

**Name of Work:- Improvement of Various roads of Lalpur Taluka Under Kishan path Yojana
Package No. JAM/KP/ 2023-24 /P-15 Taluka : Lalpur Dist: Jamnagar.**

Taluka : Lalpur

Dist: Jamnagar.

Specification index

Item No.	Item of work	Sr. No. of the applicable in enclosed	Page No.	Note
1	2	3	4	5
1	Clearing and grubbing road land including uprooting rank vegetation grass bushes, shrubs, sapling and trees girth up to 300 mm removal of stumps of trees cut earlier and disposal of unserviceable materials (C) By mechanical means in area of light jungle	--- As per attached ---		
2	Earthwork for embankment including breaking clods, dressing with all leads and lifts (excluding watering and consolidation) All Lead and lift (--- As per attached ---		
3	Rolling and watering of earth work in layers with Vibratory roller including filling in depressions which occur during the process as directed	--- As per attached ---		
4	Providing All Time Temporary Diversion suitable for traffic during the construction period of the Bridge / Cd Work by levelling existing ground including earthwork for embankment and Supplying and spreading quarry spall in layer.	--- As per attached ---		
5	Scarifying gravelled macadam or bitumen macadam surface 6 cm to 10 cm. depth including stacking useful materials on road side and disposing off remaining stuff.	--- As per attached ---		
6	Providing & laying compacted WBM 100mm thick Single layer as per MORTH specification using machine crushed M.C. Metal of size 45mm to 63mm with using 0.16 Cu.m./10 Sq.m. stone screenings 6mm to 10mm nominal size and binding materials @ 0.08Cu.m./10 Sq.m. including spreading in uniform thickness, watering and consolidation with vibratory roller etc. complete.	--- As per attached ---		
7	Providing and laying and rolling 37.50mm thick bituminous groutin with B.T. aggregate as per Required Gradation and using bitumen Grade VG-30 for Mixing at the rate of 1.99% i.e. 19.90 kg/M.T. of total mix and VG-30 for tack coat at the rate of 2.5 kg/10sq.mt on existing B.T. surface including heating and mixing in Drum mix plant ,trasporting spreading same by paver finisher and consolidation by viberated roller including necessary firewood, oil,kerosene, lubricants all equipments, tools, labour charges etc. complete using contractor's own machinary in accordance with the requirement of specification.	--- As per attached ---		

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8	Providing and laying 50.00 mm thick B.M. With BT Aggregate VG-30 grade bitumen for Tack coat @ 2.50 kg/10 sqm using crushed stone aggregate 0.66 cum/ MT as per MORTH&H Specification & VG-30 grade bitumen for mixing @35.00 Kg/1 MT i.e. 3.5% of by weight of total mix incl. heating and mixing by drum mix plant and spreading the same with paver finisher consolidation with vibratory roller including cost of fuel, hire charges, all necessary equipments, tools and plant, fire wood, oil, kerosene labour charges etc complete.(Using contractor's own Machinery)	--- As per attached ---		
9	Providing and laying 20 mm thick average for Mix seal surface using stone chips @66% by weight, gradation as per MORTH specification and using bitumin VG 30 grade for mixing rate not less then 50.90KG/MT on BT surface using stone chips as per MORTH specification including heating the asphalt and aggregates by hot mix plant and spreading the same with paver finisher including consolidation with vibratory roller and providing, operating plant machineries, equipments, tools, plants, oil, fire wood, kerosene and all labour charges etc. complete.	--- As per attached ---		
10	Demolition including stacking of serviceable materials and disposal of unserviceable materials with all lead and lift.(ii) In RCC work	--- As per attached ---		
11	Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff and depositing on the road side slope as directed upto all lead.	--- As per attached ---		
12	Providing & filling in foundation with ordinary cement concrete M 100 mix & providing necessary vertical pin headers including formwork, vibrating ramming and curing complete.	--- As per attached ---		
13	Providing and casting in situ Ordinary trimix cement concrete M-200 for average 150mm thick road work laid as directed including adding super plasticizer admixture of IS make and providing and laying M.S. side rail of road thickness with necessary nut bolts plates fixing as per width applying plate vibrator (electric or diesel) on channel compressor with vacuum dewatering system by using all necessary equipments and materials and machinery such as running screed vibrator on pre-laid M.S. channel for leveling ,Vacume pump, floating and power trowelling etc with filling the joints with bitumen as directed etc complete.	--- As per attached ---		
14	Excavation for foundation in Hard Murrum upto all depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto all lead and lift.	--- As per attached ---		
15	Excavation for foundation in Soft rock not requiring Blasting upto all depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto all lead.	--- As per attached ---		

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16	Excavation for foundation in hard murrum and boulders and very stiff or sticky, clays and other similar strata including shoring and strutting and dewatering as necessary and disposing of the excavated stuff as directed .	--- As per attached ---		
17	Excavation in large boulders and soft rock by welding including shoring, strutting and dewatering as necessary and disposing of the excavated stuff as directed.	--- As per attached ---		
18	Providing & Casting in situ ordinary cement concrete m-150 mix and providing necessary in headers including shuttering, scaffolding, laying, vibrating, curing and finishing comp. without V - grooves.	--- As per attached ---		
19	Supplying & fixing reinforced concrete heavy duty non pressure pipes with collars for culverts including setting and joining the pipes in C.M. 1:2 watering and laying (to level or slope) of I.S. class NP3 (V) 1200 mm. with all lead	--- As per attached ---		
20	Supplying & fixing reinforced concrete heavy duty non pressure pipes with collars for culverts including setting and joining the pipes in C.M. 1:2 watering and laying (to level or slope) of I.S. class NP3 (V) 900 mm. with all lead	--- As per attached ---		
21	Providing and laying in position FE 500D TMT bar reinforcement including cutting, bending, hooking and tying complete as per detailed drawings	--- As per attached ---		
22	Demolition of Brick work and stone masonry including stacking of serviceable materilas and disposal of unserviceable materials with all lead and lift.(ii) In Cement Mortar.	--- As per attached ---		
23	Providing and fixing of flood gauge in C.C. 1:2:4 with M.S. Channels C Type of size 125 X 65 mm with web thick ness 5mm thick 1.50 mt. long including the cutting the channels bending one edge for hold fast including painting with oil paint of approved brand manufacture three with one coat of primer and marking Numbering lettering etc comp by using radium strips at causeway deep on road side As per Direction(Including cost of C- Channels & Cement)	--- As per attached ---		
24	Informatrory sign :- Providing and fixing sing board made out of 2mm aluminium sheet size 80 x 60 cms rectangle as per design of IRC-67-1977 pre treated with phospheting process & acid teching coated with one coat of epoxyprimer and two coat of best quality poxy paint reflectorised with reto reflective sheeting as per latest M.O.S.T. Specifications 3.10 m long stand postand frame fabricated from suitable sixe iron angle of 35 X 35 X 3mm 75 X 75 X 6 mm as required painted with best quality poxy coating in black and white bends the details of symbols for each board shall details of symbol of eachboard shall be as per the instruction of engineer in charge the fixing at site shall be in 1:2:4 CCblock of size 45 X 45 X 60 cms for each leg including excavation curiing tec complete under the of engineer in charge (A) Engineer Grade	--- As per attached ---		

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25	Providing and fixing ordinary Kilometer stone of approved hard stone as per I.R.C. type design in C.C. 1:4:8 including painting and lettering etc. complete	--- As per attached ---		
26	Providing and fixing Hectometer as per I.R.C. type design including painting, lettering etc. complete.(ii) Fixing in C.C. 1:5:10	--- As per attached ---		
27	Providing and fixing guard stone as per I.R.C. type design including white washing etc. complete.(i) Fixing in Earth	--- As per attached ---		
28	Providing and fixing Indicator stone of approved stone as per I.R.C. type design , including white washing etc complete . Fixing in Earth.	--- As per attached ---		
29	Village name/ Bump Ahead sign :-Providing and fixing sign boards made out of 2mm aluminium sheet; size 90 x 60cms. rectangle as as per the design of IRC-67-1977 pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest M.O.S.T. Specifications; Letters and numerals should be as per IRC-30-1968, 3.1m long (2 nos) stand post and frame fabricated from suitable size iron angle of 50 x 50 x 5mm painted with best quality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge.(A) Engineer Grade(VR)...	--- As per attached ---		
30	Hazard Marker Sign :-Providing and fixing sign boards made out of 1.5mm aluminium sheet / 3mm ACP (Aluminum composite Panel); size 90x30 cms. rectangular as per design of IRC-67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with High Intensity Prismatic Grade retro reflectivesheeting of Type-4 as per ASTM D-4956 and latest M.O.S.T.Specifications; 1.8mtr long stand post of Iron Angle 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with bestquality epoxy coatings in black and white bends. The details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC blockof size 45 x 45 x 60 Cms. for each leg including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 7 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (B) Class-B Type-4 Retro Reflective sheeting	--- As per attached ---		

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31	<p>Cautionary Warning Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminum composite Panel); size 90 x 90 x 90 cms. equilateral triangle as per design of IRC-67-2012. Pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with High Intensity Prismatic Grade retro reflectivesheeting of Type-4 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.6mtr long stand post of Iron Angle 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with bestquality epoxy coatings in black and white bends. The details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC blockof size 45 x 45 x 60 Cms. for each leg including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 7 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (B) Class-B Type-4 Retro Reflective sheeting</p>	--- As per attached ---		
32	<p>STOP Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminum composite Panel); size 90 cms Octagone as per design of IRC-67-2012. Pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with Micro Prismatic Grade retro reflective sheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 3.6mtr long stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with bestquality epoxy coatings in black and white bends. The details of symbol foreach board shall be as per theinstruction of engineer in charge. The fixing at site shall be in 1:2:4 CC blockof size 45 x 45 x 60 Cms. for each leg.including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 10 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (A) Class-C Type-11 Retro Reflective sheeting</p>	--- As per attached ---		

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33	Direction (Junction) Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminum composite Panel); size 244x122 cms. rectangular as per design of IRC-67-2012. Pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with High Intensity Prismatic Grade retro reflectivesheeting of Type-4 as per ASTM D-4956 and latest M.O.S.T.Specifications; 4.0mtr (2 Nos.) long stand post of Iron Angle 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50x50x5mm; painted with bestquality epoxy coatings in black and white bends. The details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC blockof size 45 x 45 x 60 Cms. for each leg including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 7 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (B) Class-B Type-4 Retro Reflective sheeting	--- As per attached ---		
34	Providing and fixing of typical informatory sign board with logo as per MORD specifications and drawing . Three MS Plates of 1.6 mm thick , top and middle plate duly welded with MS flat iron 25 x 5mm size on back on edges. The lower plate will be welded with MS angle iron frame of 25mm x 25mm. The Angle iron frame of the lower most plate and flat iron frame of middle plate will be welded 2 nos. 75mm x 75mm of 12 SWG sheet tubes posts duly embedded in cement concrete M-15 grade block of 450mm x 450mm x 600mm, 600mm below ground level. The top most dimond plate will be welded to middle plate by 47mm x 47mm of 12 SWG steel plate tube. All M.S. will be stove enameled on both sides. Lettering and printing arrows, border etc. will be painted with ready mixed synthetic enamel paint of superior quality in required shade and colour. All sections of framed posts and steel tubes will be painted with primer and two coats of epoxy pains as per drawing Clause 1701 and Annexure 1700.1	--- As per attached ---		

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