI sheeting conforming to ASTM: D4956 . specifications and standards of coefficient of retro reflectivity, flexibility and impact resistance applicable for reboundable devices. This flexible prismatic sheeting shall have screen printed arrow/slant line pattern in black colour in a continuous roll format. Width of object marker shall be 300 mm. The rate shall include all materials, labour, T&P, transportation, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p>	Sqm
25	MoRTH - 801 (8.6)- Base	<p>Retro Reflectorised Signs (Stainless steel Frame and Post with single face sings)</p> <p>Providing and erecting (1.50x1.20)m Retro-reflectorised sign as per IRC-67 upto date made of Retro Reflective sheeting of HIP grade type IV fixed over 4mm thick 4cm (Aluminium composite material) sheeting supported on stainless steel pipe post 50mm dia SS-304 grade 02 Nos, firmly fixed to the ground by means of properly designed foundation with PCC M-25 grade of concrete 45cmx45cmx60cm, 60cm below ground level as be approve drawing. The stainless steel joint welding of SS pipe work shall be bend and grind property including buffing so an to give uniform shining at weded joints. The Retro reflective sheeting shall be tested for a certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/ Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D 4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer / Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date. Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 . Proof of the same in form of government report shall be uploaded while quoting tender.</p>	No
26	MoRTH - 801 (8.6)- Base	<p>Retro Reflectorised Signs (Stainless steel Frame and Post with double face sings)</p> <p>Providing and erecting (1.50x1.20)m Retro-reflectorised sign as per IRC-67 upto date made of Retro Reflective sheeting of HIP grade type IV fixed over 4mm thick 4cm (Aluminium composite material) sheeting supported on stainless steel pipe post 50mm dia SS-304 grade 02 Nos, firmly fixed to the ground by means of properly designed foundation with PCC M-25 grade of concrete 45cmx45cmx60cm, 60cm below ground level as be approve drawing. The stainless steel joint welding of SS pipe work shall be bend and grind property including buffing so an to give uniform shining at weded joints. The Retro reflective sheeting shall be tested for a certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/ Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D 4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer / Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date. Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 . Proof of the same in form of government report shall be uploaded while quoting tender.</p>	No
27	MoRTH - 810 (8.23)	<p>Type - A, "W" : Metal Beam Crash Barrier</p> <p>Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 811.</p>	Rmt

Sl. No.	Ref. to DAR , MORD / MoRTH	DESCRIPTION OF WORK	UNIT
1	2	3	4
28	MoRTH - 810 (8.23)	<p>Type - B, "THRIE" : Metal Beam Crash Barrier</p> <p>Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fittings to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 811</p>	Rmt
29	MoRTH - 802	<p>2.40 M Span over head Cantilever Structure with 200 dia MS one vertical post (Double face signs)</p> <p>Supply, fixing & erection of built up Cantilever Structure 2.40 m span comprising of one vertical posts of 7.30 M height made up of 200 mm NB medium class MS pipe and 4.85mm thick as vertical member welded with 10 mm MS plate at top & 10 mm MS plate at bottom fixing to vertical post as per structure design & drawing with one of steel primer and two coats of synthetic enamel plant and The Retro reflective sheeting shall be tested for a certificate of having the sheeting tested for coefficient of retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/ Institute by the manufacturer of the sheeting and in case the certificate is obtained from international condition, it should also be obtained from Indian condition within 3 years of launching of product by the manufacture in abroad. Alternatively, a certificate conforming to ASTM Specification (D 4956-09) on artificial accelerated weathering requirements from a reputed laboratory in India can be accepted provisionally. In such a situation, the Employer / Client, if so desires, could seek for a performance guarantee which would be released after receipt of certificate meeting the requirement of three years outdoor weathering of the sheeting as per IRC 67 upto date . Legends , letters , numerals and borders etc should be as per MoRTH specification No-801.3.7 . The work includes construction of RCC Foundation of size 0.60x0.60x1.20 m of required depth as per site condition for built up structure including Earth work in excavation 100 mm thick Lean Concrete in 1:3:6 cement coarse sand and 40 mm gauge stone ballast RCC M25 including supply and fixing of 25 mm dia Foundation Bolts 600 mm long as per provision of structure design including cost of reinforcement & shuttering. The lateral vertical clearances and complete. Installation work shall be as per relevant clauses of MoRT&H specification section 800 and IRC 67 upto date complete in all respect The Rates shall include cost of design fabrication, supply, transportation, Local shifting Erection of Signage structure using crane, inclusive of all taxes etc. all T&P machine, material and labour required for proper completion of work as per direction of Engineer-in-charge.</p>	No.