

**DPR FOR ROAD DEVELOPMENT IN NANDED UNDER JNNURM
DEGLOOR ROAD THROUGH C.R.C.TO GYANAMATA SCHOOL (WITH AN RUB CROSSING RAILWAY) (ROAD NO - 24)
(From Ch: 0+000 TO 2+413) { LESS RUB LENGTH, EFFECTIVE LENGTH = 2373 M }
MEASUREMENT SHEETS**

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|--------------|----------|--|------|---------------|-------------|--------------|---------------------|-------------|
| Sec-1 | | Site Clearance | | | | | | |
| 1 | 1.1 | Clearing & grubbing road land including uprooting all vegetation, grass, bush shrubs, saplings and trees of girth up to 300 mm, removal of stumps of trees of girth of all sizes including removing stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable materials as directed by engineer with all leads and lifts etc. complete | | | | | | |
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | Ha | prop.DP 30 m | | | | |
| | | 0-2413 | | existing road | 2,373.00 | 16.00 | | 3.80 |
| | | | | width is avg | | | | |
| | | | | | | | Total | 3.80 |
| | | | | | | | Say | 3.80 |
| 2 | 1.2 | Cutting of trees of all girth above 300 mm including cutting of trunks, branches,uprooting and removal of all materials and stacking within the ROW and filling depressions/pits by earth etc. complete. including liasoning with concerned authorities for obtaining permissions. | | | | | | |
| | | 1) girth 300 mm to 600 mm | Nos | 45 | | | | 45.00 |
| | | 2) girth above 600 mm to 900 mm | Nos | 10 | | | | 10.00 |
| | | 3) girth above 900 mm to 1800 mm | Nos | 8 | | | | 8.00 |
| 3 | 1.3 | Transplantation of existng trees of girth above 600 mm girth as directed by engineer, including uprooting and shifting of the tree and placing in excavated pits of suitable size and after transplanting, removal and stacking of excavated earth to desired location, filling the pit with soil mixture of excavated earth, fresh red earth etc as directed. | Nos | 6 | | | | 6.00 |
| 4 | 1.4 | Dismantling of structures on roadway including sorting out the dismantled material, disposal of unserviceable material and utilising the serviceable material free of cost in permanent works as directed by the Engineer with all leads and lifts etc. complete. | | | | | | |
| | a) | Brick masonry | Cum | | | | | 536.00 |
| | b) | Stone masonry | Cum | | | | | 26.00 |
| | c) | Plain Concrete | Cum | | | | | 133.00 |
| | d) | Reinforced Concrete | Cum | | | | | 223.00 |
| | e) | Dismantling pavement | | | | | | |
| | | - Bituminous pavement | Cum | | | | | |
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | | | | | | |
| | | | 0 | 1 | - | - | 0.20 | - |
| | | | | | | | Total | - |
| | | | | | | | Say | - |
| | | -Metal pavement | | | | | | |
| | | | | 1 | - | - | 0.30 | - |
| | | | | | | | Total | - |
| | | | | | | | Say | - |
| | f) | Dismantling | | | | | | |
| | | (i)MS Pipes, Guard rails, and Fencing | RM | | | | | 770.00 |
| | | (ii)Footpaths and Medians | Sqm | | | | | - |
| | | (iii) Electric /telephone poles/Transformers | Nos | | | | | 44.00 |
| | | (iv) Bus shelters | Nos | | | | | - |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|--------------|----------|---|------|------|-------------|--------------|---------------------|------------------|
| Sec-2 | | Earth Work | | | | | | |
| 1 | 2.1 | Earth work in excavation for roadway in all types of strata other than rock requiring blasting including dressing section to the required grade, camber and side slopes and conveying and/or disposing off the excavated material with mechanical means, spreading or disposing as directed by Engineer, with all leads and lifts etc. complete. | Cum | | | | | |
| | | For Main Carriageway | | | | | | |
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | | | | | | |
| | | 0-2413 | | 1 | 2,053.00 | 19.00 | 0.30 | 11,702.10 |
| | | For RUB Approach | | 1 | 320.00 | 14.00 | 2.10 | 9,408.00 |
| | | For Junctions along the road (There are 2 junction to improve) | | 2 | 40.00 | 7.00 | 0.30 | 168.00 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | | | | | | Total | 21,278.10 |
| | | | | | | | Say | 21,278.00 |
| 2 | 2.2. | Earth work in excavation for roadway in rock by Wedging including dressing section to the required grade, camber and side slopes and conveying and/or disposing off the excavated material preferably with mechanical means, spreading or disposing as directed , with all leads and lifts etc. complete | Cum | | | | | - |
| | | | | | | Provisional | Say | - |
| 3 | 2.3 | Earth work in embankment including median by using mechanical means with approved material obtained from the excavated portions of the roadway, laying in layers not exceeding 250 mm loose breaking clods, dressing to the required lines, curves, grades and watering to OMC and compacting to 95 % modified proctor density with vibratory roller having minimum 80-100 KN static weight with all leads and lifts etc. complete. | Cum | | | | | |
| | | | | | | provisional | Say | - |
| 4 | 2.4 | Leveling, watering and rolling the prepared subgrade with power roller weighing not less than 8 to 10 Tonnes and preparing the ground to required level, grade and camber etc. complete as directed by Engineer.. | Sqm | | | | | |
| | | 0-2413 | | 1 | 529.00 | 19.00 | | 10,051.00 |
| | | For RUB Approach | | 1 | 320.00 | 11.10 | | 3,552.00 |
| | | For Junctions along the road (There are 2 junction to improve) | | 2 | 40.00 | 7.00 | | 560.00 |
| | | | | | | | Total | 14,163.00 |
| 5 | 2.5 | Earth work in embankment / cushion layer for subgrade and hard shoulders by using mechanical means with approved material obtained from borrow areas outside ROW having 4 days soaked CBR equal to or more than 8%, laying in layers not exceeding 250 mm loose, breaking clods and dressing to the required lines,curve grades, and watering to OMC and compacting to 97 % modified proctor density with vibratory roller having minimum 80-100KN static weight including all leads and lifts etc. complete. | Cum | | | | | |
| | | For Main CW | | | | | | |
| | | 0-2413 (Height of Fill + Cushion Layer) | | 1 | 2,053.00 | 17.25 | 0.50 | 17,707.13 |
| | | For RUB Approach | | 1 | 320.00 | 11.10 | 0.20 | 710.40 |
| | | For Junctions along the road (There are 2 junction to improve) | | 2 | 40.00 | 7.00 | 0.20 | 112.00 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|---|----------|---|------|-------------|-------------|--------------|---------------------|-----------|
| | | Cushion Layer Below Drain | | 2 | 2,413.00 | 1.40 | 0.20 | 1,351.28 |
| | | | | | | | Total | 19,880.81 |
| | | | | | | | Say | 19,881.00 |
| 6 | 2.6 | Removal of unsuitable materials (debris) in the embankment foundation and /or subgrade and disposing the excavated material as directed by the engineer including all leads and lifts etc. complete. | Cum | Provisional | | | | - |
| | | | | | | | Say | - |
| Sec- 3 Drainage and Protective works, Paver Blocks in FP, Cross Pipes for Utilities etc. | | | | | | | | |
| 1 | 3.1 | Earth work in excavation in all types of strata other than rock for drains and channels etc., including dressing of bottom and sides of trenches, stacking the excavated spoil, clear from the edge of excavation including disposal of surplus spoil as directed by the Engineer with all leads and lifts etc. complete. | Cum | | | | | |
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | | 2 | 2,413.00 | 1.40 | 1.45 | 9,796.78 |
| | | For Junctions along the road (There are 2 junction to improve) | | - | 40.00 | 1.40 | 1.45 | - |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | For cross ducts @150m interval | | 16 | 9.60 | 1.60 | 1.57 | 384.61 |
| | | | | | | | Total | 10,181.39 |
| | | | | | | | Say | 10,181.00 |
| 2 | 3.2 | Earth work in excavation in rock by chiselling / wedging for drains and channels etc., including dressing of bottom and side of trenches, stacking the excavated spoil, clear from the edge of excavation including disposal of surplus spoil as directed by the Engineer with all leads and lifts etc. complete. | Cum | | | provisional | Say | - |
| 3 | 3.3 | Providing dry trap /granite /quartzite/ gneiss rubble stone soling 15 to 20 cm thick including hand packing and compacting etc. complete | Cum | 2 | 2,413.00 | 1.20 | 0.15 | 868.68 |
| | | For cross ducts @150m interval | | 16 | 9.60 | 1.60 | 0.15 | 36.86 |
| | | | | | | | Total | 905.54 |
| 4 | 3.4 | Providing and laying PCC M-15 grade for bed for lined drain, median cross drain, kerb with the maximum size of coarse aggregate 20 mm including necessary form work, mixing, vibrating, curing by sprinkling / ponding of water for 14 days etc. complete. | Cum | | | | | |
| | | Bedding concrete for drain | | 2 | 2,333.00 | 1.20 | 0.10 | 559.92 |
| | | Bedding concrete for Kerbs of median | | 2 | 2,333.00 | 0.37 | 0.10 | 170.31 |
| | | Bedding concrete for Kerbs between footpath and NMV | | 2 | 2,413.00 | 0.47 | 0.10 | 224.41 |
| | | Bedding concrete for runner beam of paver blocks in CW | | 2 | 2,333.00 | 0.43 | 0.10 | 200.64 |
| | | encasement of utility pipes (tranverse) | | 16 | 9.60 | Area | 0.69 | 105.68 |
| | | For Junctions along the road (There are 2 junction to improve) | | 4 | 40.00 | 1.40 | 0.10 | 22.40 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | For Junctions island kerb (There are 2 junction to improve) | | 2 | 39.00 | 0.37 | 0.10 | 2.85 |
| | | | | | | | Total | 1,286.21 |
| | | | | | | | Say | 1,286.00 |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|---------|----------|--|------|------|-------------|--------------|---------------------|----------|
| 5 | 3.5 | Providing and laying in situ PCC/RCC M25 grade for trenches, drains, precast cover, retaining walls, toe walls, head walls including coping. with stone metal, natural or crushed sand, including necessary form work, centering, mixing with mechanical mixers, compacting vibrating, curing by sprinkling/ponding of water for 14 days and finishing as directed and including construction of weep holes as directed by the Engineer including all leads and lifts etc. complete(excluding reinforcement) | Cum | | | | | |
| | | RCC drain walls and bottom | | 2 | 2,333.00 | 3.40 | 0.15 | 2,379.66 |
| | | RCC drain top | | 2 | 2,333.00 | 1.00 | 0.15 | 699.90 |
| | | For Junctions along the road (There are 2 junction to improve) (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | 4 | 40.00 | 4.20 | 0.15 | 100.80 |
| | | RCC runner beam of size 150mmx100m for paver blocks on FP | | 2 | 2,413.00 | 0.15 | 0.10 | 72.39 |
| | | Utility service chambers wall(1050x1500mm) | | 32 | 4.30 | 0.40 | 0.62 | 33.85 |
| | | | | | | | Total | 3,286.60 |
| | | Deduction for drian covers (provided at @10m interval of size 1200x500x150mm) | | 965 | (1.20) | 1.00 | 0.15 | (173.70) |
| | | | | | | | Net | 3,112.90 |
| | | | | | | | Say | 3,113.00 |
| 6 | 3.6 | Providing and laying HYSD bars for reinforcement for structure including cutting,bending hooking by machine,trying in position including binding wire, spacers, chairs,cover blocks as per detailed drawing including all leads and lifts etc. complete. (Steel = 60kg/1Cum) | MT | | | | | |
| | | | | | | | Total | 186.78 |
| | | | | | | | Say | 187.00 |
| 7 | 3.7 | Providing and laying cement concrete kerb in M-25 grade concrete as per drawing and directed by Engineer with all leads lifts etc. complete. | Cum | | | CS Area | | |
| | (a) | Pre-cast/cast-in-situ kerbs | | | | | | |
| | | (I) for median (Cross sectional Area : 0.078sq.m -) (Total length : 2053m, less for junctions- 40m) | | 2 | 2,333.00 | 0.08 | | 363.95 |
| | | (ii) for foot paths (Cross sectional Area : 0.038sq.m - type B) (Total length : 2053 m, less for junctions- 40m) | | 2 | 2,333.00 | 0.04 | | 177.31 |
| | | (iii) for foot paths (Cross sectional Area : 0.038sq.m - type B) (Total length :160m, for junctions @40m for 2 nos) | | 2 | 80.00 | 0.04 | | 6.08 |
| | | (iv) for traffic islands (Cross sectional Area : 0.038sq.m - type B) - assumed 2 junctions@ 39 m kerb length | | 2 | 39.00 | 0.04 | | 2.96 |
| | | | | | | | Total | 550.30 |
| | | | | | | | Say | 550.00 |
| 8 | 3.8 | Raising or lowering of manholes of any shape | Nos | 59 | | | | 59.00 |
| 9 | 3.9 | Providing and laying in position to the level and grade 150 mm dia precast NP2 class pipe below footpath for discharging water into concrete open drains including providing and fixing GI grating etc. complete as directed by Engineer. (at 10m interval, each location will have 0.7m pipe | RM | | | | | |
| | | | | 483 | 0.70 | | | 338.10 |
| | | | | | | | Say | 338.00 |
| 10 | 3.10 | Providing and laying interlocking concrete paving blocks in footpaths and medians including sand bed of thickness 50 mm and precast concrete head strips etc. complete as per drawing and specifications. | Sqm | | | | | |
| | | (I) For Footpath (60 mm Thick Paver Block) | | 2 | 2,413.00 | 0.84 | | 4,029.71 |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|--------------|----------|--|------|------|-------------|--------------|---------------------|-----------|
| | | Total width :1.1m, less for edge beam 0.15m, kerb top width :0.115m | | | | | | |
| | | (ii) for junction improvement: | | 2 | 80.00 | 0.84 | | 133.60 |
| | | | | | | | Total | 4,163.31 |
| | | | | | | | Say | 4,163.00 |
| 11 | 3.11 | Water table sets | RM | 2 | 2,413.00 | | | 4,826.00 |
| 12 | 3.12 | RCC runner beam of size 230mmx300m for paver blocks on CW | Cum | 2 | 2,333.00 | 0.23 | 0.30 | 321.95 |
| | | | | | | | Say | 322.00 |
| 13 | 3.13 | Providing and fixing RCC cover of any size, shape and thickness over drain/chamber with necessary heavy duty cast iron frame including all labour and material etc complete as directed by Engineer. | | | | | | |
| | | for Utility service chambers(1050x600x200 in 3nos) | Nos | 96 | | | | 96.00 |
| | | for drains | Nos | 965 | | | | 965.00 |
| | | (provided at @10m interval of size 1200x500x150mm in 2nos) | | | | | | |
| | | | | | | | Total | 1,061.00 |
| 14 | 3.14 | Providing and laying service ducts in position , precast RCC Pipes NP2 class including bed preparation ,cost of lifting ,loading and unloading ,jointing with collar or flush joints including cost of backfilling the trenches including all leads and lifts etc. complete. | | | | | | |
| | | For 250 mm Diameter pipes | | | | | | |
| | | For cross direction | RM | 16 | 28.80 | | | 460.80 |
| | | | | | | | Total | 461.00 |
| 15 | 3.15 | Providing & laying 100 mm dia PVC perforated pipe median under drain including geotextile and building through kerb etc. complete as per drawing and specification (at 15 m interval in median with approximate width of 1.5 m) | RM | 2 | 193.04 | | | 386.00 |
| 16 | 3.16 | Providing and fixing 150x100 mm non skidding precast chequered tiles 25 mm thick of approved quality in traffic island and where ever necessary in city suburban limit over 18 mm thick C.M 1:3 including curing etc.complete as per drawing and as directed by Engineer. | Sqm | | | from drawing | | 47.00 |
| Sec-4 | | Pavement | | | | | | |
| 1 | 4.1(a) | Providing and laying Granular Sub Base (structural layer) conforming to Grading II of Table 400.2 of compacted thickness of 150 mm with specified graded stone metal and sand mixed in place and laid with mechanical means spreading with motor grader and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD including all material , labour , machinery with all leads and lifts etc. complete. | Cum | | | | | |
| | | For Carriageway with BT | | | | | | |
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | | | | | | |
| | | 0-2413 | | 1 | 2,373.00 | 22.03 | 0.20 | 10,455.44 |
| | | For Junctions along the road (There are 2 junction to improve) | | 2 | 40.00 | 7.00 | 0.20 | 112.00 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | Below NMV | | 2 | 2,413.00 | 1.80 | 0.38 | 3,257.55 |
| | | Below Water Table & Kerb | | - | 2,413.00 | 0.60 | 0.31 | - |
| | | | | | | | Total | 13,824.99 |
| | | | | | | | Say | 13,825.00 |
| | 4.1(b) | GSB in drainage layer | Cum | | | | | |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|---------|----------|--|------|------|-------------|--------------|---------------------|------------|
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | | | | | | |
| | | 0-2413 | | 2 | 2,373.00 | 22.03 | 0.20 | 20,910.88 |
| | | For Junctions along the road (There are 2 junction to improve) | | 2 | 40.00 | 7.00 | 0.20 | 112.00 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | | | | | | Total | 21,022.88 |
| | | | | | | | Say | 21,023.00 |
| 2 | 4.2 | Providing and laying Wet Mix Macadam with paver finisher in specified thickness, each layer not exceeding 200 mm compacted thickness including premixing in pugmill/plant well graded crushed stone aggregate, with watering and spreading by to required profile and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD including all material , labour , machinery with all leads and lifts etc. complete. | Cum | | | | | |
| | | For Carriageway with BT | | | | | | |
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | | | | | | |
| | | 0-2413 | | 1 | 2,373.00 | 22.03 | 0.28 | 14,376.23 |
| | | For Junctions along the road (There are2 junction to improve) | | 2 | 40.00 | 7.00 | 0.28 | 154.00 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | For Carriageway paver blocks | | | | | | |
| | | Degloor Road Through CRC To Gyanamata Schoo (With an RUB Crossing Railway) | | 1 | 2,333.00 | 0.97 | 0.38 | 848.63 |
| | | For Junctions (2 Nos.) Main C/W | | 2 | 40.00 | 7.50 | 0.10 | 60.00 |
| | | For Junctions (2 Nos.)- Cross Road | | 2 | 20.00 | 7.00 | 0.10 | 28.00 |
| | | | | | | | Total | 15,466.86 |
| | | | | | | | Say | 15,467.00 |
| 3 | 4.3 | Providing and applying primer coat using bituminous emulsion complying to IS:8887 over prepared surface of granular base with emulsion at a temperature between 20 - 60 deg. C and applying a uniform coat with the aid of self propelled bitumen pressure spraying bar with nozzles of constant volume of pressure system @10Kg/10Sqm including all material , labour , machinery with all leads and lifts etc. complete. | Sqm | | | | | |
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | | | | | | |
| | | 0-2413 | | 1 | 2,373.00 | 22.03 | | 52,277.19 |
| | | For Junctions along the road (There are 2 junction to improve) | | 1 | 40.00 | 7.00 | | 280.00 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | | | | | | Total | 52,557.00 |
| 4 | 4.4 | Providing and applying tack coat by using bituminous emulsion complying to IS: 8887 over prepared surface preheated to a temperature between 20 - 70 deg. C and applying a uniform coat with the aid of self propelled bitumen pressure sprayer with self heating arrangement and spraying bar with nozzles of constant volume or pressure system at the rate of5Kg/10Sqm on primed / blacktop surface and curing etc. including all material, labour,machinery, with all leads and lifts etc. complete. | Sqm | | | | | |
| | | For new construction | | | | | | |
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | | | | | | |
| | | 0-2413 | | 2 | 2,373.00 | 22.03 | | 104,554.38 |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|---------|----------|--|------|---------------|-------------|--------------|---------------------|-------------------|
| | | For Junctions along the road (There are 2 junction to improve) | | 1 | 40.00 | 7.00 | | 280.00 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | For over lay(2 layers)& Profile Corrective Course | | | | | | |
| | | Degloor Road Through CRC To Gyanamata School (With an RUB Crossing Railway) | | 3 | 2,373.00 | - | | - |
| | | | | | | | Total | 104,834.00 |
| 5 | 4.5 | Providing and laying Bituminous Macadam of maximum 100 mm compacted thickness on prepared surface using 30 - 40 grade bitumen | Cum | | | | | |
| | | For over lay(1 layer) | | | | | | |
| | | 0-2413 | | - | 2,373.00 | 7.50 | - | - |
| | | For profile corrective course(camber)-deficit by 2.5% | | | | | | |
| | | | | - | 2,373.00 | 7.50 | - | - |
| | | | | | | | Total | - |
| 6 | 4.6 | Providing and laying Dense Bituminous macadam in a single layer of 50mm to 100 mm compacted thickness on prepared surface using 30 - 40 grade bitumen | Cum | | | | | |
| | | For new construction | | | | | | |
| | | 0-2053 | | 1 | 2,373.00 | 17.00 | 0.18 | 7,261.38 |
| | | For Junctions along the road (There are 2 junction to improve) | | 2 | 40.00 | 7.00 | 0.18 | 100.80 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | deduction for Junctions with paver blocks(2 Nos.) | | (2) | 40.00 | 7.50 | 0.18 | (108.00) |
| | | deduction for cross RD with paver blocks(2 Nos.) | | (2) | 20.00 | 7.00 | 0.18 | (50.40) |
| | | | | | | | Total | 7,203.78 |
| | | | | | | | Say | 7,204.00 |
| 7 | 4.7 | Providing and laying Bituminous Concrete in a single layer of 25mm to 50 mm compacted thickness on prepared surface using 30-40 bitumen | Cum | | | | | |
| | | For over lay | | | | | | |
| | | 0-2413 | | - | 2,373.00 | 7.50 | - | - |
| | | For New construction | | | | | | |
| | | 0-2413 | | 1 | 2,373.00 | 17.00 | 0.05 | 2,017.05 |
| | | For Junctions along the road (There are 2 junction to improve) | | 2 | 40.00 | 7.00 | 0.05 | 28.00 |
| | | (average width for widening of the road at all junctionas = 7m, and length of road = 40m,avg.) | | | | | | |
| | | deduction for Junctions with paver blocks(2 Nos.) | | (2) | 40.00 | 7.50 | 0.05 | (30.00) |
| | | deduction for cross RD with paver blocks(2 Nos.) | | (2) | 20.00 | 7.00 | 0.05 | (14.00) |
| | | | | | | | Total | 2,001.05 |
| | | | | | | | Say | 2,001.00 |
| 8 | 4.8 | Providing and laying 20 mm thick mix seal surfacing 'A' type as renewal coat for maintenance of the existing road surface during construction including supplying of all materials , clearing the base, heating the bitumen and aggregates and rolling with power roller 8 - 10 tonne using 30/40 grade bitumen. | Sqm | (Provisional) | | | | - |
| 9 | 4.9 | Providing and laying Dry Lean Concrete base including providing coarse and fine aggregate to the specified gradation using minimum cement content 150 kg/cum of concrete with OPC 43 grade cement | Cum | | | | | |
| | | 0-2413 | | 1 | 2,373.00 | - | - | - |
| | | deduction for Junctions with paver blocks(2 Nos.) | | (2) | 40.00 | - | - | - |
| | | deduction for cross RD with paver blocks(2 Nos.) | | (2) | 20.00 | 7.00 | - | - |
| | | | | | | | Total | - |
| | | | | | | | Say | - |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|--------------|----------|---|------|---------------|-------------|--------------|---------------------|-----------------|
| 10 | 4.10 | Providing and laying Pavement Quality Concrete of M 35 grade including providing 125 micron thick impermeable plastic sheet membrane over the surface to be covered, coarse and fine aggregates of specified gradation using minimum cement content 350 kg/cum of concrete with OPC 43 grade cement | Cum | | | | | |
| | | 0-2413 | | 1 | 2,373.00 | - | - | - |
| | | deduction for Junctions with paver blocks(2 Nos.) | | (2) | 40.00 | - | - | - |
| | | deduction for cross RD with paver blocks(2 Nos.) | | (2) | 20.00 | 7.00 | - | - |
| | | | | | | | Total | - |
| | | | | | | | Say | - |
| 11 | 4.11 | Providing and laying Pavement Quality Concrete for Profile correction Coarse/ overlay of M 35 grade including roughening the existing surface by Shot blasting and providing bonding material (cement sand slurry/low viscous epoxy) providing over the surface to be covered, coarse and fine aggregates of specified gradation using minimum cement content 350 kg/cum of concrete with OPC 43 grade cement, approved admixture, mixing with mechanised batch mix plant of appropriate capacity as per the design mix to the specified workability, transporting the mix with dumpers or transit mixers and laying with self propelled slip form paving train of required capacity having electronic sensor device, curing with approved resin based aluminised reflective curing compound and covering with moist hessian or ponding and sprinkling of water for a minimum period of 14 days and including providing and fixing dowels, tie bars, approved precompressed seals for joint filling and sealing all types of joints and finishing to the desired surface texture including all material, labour, machinery | Cum | | | | | |
| 12 | 4.12 | Paver blocks of 80mm thick in Carriageway (deduct runner beam and water table, kerb from width= 1.5-0.23-0.3) | Sqm | 2 | 2,333.00 | 1.50 | | 6,999.00 |
| | | Add for Junctions along the road (There are 2 junction to improve) | | | | | | |
| | | Junctions with paver blocks(2 Nos.) | | 2 | 40.00 | 7.50 | | 600.00 |
| | | cross RD with paver blocks(2 Nos.) | | 2 | 20.00 | 7.00 | | 280.00 |
| | | | | | | | Total | 7,879.00 |
| | | | | | | | Say | 7,879.00 |
| 13 | 4.13 | Pot hole filling with open graded 20mm premix surfacing | Sqm | | | | | 10.00 |
| 14 | 4.14 | Crack sealing | Sqm | (Provisional) | | | | - |
| Sec-5 | | Cross Drainage Work | | NA | | | | - |
| | | Total of Section 5 | | | | | Say | - |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|--------------|----------|--|------|------|-------------|--------------|---------------------|-----------------|
| Sec-6 | | Road Markings, etc. | | | | | | |
| 1 | 6.1 | Providing and laying hot applied thermoplastic road marking compound in approved colour and shade for road marking on bituminous/ concrete road surface in lane marking 100mm wide 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic Material including cleaning the surface of all dirt, dust, and other foriegn matter, demarcation at site/premarking, finishing and managing the traffic control etc.complete. The thermoplastic compound shall be of approved colour and shade. Marking to be done as per specifications, detailed drawings and as directed. | Sqm | | | | | |
| | | Lane marking (main CW broken line) | | 2 | 811.00 | 0.10 | | 162.20 |
| | | Total length :2333 m, straight:2133m, curves: 200 (crieteria: 1/3 length on straight, 1/2 on curves) | | | | | | |
| | | lane marking in junction improvement (@one centre line for 2JNs) | | 2 | 20.00 | 0.10 | | 4.00 |
| | | | | | | | Total | 166.00 |
| 2 | 6.2 | Providing and applying two coats of synthetic enamel paint including primer to kerb as per Technical Specification and as directed by the engineer. | Sqm | | | | | - |
| | | (I) For footpath kerbs | | | | | | |
| | | - Main CW, | | 4 | 50.00 | | 0.29 | 58.00 |
| | | - Junctions | | 4 | 40.00 | | 0.29 | 46.40 |
| | | (ii) for Median kerbs | | 4 | 50.00 | | 0.46 | 92.80 |
| | | | | | | | Total | 197.00 |
| 3 | 6.3 | Providing and laying hot applied thermoplastic road marking compound in approved colour and shade for road marking on bituminous/ concrete road surface in edge line 150mm wide 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic Material,including cleaning the surface of all dirt, dust, and other foriegn matter, demarcation at site/ premarking, finishing and managing the traffic control etc.complete and as per specifications, detailed drawings and as directed. | Sqm | 2 | 2,373.00 | 0.15 | | 711.90 |
| | | Edge lines (continuous by FP side and Median sides) | | | | | | |
| 4 | 6.4 | Providing and laying hot applied thermoplastic road marking compound in approved colour and shade for road marking on bituminous/ concrete road surface in pedestrian crossings, chevrons, directional arrows etc, 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic .Material,including dispensing drop on glass beads of approved make and as per BS 6088 at the rate 250 gms per sqm. including cleaning the surface of all dirt, dust, and other foriegn matter, demarcation at site/ premarking, finishing and managing the traffic control etc.complete. Marking to be done as per specifications, drawings and as directed. | Sqm | | | | | |
| | | | | | | Area | | |
| | | (I) Straight arrows | | 30 | | 1.10 | | 33.00 |
| | | (ii) Straight and turn arrows | | 8 | | 1.42 | | 11.36 |
| | | (iii) Turn Arrows | | 8 | | 1.13 | | 9.00 |
| | | (iv) Cheveron markings | | 4 | | 5.00 | | 20.00 |
| | | (v) Pedestrian crossings | | 3 | | 375.00 | | 1,125.00 |
| | | (vi) Stop lines | | 4 | | 4.00 | | 16.00 |
| | | (vii) Additional provision for any | | | | | | 20.00 |
| | | | | | | | Total | 1,234.36 |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|--------------|----------|---|------|------|-------------|--------------|---------------------|-----------------|
| Sec-7 | | TRAFFIC SIGNS/ROAD FURNITURE | | | | | | |
| 1 | 7.1 | Supplying and fixing informatory road sign boards made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications. | | | | | | |
| | a) | Boards of area not exceeding 1 sq. m. | Nos | 6 | | | | 6.00 |
| 2 | 7.2 | Supplying and fixing utility/services road sign boards made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications. | | | | | | |
| | a) | Boards of area not exceeding 1 sq. m. | Nos | 2 | | | | 2.00 |
| 3 | 7.3 | Supplying and fixing cautionary/warning road sign boards (Equilateral triangle 900 mm side) made up with high intensity grade retro-reflective type sheeting complete as per drawing and technical specifications. | Nos | | | | | |
| | | Cautionary sign boards | | | | | | |
| | | -cross road signs | | 4 | | | | 4.00 |
| | | -median gap signs | | - | | | | - |
| | | -traffic signals sign | | 2 | | | | 2.00 |
| | | -curves signs | | 2 | | | | 2.00 |
| | | -pedestrian crossing signs | | 6 | | | | 6.00 |
| | | -school locations | | 2 | | | | 2.00 |
| | | -for junctions | | 2 | | | | 2.00 |
| | | | | | | | Total | 18.00 |
| 4 | 7.4 | Supplying and fixing regulatory/mandatory road sign boards (Circular 600 mm dia) made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications. | Nos | | | | | |
| | | -speed signs | | 6 | | | | 6.00 |
| | | -stop signs | | 2 | | | | 2.00 |
| | | -giveaway signs | | 2 | | | | 2.00 |
| | | | | | | | Total | 10.00 |
| 5 | 7.5 | Supplying/Erecting and fixing in position road overhead retro-reflective informatory sign boards including fixing on overhead gantry structure including the cost of gantry and other supports and including cost of back frame complete as per drawing and | Nos | 1 | | | | 1.00 |
| 6 | 7.6 | Supplying and fixing in position road cantilever overhang retro-reflective informatory sign boards including fixing on specified galvoniged overhang structure including the cost of overhang and other supports but including cost of back frame complete as per drawing and specifications. | Nos. | 2 | | | | 2.00 |
| 7 | 7.7 | Cat Eye studs | Nos. | - | | | | - |
| 8 | 7.8 | Delineators (on edge lines 4nos @ 3m interval) | Nos. | - | | | | - |
| 9 | 7.9 | Supplying and fixing in position MS Railing including painting complete as per drawing and specifications. | Rmt | 2 | 2,333.00 | | | 4,666.00 |

| Sr. No. | Item No. | Description | Unit | Nos. | Length in M | Breadth in M | Depth / Height in M | Qty |
|----------------|----------|--|---------------|------|---|--------------|---------------------|---------------|
| Sec - 8 | | Traffic Management | | | | | | |
| | | <i>Traffic Management</i> | | | | | | |
| 1 | 8.1 | Traffic Management and Regulation during construction | | | | | | |
| | | Maintaining, Managing, Operating the traffic plying on road during day and night smoothly and safely as and when required without hindrance to traffic during entire construction activity by providing necessary equipments such as, various road signs, delineaters, barricading, | | | | | | |
| | a) | Installation of a steel portable barricade with horizontal rail 300 mm wide, 2.5 m in length fitted on a 'A' frame made with 45x45x5 mm angle iron section, 1.5 m in height, horizontal rail painted (2 coats) with yellow and white strips, 150 mm in width at an angle of 45o, 'A' frame painted with 2 coats of yellow paint, complete as per IRC:SP:55-2001. | Nos | 759 | two rows per 40% length has been provided | | | 759.00 |
| | b) | Providing Red lanterns or warning lights of similar type on the barricades. | Nos | 38 | | | | 38.00 |
| | c) | Provision of metal drum / empty bitumen drum delineator, 300 mm in diameter 800 mm high filled with earth for stability painted in circumferential strips of alternate black and white 100 mm white fitted with reflectors 3 nos. of 7.5 cm dia. All as per IRC-SP:55-2001. | Nos | 316 | two rows per20% length @ 3m interval | | | 316.00 |
| | d) | Installation of a steel portable barricade with horizontal sheet of 800 mm wide, 3.0 m in length fitted on a 'wooden bamboos of diameter 200 mm 1.5 m in height, horizontal sheet painted (2 coats) with yellow and white stripes, 150 mm in width at an angle of 450, complete as directed by Engineer. | Nos | 633 | two rows per40% length @ 3m interval | | | 633.00 |
| Sec - 9 | | Utility Relocation Items | | | | | | |
| | | Utility Relocation Items (Provisional) | B Section 100 | | | | | |
| 1 | 9.1 | Water Pipe Line | | | | | | |
| | | Relocation of water pipelines by nominated sub-contractors. | per 100 m | 1 | 23.73 | | | 23.73 |
| 2 | 9.2 | Sewerage Line | | | | | | |
| | | Relocation of sewerage services by nominated sub-contractors. | per 100 m | 1 | 23.73 | | | 23.73 |
| 3 | 9.3 | Electricity, (M.S.E.B.) | | | | | | |
| | i) | Relocation of electrical services by nominated sub-contractors. | per 100 m | 1 | 23.73 | | | 23.73 |
| | ii) | Relocation of electrical services by nominated sub-contractors. | per 100 m | 1 | 23.73 | | | 23.73 |
| 4 | 9.4 | Telephone | | | | | | |
| | | Relocation of telephone services by nominated sub-contractors. | per 100 m | 1 | 23.73 | | | 23.73 |
| 5 | 9.5 | Relocation of OFC Lines by nominated sub-contractors. | per 100 m | 1 | 23.73 | | | 23.73 |

**DPR FOR ROAD DEVELOPMENT IN NANDED UNDER JNNURM
DEGLOOR ROAD THROUGH C.R.C.TO GYANAMATA SCHOOL (WITH AN RUB CROSSING RAILWAY) (ROAD NO - 24)
(From Ch: 0+000 TO 2+413) { LESS RUB LENGTH, EFFECTIVE LENGTH = 2373 M }
COST ESTIMATE**

Note: The specification reference is as under:

A - As per Additional Technical Specifications (SP) Vol. - III

B - As per MORT&H specifications (4th revision August 2001) and revisions as made in Part B Vol. - III

| Sr. No. | Item No. | Description | Unit | Specifications | Quantity | Estimated Cost | |
|--------------|----------|---|------|--------------------|----------|------------------|-------------------|
| | | | | | | Unit Rate in Rs. | Amount in Rs. |
| Sec-1 | | Site Clearance | | | | | |
| 1 | 1.1 | Clearing & grubbing road land including uprooting all vegetation, grass, bush shrubs, saplings and trees of girth up to 300 mm, removal of stumps of trees of girth of all sizes including removing stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable materials as directed by engineer with all leads and lifts etc. | Ha | B Clause 201 | 3.80 | 16,461.00 | 62,499.12 |
| 2 | 1.2 | Cutting of trees of all girth above 300 mm including cutting of trunks, branches, uprooting and removal of all materials and stacking within the ROW and filling depressions/pits by earth etc. complete. including liasoning with concerned authorities for obtaining permissions. | | B Clause 201 & 305 | | | |
| | 1.2 (a) | Girth 300 mm to 600 mm | Nos | | 45.00 | 49.00 | 2,205.00 |
| | 1.2 (b) | Girth above 600 mm to 900 mm | Nos | | 10.00 | 101.00 | 1,010.00 |
| | 1.2 (c) | Girth above 900 mm to 1800 mm | Nos | | 8.00 | 244.00 | 1,952.00 |
| 3 | 1.3 | Transplantation of existing trees of girth above 600 mm girth as directed by engineer, including uprooting and shifting of the tree and placing in excavated pits of suitable size and after transplanting, removal and stacking of excavated earth to desired location, filling the pit with soil mixture of excavated earth, fresh red earth etc as directed. | Nos | MORT&H | 6.00 | 2,168.00 | 13,008.00 |
| 4 | 1.4 | Dismantling of structures on roadway including sorting out the dismantled material, disposal of unserviceable material and utilizing the serviceable material free of cost in permanent works as directed by the Engineer with all leads and lifts etc. complete. | | B Clause 202 | | | |
| | 1.4 (a) | Brick masonry | Cum | | 536.00 | 138.00 | 73,968.00 |
| | 1.4 (b) | Stone masonry | Cum | | 26.00 | 138.00 | 3,588.00 |
| | 1.4 (c) | Plain Concrete | Cum | | 133.00 | 138.00 | 18,354.00 |
| | 1.4 (d) | Reinforced Concrete | Cum | | 223.00 | 144.00 | 32,112.00 |
| | 1.4 (e) | Dismantling pavement | | | | | |
| | | (i) Bituminous pavement | Cum | | - | 144.00 | - |
| | | (ii) CC Pavement | Cum | | - | 144.00 | - |
| | | (iii) Metal Road | Cum | | - | 144.00 | - |
| | 1.4 (f) | Dismantling | | | | | |
| | | (i) MS Pipes, Guard rails, and Fencing | RM | | 770.00 | 10.00 | 7,700.00 |
| | | (ii) Footpaths and Medians | Sqm | | - | 144.00 | - |
| | | (iii) Electric poles/Telephone poles/Transformers | Nos | | 44.00 | 74.00 | 3,256.00 |
| | | (iv) Bus Shelters | Nos | | - | 3,000.00 | - |
| | | Total of Section 1 | | | | | 219,652.12 |

| Sr. No. | Item No. | Description | Unit | Specifications | Quantity | Estimated Cost | |
|---------------|----------|---|------|---------------------------------|-----------|------------------|---------------------|
| | | | | | | Unit Rate in Rs. | Amount in Rs. |
| Sec-2 | | Earth Work and Ground Improvement | | | | | |
| 1 | 2.1 | Earth work in excavation for roadway in all types of strata other than rock requiring blasting including dressing section to the required grade, camber and side slopes and conveying and/or disposing off the excavated material with mechanical means, spreading or disposing as directed by Engineer, with all leads and lifts etc. complete. | Cum | B Clause 301 | 21,278.00 | 40.00 | 851,120.00 |
| 2 | 2.2. | Earth work in excavation for roadway in rock by Wedging/controlled blasting including dressing section to the required grade, camber and side slopes and conveying and/or disposing off the excavated material preferably with mechanical means, spreading or disposing as directed , with all leads and lifts etc. complete | Cum | B Clause 301, 302 | - | 228.00 | - |
| 3 | 2.3 | Earth work in embankment including median by using mechanical means with approved material obtained from the excavated portions of the roadway, laying in layers not exceeding 250 mm loose breaking clods, dressing to the required lines, curves, grades and watering to OMC and compacting to 95 % modified proctor density with vibratory roller having minimum 80-100 KN static weight with all leads and lifts etc. complete. | Cum | B Clause 305 | - | 33.00 | - |
| 4 | 2.4 | Leveling, watering and rolling the prepared sub grade with power roller weighing not less than 8 to 10 Tones and preparing the ground to required level, grade and camber etc. complete as directed by Engineer.. | Sqm | MORT&H | 14,163.00 | 6.00 | 84,978.00 |
| 5 | 2.5 | Earth work in embankment for sub grade/cushion and hard shoulders by using mechanical means with approved material obtained from borrow areas outside ROW having 4 days soaked CBR equal to or more than 8%, laying in layers not exceeding 250 mm loose, breaking clods and dressing to the required lines, curve grades, and watering to OMC and compacting to 97 % modified proctor density with vibratory roller having minimum 80-100KN static weight including all leads and lifts etc. | Cum | B Clause 305 | 19,881.00 | 86.00 | 1,709,766.00 |
| 6 | 2.6 | Removal of unsuitable materials (debris) in the embankment foundation and /or sub grade and disposing the excavated material as directed by the engineer including all leads and lifts etc. complete. (Lead beyond 3.00 Kms.) | Cum | B Clause 301 | - | 46.00 | - |
| | | Total of Section 2 | | | | | 2,645,864.00 |
| Sec- 3 | | Drainage and Protective Works, Paver blocks in FP, cross pipes for utilities etc | | | | | |
| 1 | 3.1 | Earth work in excavation in all types of strata other than rock for drains and channels etc., including dressing of bottom and sides of trenches, stacking the excavated spoil, clear from the edge of excavation including disposal of surplus spoil as directed by the Engineer with all leads and lifts etc. complete. | Cum | B Clause 301,304 & 309 | 10,181.00 | 40.00 | 407,240.00 |
| 2 | 3.2 | Earth work in excavation in rock by chiseling / wedging for drains and channels etc., including dressing of bottom and side of trenches, stacking the excavated spoil, clear from the edge of excavation including disposal of surplus spoil as directed by the Engineer with all leads and lifts etc. complete. | Cum | B Clause 301 & 303 | - | 228.00 | - |
| 3 | 3.3 (a) | Providing dry trap /granite /quartzite/ gneiss rubble stone soling 15 to 20 cm thick including hand packing and compacting etc. complete | Cum | MORT&H | 905.54 | 205.00 | 185,636.52 |
| | 3.3 (b) | Providing cushion layer subgrade / gravel / below Rubble Soaling by using approved material | Cum | MORT&H | - | 86.00 | - |
| 4 | 3.4 | Providing and laying PCC M-15 grade for bed for lined drain, median cross drain, Kerb with the maximum size of coarse aggregate 20 mm including necessary form work, mixing, vibrating, curing by sprinkling / ponding of water for 14 days etc. complete. | Cum | B Section 1500,1700 & 2100, ASP | 1,286.00 | 1,871.00 | 2,406,106.00 |

| Sr. No. | Item No. | Description | Unit | Specifications | Quantity | Estimated Cost | | |
|---------------------------|----------|---|------|----------------------------|----------|------------------|---------------|----------------------|
| | | | | | | Unit Rate in Rs. | Amount in Rs. | |
| 5 | 3.5 | Providing and laying in situ PCC/RCC M25 grade for trenches, drains, precast cover, retaining walls, toe walls, head walls including coping. with stone metal, natural or crushed sand, including necessary form work, centering, mixing with mechanical mixers, compacting vibrating, curing by sprinkling/ponding of water for 14 days and finishing as directed and including construction of weep holes as directed by the Engineer including all leads and lifts etc. complete excluding | Cum | B Section 1500 & 1700, ASP | 3,113.00 | 2,467.00 | 7,679,771.00 | |
| 6 | 3.6 | Providing and laying HYSD bars with cement polymer composite coating (CPCC) anticorrosive epoxy treatment for reinforcement for structure including cutting, bending hooking by machine, trying in position including binding wire, spacers, chairs, cover blocks as per detailed drawing including all leads and lifts etc. complete. | MT | B Section 1600 ASP | 187.00 | 34,042.00 | 6,365,854.00 | |
| 7 | 3.7 | Providing and laying cement concrete Kerb in M-35 grade concrete as per drawing and directed by Engineer with all leads lifts etc. complete. | Cum | B clause 408, ASP | | | - | |
| | | Pre-cast/cast-in-situ Kerbs | Cum | | 550.00 | 2,468.00 | 1,357,400.00 | |
| 8 | 3.8 | Raising or lowering any shape and size of manhole to the required level including all material formwork, brickwork and with 16 mm thick M15 (1:2:4) c/c Coping under frames of manhole including curing etc. complete as specified and as directed by Engineer In Charge | No | MORT&H | 59.00 | 953.00 | 56,227.00 | |
| 9 | 3.9 | Providing and laying in position to the level and grade 150 mm dia precast NP2 class pipe below footpath for discharging water into concrete open drains including providing and fixing GI grating etc. complete as directed by Engineer. | RM | B-Section 2900 | 338.00 | 216.00 | 73,008.00 | |
| 10 | 3.10 | Providing and laying interlocking concrete paving blocks in footpaths and medians including sand bed of thickness 50 mm and precast concrete head strips etc. complete as per drawing and specifications. a) For 60mm Thick Paver Block | Sqm | ASP | | | | |
| | | | | | 4,163.00 | 595.00 | 2,476,985.00 | |
| 11 | 3.11 | Providing And fixing of the precast tapered water table of thickness 105 mm, 300 mm width in M35 grade concrete as detailed in drawing including laying a leveling course of M15 grade concrete slope, inclusive of form work jointing in 1:2 CM prop flush to concrete surface including curing as | RM | MORT&H | 4,826.00 | 336.00 | 1,621,536.00 | |
| 12 | 3.12 | Providing and laying required size RCC running Beam in M35 concrete including formwork, mixing, compacting and curing etc. complete reinforced with 12 mm dia (min 4 nos) MS main bars and 6 mm dia MS ring at 15 mm c/c to be anchored in slipper slab properly with MS reinforcement as per drawing etc. complete as specified (steel will not be paid separately) etc. complete as directed by Engineer in Charge | Cum | MORT&H | 322.00 | 2,531.00 | 814,982.00 | |
| 13 | 3.13 | Providing and fixing RCC cover of any size, shape and thickness over drain/chamber with necessary heavy duty cast iron frame including all labour and material etc complete as directed by Engineer. | No | MORT&H | 1,061.00 | 1,500.00 | 1,591,500.00 | |
| 14 | 3.14 | Providing and laying service ducts in position, precast RCC Pipes NP2 class including bed preparation, cost of lifting, loading and unloading, jointing with collar or flush joints including cost of backfilling the trenches including all leads and lifts etc. complete. 250 mm Diameter | Rm | MORT&H | 461.00 | 368.00 | 169,648.00 | |
| 15 | 3.15 | Providing & laying 100 mm dia PVC perforated pipe median under drain including geotextile and building through Kerb etc. complete as per drawing and specification (at 15 m interval in median with approximate width of 1.5 m) | Rm | MORT&H | 386.00 | 144.00 | 55,584.00 | |
| 16 | 3.16 | Providing and fixing 150x100 mm non skidding precast chequered tiles 25 mm thick of approved quality in traffic island and where ever necessary in city suburban limit over 18 mm thick C.M 1:3 including curing etc. complete as per drawing and as directed by Engineer. | Sqm | MORT&H | 47.00 | 244.00 | 11,468.00 | |
| Total of Section 3 | | | | | | | | 25,272,945.52 |

| Sr. No. | Item No. | Description | Unit | Specifications | Quantity | Estimated Cost | |
|--------------|----------|---|------|----------------|------------|------------------|---------------|
| | | | | | | Unit Rate in Rs. | Amount in Rs. |
| Sec-4 | | Pavement | | | | | |
| 1 | 4.1(a) | Providing and laying Granular Sub Base (structural layer) close graded conforming to Grading II of Table 400.2 of compacted thickness of 150 mm with specified graded stone metal and sand mixed in place and laid with mechanical means spreading with motor grader and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD including all material , labour , machinery with all leads and lifts etc. complete. (by plant mix method) | Cum | B Clause 401 | 13,825.00 | 445.00 | 6,152,125.00 |
| | 4.1(b) | Providing and laying Granular Sub Base (drainage layer) coarse graded conforming to Grading II of Table 400.2 of compacted thickness of 150 mm with specified graded stone metal and sand mixed in place and laid with mechanical means spreading with motor grader and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD including all material , labour , machinery with all leads and lifts etc. complete. | Cum | B Clause 401 | 21,023.00 | 389.00 | 8,177,947.00 |
| 2 | 4.2 | Providing and laying Wet Mix Macadam with paver finisher in specified thickness, each layer not exceeding 200 mm compacted thickness including premixing in pugmill/plant well graded crushed stone aggregate, with watering and spreading by to required profile and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD including all material, labour, machinery with all leads and lifts etc. complete. | Cum | B Clause 406 | 15,467.00 | 484.00 | 7,486,028.00 |
| 3 | 4.3 | Providing and applying primer coat using bituminous emulsion complying to IS:8887 over prepared surface of granular base with emulsion at a temperature between 20 - 45 deg. C and applying a uniform coat with the aid of self propelled bitumen pressure spraying bar with nozzles of constant volume of pressure system @10Kg/10Sqm including all material, labour, machinery with all leads and lifts etc. complete. | Sqm | B Clause 502 | 52,557.00 | 31.00 | 1,629,267.00 |
| 4 | 4.4 | Providing and applying tack coat by using bituminous emulsion complying to IS: 8887 over prepared surface preheated to a temperature between 20 - 50 deg. C and applying a uniform coat with the aid of self propelled bitumen pressure sprayer with self heating arrangement and spraying bar with nozzles of constant volume or pressure system at the rate of 3Kg/10Sqm on primed / blacktop surface and curing etc. including all material, labour,machinery, with all leads and lifts etc. complete. | Sqm | B Clause 503 | 104,834.00 | 16.00 | 1,677,344.00 |
| 5 | 4.5 | Providing and laying Bituminous Macadam of maximum 100 mm compacted thickness on prepared surface using 30 - 40 grade bitumen providing necessary aggregates with specified gradation mixing with mechanical means in hot mix plant of suitable capacity of batch mix type and electronically controlled mixing to the specified temperature, transporting and laying the mix with self propelled paver finisher with electronic sensor device and initial compaction with minimum 80 - 100 KN static weight smooth wheeled roller followed by intermediate rolling with minimum 80 – 100 KN static weight vibratory roller/pneumatic tyred roller having minimum 150 – 250 KN weight having a tyre pressure of atleast 0.7 Mpa and finished with minimum 60 - 80 KN weight smooth wheeled tandem roller to achieve desired density including all material, labour, machinery with all leads and lifts (Excluding tack coat) etc. complete. | Cum | B Clause 504 | - | 3,092.00 | - |

| Sr. No. | Item No. | Description | Unit | Specifications | Quantity | Estimated Cost | |
|---------|----------|---|------|---|----------|------------------|---------------|
| | | | | | | Unit Rate in Rs. | Amount in Rs. |
| 6 | 4.6 | Providing and laying Dense Bituminous macadam in a single layer of 50mm to 100 mm compacted thickness on prepared surface using 30 - 40 grade bitumen including providing necessary aggregates with specified gradation mixing with mechanical means in hot mix plant of suitable capacity of batch mix type and electronically controlled mixing of the specified temperature, transporting and laying the mix with self propelled paver finisher with electronic sensor device in full width and initial compaction with minimum 80 - 100 KN static weight vibratory roller/pneumatic tyred roller having minimum 150 – 250 KN weight having a tyre pressure of atleast 0.7 MPa and finished with minimum 60 – 80 KN weight smooth wheeled tandem roller to achieve desired density including all material, labour, machinery with all leads and lifts (excluding tack coat) | Cum | B Clause 507 | 7,204.00 | 3,922.00 | 28,254,088.00 |
| 7 | 4.7 | Providing and laying Bituminous Concrete in a single layer of 25mm to 50 mm compacted thickness on prepared surface using 30-40 bitumen of grade approved by the engineer including providing necessary aggregates with specified gradation mixing with mechanical means in hot mix plant of suitable capacity of batch mix type and electronically controlled mixing to the specified temperature, transporting and laying the mix with self propelled paver finisher with electronic sensor device in full width and initial compaction with minimum 80 - 100 KN static weight smooth wheeled roller followed by intermediate rolling with minimum 80 - 100 KN static weight vibratory roller / pneumatic tyred roller having minimum 150 - 250 KN weight having a tyre pressure of atleast 0.7 MPa and finished with minimum 60 - 80 KN weight smooth wheeled tandem roller to achieve desired density including all material, labour, machinery with all leads and lifts etc. complete (excluding tack coat) and including cement filler @2% by weight of | Cum | B Clause 509 & 521 | 2,001.00 | 4,711.00 | 9,426,711.00 |
| 8 | 4.8 | Providing and laying 20 mm thick mix seal surfacing 'A' type as renewal coat for maintenance of the existing road surface during construction including supplying of all materials , clearing the base, heating the bitumen and aggregates and rolling with power roller 8 - 10 tonne using | Sqm | B Clause 512 | - | 80.00 | - |
| 9 | 4.9 | Providing and laying Dry Lean Concrete base including providing coarse and fine aggregate to the specified gradation using minimum cement content 150 kg/cum of concrete with OPC 43 grade cement mixing of concrete as per approved design mix using mechanised batch mix plant of appropriate capacity, transporting and laying with self propelled paver with electronic sensor device and compacting with vibratory roller of minimum 80 - 100 KN static weight to give desired compacted density and average compressive strength of 10 MPa at 7 days and curing with liquid curing compound and sprinkling water and covering with moist hessian or ponding of water for 7 days including providing construction joints, including all material, labour, machinery with all leads and lifts | Cum | B Clause 601 B-Section 900, 1000 & A SP | - | 1,043.00 | - |

| Sr. No. | Item No. | Description | Unit | Specifications | Quantity | Estimated Cost | | |
|---------------------------|----------|---|------|--|----------|------------------|---------------|----------------------|
| | | | | | | Unit Rate in Rs. | Amount in Rs. | |
| 10 | 4.10 | Providing and laying Pavement Quality Concrete of M 35 grade including providing 125 micron thick impermeable plastic sheet membrane over the surface to be covered, coarse and fine aggregates of specified gradation using minimum cement content 350 kg/cum of concrete with OPC 43 grade cement, approved admixture, mixing with mechanised batch mix plant of appropriate capacity as per the design mix to the specified workability, transporting the mix with dumpers or transit mixers and laying with self propelled slip form paving train of required capacity having electronic sensor device, curing with approved resin based aluminised reflective curing compound and covering with moist hessian or ponding and sprinkling of water for a minimum period of 14 days and including providing and fixing dowels, tie bars, approved precompressed seals for joint filling and sealing all types of joints and finishing to the desired surface texture including all material, labour, machinery with all leads and lifts etc. | Cum | B Clause 602 & 704 B-Section 900,1000 & A SP | - | 3,046.00 | - | |
| 11 | 4.11 | Providing and laying Pavement Quality Concrete for Profile correction Coarse/overlay of M 35 grade including roughening the existing surface by Shot blasting and providing bonding material (cement sand slurry/low viscous epoxy) providing over the surface to be covered, coarse and fine aggregates of specified gradation using minimum cement content 350 kg/cum of concrete with OPC 43 grade cement, approved admixture, mixing with mechanised batch mix plant of appropriate capacity as per the design mix to the specified workability, transporting the mix with dumpers or transit mixers and laying with self propelled slip form paving train of required capacity having electronic sensor device, curing with approved resin based aluminised reflective curing compound and covering with moist hessian or ponding and sprinkling of water for a minimum period of 14 days and including providing and fixing dowels, tie bars, approved precompressed seals for joint filling and sealing all types of joints and finishing to the | Cum | B Clause 602 & 704 B-Section 900,1000 & A SP | - | 3,046.00 | - | |
| 12 | 4.12 | Providing and laying interlocking 80mm thick Concrete paving blocks in carriageway including sand bed of thickness 50 mm and precast concrete head strips etc. complete as per drawing and specifications. | Sqm | ASP | 7,879.00 | 710.00 | 5,594,090.00 | |
| 13 | 4.13 | Filling pot hole and patch repair with premix surfacing (20 mm)Removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 511, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per | Sqm | MORT&H | 10.00 | 71.00 | 710.00 | |
| 14 | 4.14 | Providing and laying slurry seal consisting of a mixture of fine aggregates, portland cement filler, bituminous emulsion and water on a road surface including cleaning of surface, mixing of slurry seal in a suitable mobile plant, laying and compacting to provide even riding surface | Sqm | MORT&H | - | 26.00 | - | |
| Total of Section 4 | | | | | | | | 68,398,310.00 |
| Sec-5 | | Cross Drainage Work | | NA | | | | |
| Total of Section 5 | | | | | | | | - |

| Sr. No. | Item No. | Description | Unit | Specifications | Quantity | Estimated Cost | | |
|---------------------------|----------|--|------|--------------------|----------|------------------|---------------------|--|
| | | | | | | Unit Rate in Rs. | Amount in Rs. | |
| Sec-6 | | Road Markings, etc. | | | | | | |
| 1 | 6.1 | Providing and laying hot applied thermoplastic road marking compound in approved colour and shade for road marking on bituminous/ concrete road surface in centre line 100mm wide 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic Material including cleaning the surface of all dirt, dust, and other foriegn matter, demarcation at site/premarking, finishing and managing the traffic control etc.complete. The thermoplastic compound shall be of approved colour and shade. Marking to be done as per specifications, detailed drawings and as directed. | Sqm | B Clause 803 | 166.00 | 630.00 | 104,580.00 | |
| 2 | 6.2 | Providing and applying two coats of synthetic enamel paint including primer to kerb as per Technical Specification and as directed by the engineer. | Sqm | MORT&H | 197.00 | 60.00 | 11,820.00 | |
| 3 | 6.3 | Providing and laying hot applied thermoplastic road marking compound in approved colour and shade for road marking on bituminous/ concrete road surface in edge line 150mm wide 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic Material,including cleaning the surface of all dirt, dust, and other foriegn matter, demarcation at site/ premarking, finishing and managing the traffic control etc.complete and as per specifications, detailed drawings and as directed. | Sqm | B Clause 803 | 711.90 | 630.00 | 448,497.00 | |
| 4 | 6.4 | Providing and laying hot applied thermoplastic road marking compound in approved colour and shade for road marking on bituminous/ concrete road surface in pedestrian crossings, chevrons, directional arrows etc, 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic .Material,including dispensing drop on glass beads of approved make and as per BS 6088 at the rate 250 gms per sqm. including cleaning the surface of all dirt, dust, and other foriegn matter, demarcation at site/ premarking, finishing and managing the traffic control etc.complete. Marking to be done as per specifications, drawings and as directed. | Sqm | B Clause 803 | 1,234.36 | 630.00 | 777,646.80 | |
| Total of Section 6 | | | | | | | 1,342,543.80 | |
| Sec-7 | | TRAFFIC SIGNS/ROAD FURNITURE | | | | | | |
| 1 | 7.1 | Supplying and fixing informatory road sign boards made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications. | | B Section 800 A SP | | | - | |
| | (a) | Boards of area not exceeding 1 sq. m. | Nos | | 6.00 | 10,500.00 | 63,000.00 | |
| 2 | 7.2 | Supplying and fixing utility/services road sign boards made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications. | | B Section 800 A SP | | | - | |
| | (a) | Boards of area not exceeding 1 sq. m. | Nos | B Section 800 A SP | 2.00 | 10,500.00 | 21,000.00 | |
| 3 | 7.3 | Supplying and fixing cautionary/warning road sign boards (Equilateral triangle 900 mm side) made up with high intensity grade retro-reflective type sheeting complete as per drawing and technical specifications. | Nos | | 18.00 | 3,675.00 | 66,150.00 | |
| 4 | 7.4 | Supplying and fixing regulatory/mandatory road sign boards (Circular 600 mm dia) made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications. | Nos | B Section 800 A SP | 10.00 | 3,439.00 | 34,390.00 | |
| 5 | 7.5 | Supplying/Erecting and fixing in position road overhead retro-reflective informatory sign boards including fixing on overhead gantry structure including the cost of gantry and other supports and including cost of back frame complete as per drawing and specifications. | | B Section 800 A SP | | | - | |
| | (a) | 12 mt. | Nos | | - | 864,184.00 | - | |
| | (b) | 15 mt. | Nos | | - | 1,050,515.00 | - | |
| | (c) | 18 - 22 mt. | Nos | | - | 1,152,864.00 | - | |
| | (d) | 24 - 30 mt. | Nos | | 1.00 | 1,434,326.00 | 1,434,326.00 | |

| Sr. No. | Item No. | Description | Unit | Specifications | Quantity | Estimated Cost | | |
|---------------------------|----------|---|-----------|--------------------|----------|------------------|---------------|----------------------|
| | | | | | | Unit Rate in Rs. | Amount in Rs. | |
| 6 | 7.6 | Supplying and fixing in position road cantilever overhang retro-reflective informatory sign boards including fixing on specified galvoniged overhang structure including the cost of overhang and other supports but including cost of back frame complete as per drawing and specifications. | Nos. | B Section 800 A SP | 2.00 | 360,000.00 | 720,000.00 | |
| 7 | 7.7 | Providing and fixing aluminium casted CAT EYE STUD of size 10 cm *10 cm at the base with zinc coated nalls of size 12 mm dia of 12 cm long having both side (dual direction) high impact ABC 3 nos of eyes of 16 mm dia on both side containing 7 beads each i.e . 42 beads in retro reflective etc. | Nos. | | - | 191.00 | - | |
| 8 | 7.8 | Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high above ground level, painted black and white in 15 cm wide strips, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to I RC-79 and the drawings. | Nos. | MORT&H | - | 701.00 | - | |
| 9 | 7.9 | Supplying and fixing in position MS Railing including painting complete as per drawing and specifications. | Rm | | 4,666.00 | 2,000.00 | 9,332,000.00 | |
| Total of Section 7 | | | | | | | | 11,670,866.00 |
| Sec - 8 | | Traffic Management | | | | | | |
| | | Traffic Management | | B Section 100 ASP | | | | |
| 1 | 8.1 | Traffic Management and Regulation during construction Maintaining, Managing, Operating the traffic plying on road during day and night smoothly and safely as and when required C262without hindrance to traffic during entire construction activity by providing necessary equipments such as, various road signs, delineaters, barricading, | | | | | | |
| | (a) | Installation of a steel portable barricade with horizontal rail 300 mm wide, 2.5 m in length fitted on a 'A' frame made with 45x45x5 mm angle iron section, 1.5 m in height, horizontal rail painted (2 coats) with yellow and white strips, 150 mm in width at an angle of 45o, 'A' frame painted with 2 coats of yellow paint, complete as per IRC:SP:55- | RM | | 759.00 | 1,522.00 | 1,155,198.00 | |
| | (b) | Providing Red lanterns or warning lights of similar type on the barricades. | Nos | | 38.00 | 50.00 | 1,900.00 | |
| | (c) | Provision of metal drum / empty bitumen drum delineator, 300 mm in diameter 800 mm high filled with earth for stability painted in circumferntial strips of alternate black and white 100 mm white fitted with reflectors 3 nos. of 7.5 cm dia. All as per IRC-SP:55-2001. | Nos | | 316.00 | 322.00 | 101,752.00 | |
| | (d) | Installation of a steel portable barricade with horizontal sheet of 800 mm wide, 3.0 m in length fitted on a 'wooden bamboos of diameter 200 mm 1.5 m in height, horizontal sheet painted (2 coats) with yellow and white stripes, 150 mm in width at an angle of 450, complete as directed by Engineer. | Nos | | 633.00 | 447.00 | 282,951.00 | |
| Total of Section 8 | | | | | | | | 1,541,801.00 |
| Sec - 9 | | Utility Relocation Items | | | | | | |
| | | Utility Relocation Items (Provisional Sum). | | B Section 100 | | | | |
| 1 | 9.1 | Water Pipe Line | | | | | | |
| | | Relocation of water pipelines by nominated sub-contractors. | Per 100 m | | 23.73 | 115,000.00 | 2,728,950.00 | |
| 2 | 9.2 | Sewerage Line | | | | | | |
| | | Relocation of sewerage services by nominated sub-contractors. | Per 100 m | | 23.73 | 100,000.00 | 2,373,000.00 | |
| 3 | 9.3 | Electricity, (M.S.E.B.) | | | | | | |
| | i) | Relocation of electrical services by nominated sub-contractors. | Per 100 m | | 23.73 | 115,630.00 | 2,743,899.90 | |
| | ii) | Relocation of H.T. pylons of (M.S.E.B) by nominated sub-contractors. | Per 100 m | | 23.73 | 81,625.00 | 1,936,961.25 | |
| 4 | 9.4 | Telephone | | | | | | |
| | (i) | Relocation of telephone services by nominated sub-contractors. | Per 100 m | | 23.73 | 1,600.00 | 37,968.00 | |
| 5 | 9.5 | Relocation of OFC Lines by nominated sub-contractors. | Per 100 m | | 23.73 | 12,000.00 | 284,760.00 | |
| Total of Section 9 | | | | | | | | 10,105,539.15 |

**DPR FOR ROAD DEVELOPMENT IN NANDED UNDER JNNURM
DEGLOOR ROAD THROUGH C.R.C.TO GYANAMATA SCHOOL
(WITH AN RUB CROSSING RAILWAY) (ROAD NO - 24)**

(From Ch: 0+000 TO 2+413) { LESS RUB LENGTH, EFFECTIVE LENGTH = 2373 M }

SUMMARY

| SECTION | SHORT DESCRIPTION | TOTAL AMOUNT |
|----------------|--|-------------------------|
| | | (Rs. in Figures) |
| 1 | Site Clearance | 219,652 |
| 2 | Earthwork | 2,645,864 |
| 3 | Drainage and Protective Works, paver blocks in FP, cross pipes for utilities etc | 25,272,946 |
| 4 | Pavement | 68,398,310 |
| 5 | Cross Drainage Work | - |
| 6 | Road Markings | 1,342,544 |
| 7 | Traffic Signs/Road Furniture | 11,670,866 |
| 8 | Traffic Management, | 1,541,801 |
| 9 | Utility Relocation Items | 10,105,539 |
| | TOTAL (FROM SECTION 1 TO 9) | 121,197,522 |

DEGLOOR ROAD THROUGH C.R.C.TO GYANAMATA SCHOOL (WITH AN RUB CROSSING RAILWAY) (ROAD NO - 24)
(From Ch: 0+000 TO 2+413) { LESS RUB LENGTH, EFFECTIVE LENGTH = 2373 M }
BILL OF QUANTITIES

Note: The specification reference is as under:

A - As per Additional Technical Specifications (SP) Vol. - III

B - As per MORT&H specifications (4th revision August 2001)and revisions as made in Part B Vol. - III

| Sr. No. | Item No. | Description | Unit | Specifica tions | Quantity | Amount Quoted by bidder | | |
|--------------|----------|--|------|-----------------------|----------|-------------------------|----------------------------------|--------------------------------|
| | | | | | | Unit Rate in Rs. | Amount in Rs. (In Figures) | Amount in Rs. (In Words) |
| Sec 1 | | Site Clearance | | | | | | |
| 1 | 1.1 | Clearing & grubbing road land including uprooting all vegetation, grass, bush shrubs, saplings and trees of girth up to 300 mm, removal of stumps of trees of girth of all sizes including removing stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable materials as directed by engineer with all leads and lifts etc. complete | Ha | B Clause 201 | #REF! | | | |
| 2 | 1.2 | Cutting of trees of all girth above 300 mm including cutting of trunks, branches,uprooting and removal of all materials and stacking within the ROW and filling depressions/pits by earth etc. complete. including liasoning with concerned authorities for obtaining permissions. | | B Clause 201 & 305 | | | | |
| | | 1) girth 300 mm to 600 mm | Nos | | #REF! | | | |
| | | 2) girth above 600 mm to 900 mm | Nos | | #REF! | | | |
| | | 3) girth above 900 mm to 1800 mm | Nos | | #REF! | | | |
| 3 | 1.3 | Transplantation of existng trees of girth above 600 mm girth as directed by engineer, including uprooting and shifting of the tree and placing in excavated pits of suitable size and after transplanting, removal and stacking of excavated earth to desired location, filling the pit with soil mixture of excavated earth, fresh red earth etc as directed. | Nos | MORT&H | #REF! | | | |
| 4 | 1.4 | Dismantling of structures on roadway including sorting out the dismantled material, disposal of unserviceable material and utilising the serviceable material free of cost in permanent works as directed by the Engineer with all leads and lifts etc. complete. | | B Clause 202 | | | | |
| | a) | Brick masonry | Cum | | #REF! | | | |
| | b) | Stone masonry | Cum | | #REF! | | | |
| | c) | Plain Concrete | Cum | | #REF! | | | |
| | d) | Reinforced Concrete | Cum | | #REF! | | | |
| | e) | Dismantling pavement | | | | | | |
| | | - Bituminous pavement | Cum | | #REF! | | | |
| | | - Non bituminous Pavement | Cum | | #REF! | | | |
| | f) | Dismantling | | | | | | |
| | | (i)MS Pipes, Guard rails, and Fencing | RM | | #REF! | | | |
| | | (ii)Footpaths and Medians | Sqm | | #REF! | | | |
| | | (iii) Electric poles/Telephone poles/ Transformers | Nos | | #REF! | | | |
| | | (iv) Bus Shelters | Nos | | #REF! | | | |
| | | Total of Section 1 | | | | | | |
| Sec-2 | | Earth Work | | | | | | |
| 1 | 2.1 | Earth work in excavation for roadway in all types of strata other than rock requiring blasting including dressing section to the required grade, camber and side slopes and conveying and/or disposing off the excavated material with mechanical means, spreading or disposing as directed by Engineer, with all leads and lifts etc. complete. | Cum | B Clause 301 | #REF! | | | |
| 2 | 2.2. | Earth work in excavation for roadway in rock by Wedging/controlled blasting including dressing section to the required grade, camber and side slopes and conveying and/or disposing off the excavated material with mechanical means, spreading or disposing as directed , with all leads and lifts etc. complete | Cum | B Clause 301, 302 | #REF! | | | |

| | | | | | | | | |
|---------------------------|-----|--|--------------------------------------|-------------------------------------|-------|--|--|--|
| 3 | 2.3 | Earth work in embankment including median by using mechanical means with approved material obtained from the excavated portions of the roadway, laying in layers not exceeding 250 mm loose breaking clods, dressing to the required lines, curves, grades and watering to OMC and compacting to 95 % modified proctor density with vibratory roller having minimum 80-100 KN static weight with all leads and lifts etc. complete. | Cum | B Clause 305 | #REF! | | | |
| 4 | 2.4 | Leveling, watering and rolling the prepared subgrade with power roller weighing not less than 8 to 10 Tonnes and preparing the ground to required level, grade and camber etc. complete as directed by Engineer. | Sqm | MORT&H | #REF! | | | |
| 5 | 2.5 | Earth work in embankment / cushion layer for subgrade and hard shoulders by using mechanical means with approved material obtained from borrow areas outside ROW having 4 days soaked CBR equal to or more than 8%, laying in layers not exceeding 250 mm loose, breaking clods and dressing to the required lines, curve grades, and watering to OMC and compacting to 97 % modified proctor density with vibratory roller having minimum 80-100KN static weight including all leads and lifts etc. complete. | Cum | B Clause 305 | #REF! | | | |
| 6 | 2.6 | Removal of unsuitable materials (debris) in the embankment foundation and /or subgrade and disposing the excavated material as directed by the engineer including all leads and lifts etc. complete. | Cum | B Clause 301 | #REF! | | | |
| Total of Section 2 | | | | | | | | |
| Sec- 3 | | | Drainage and Protective Works | | | | | |
| 1 | 3.1 | Earth work in excavation in all types of strata other than rock for drains and channels etc., including dressing of bottom and sides of trenches, stacking the excavated spoil, clear from the edge of excavation including disposal of surplus spoil as directed by the Engineer with all leads and lifts etc. complete. | Cum | B Clause 301,304 & 309 | #REF! | | | |
| 2 | 3.2 | Earth work in excavation in rock by chiselling / wedging for drains and channels etc., including dressing of bottom and side of trenches, stacking the excavated spoil, clear from the edge of excavation including disposal of surplus spoil as directed by the Engineer with all leads and lifts etc. complete. | Cum | B Clause 301 & 303 | #REF! | | | |
| 3 | 3.3 | Providing dry trap /granite /quartzite/ gneiss rubble stone soling 15 to 20 cm thick including hand packing and compacting etc. complete | Cum | MORT&H | #REF! | | | |
| 4 | 3.4 | Providing and laying PCC M-15 grade for bed for lined drain, median cross drain, kerb with the maximum size of coarse aggregate 20 mm including necessary form work, mixing, vibrating, curing by sprinkling / ponding of water for 14 days etc. complete. | Cum | B Section 1500,1700 & 2100, ASP - 1 | #REF! | | | |
| 5 | 3.5 | Providing and laying in situ PCC/RCC M25 grade for trenches, drains, precast cover, retaining walls, toe walls, head walls including coping. with stone metal, natural or crushed sand, including necessary form work, centering, mixing with mechanical mixers, compacting vibrating , curing by sprinkling/ponding of water for 14 days and finishing as directed and including construction of weep holes as directed by the Engineer including all leads and lifts etc. complete(excluding reinforcement) | Cum | B Section 1500 &1700, ASP - 1 | #REF! | | | |
| 6 | 3.6 | Providing and laying HYSD bars for reinforcement for structure including cutting,bending hooking by machine,trying in position including binding wire, spacers, chairs,cover blocks as per detailed drawing including all leads and lifts etc. complete. | MT | B Section 1600 ASP - 16 | #REF! | | | |
| 7 | 3.7 | Providing and laying cement concrete kerb in M-25 grade concrete as per drawing and directed by Engineer with all leads lifts etc. complete. | Cum | B clause 408, ASP - 1 | #REF! | | | |
| | (a) | Pre-cast/cast-in-situ kerbs including discontinuous kerb | | | #REF! | | | |
| 8 | 3.8 | Raising or lowering any shape and size of manhole to the required level including all material formwork ,brickwork and with 16 mm thick M15 (1:2:4) C.C. Coping under frames of manhole including curing etc. complete as specified and as directed by Enginner | Nos | MORT&H | #REF! | | | |

| | | | | | | | | |
|---------------------------|--------|--|------|----------------|-------|--|--|--|
| 9 | 3.9 | Providing and laying in position to the level and grade 150 mm dia precast NP2 class pipe below footpath for discharging water into concrete open drains including providing and fixing GI grating etc. complete as directed by Engineer. | RM | B-Section 2900 | #REF! | | | |
| 10 | 3.10 | Providing and laying interlocking concrete paving blocks in footpaths and medians including sand bed of thickness 50 mm and precast concrete head strips etc. complete as per drawing and specifications. | Sqm | ASP - 8 | | | | |
| | | a) For 60mm Thick Paver Block | | | #REF! | | | |
| 11 | 3.11 | Providing And fixing of the precast tapered water table of thickness 105 mm , 300 mm width in M35 grade concrete as detailed in drawing including laying a levelling course of M15 grade concrete slope,inclusive of form work jointing in 1:2 CM prop flush to concrete surface including curing as directed by Engineer. | RM | MORT&H | #REF! | | | |
| 12 | 3.12 | Providing and laying required size RCC running Beam in M35 concrete including formwork ,mixing,compacting and curing etc.complete reinforced with 12 mm dia (min 4 nos) MS main bars and 6 mm dia MS ring at 15 mm c/c to be anchored in slipper slab properly with MS reinforcement as per drawing etc. complete as specified (steel will not be paid separately) etc. complete as directed by Engineer | Cum | MORT&H | #REF! | | | |
| 13 | 3.13 | Providing and fixing RCC cover of any size, shape and thickness over drain/chamber with necessary heavy duty cast iron frame including all labour and material etc complete as directed by Engineer. | Nos. | MORT&H | #REF! | | | |
| 14 | 3.14 | Providing and laying service ducts in position , precast RCC Pipes NP2 class including bed preparation ,cost of lifting ,loading and unloading ,jointing with collar or flush joints including cost of backfilling the trenches including all leads and lifts etc. complete. 250 mm Diameter | RM | MORT&H | #REF! | | | |
| 15 | 3.15 | Providing & laying 100 mm dia PVC perforated pipe median under darin including geotextile and building through kerb etc. complete as per drawing and specification (at 15 m interval in median with approximate width of 1.5 m) | RM | MORT&H | #REF! | | | |
| 16 | 3.16 | Providing and fixing 150x100 mm non skidding precast chequered tiles 25 mm thick of approved quality in traffic island and where ever necessary in city suburban limit over 18 mm thick C.M 1:3 including curing etc.complete as per drawing and as directed by Engineer. | Sqm | MORT&H | #REF! | | | |
| Total of Section 3 | | | | | | | | |
| Sec-4 | | Pavement | | | | | | |
| 1 | 4.1(a) | Providing and laying Granular Sub Base (structural layer) close graded conforming to Grading II of Table 400.2 of compacted thickness of 150 mm with specified graded stone metal and sand mixed in place and laid with mechanical means spreading with motor grader and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD including all material , labour , machinery with all leads and lifts etc. complete.(by plant mix method) | Cum | B Clause 401 | #REF! | | | |
| | 4.1(b) | Providing and laying Granular Sub Base (drainage layer) coarse graded conforming to Grading II of Table 400.2 of compacted thickness of 150 mm with specified graded stone metal and sand mixed in place and laid with mechanical means spreading with motor grader and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD including all material , labour , machinery with all leads and lifts etc. complete. | Cum | B Clause 401 | #REF! | | | |
| 2 | 4.2 | Providing and laying Wet Mix Macadam with paver finisher in specified thickness, each layer not exceeding 200 mm compacted thickness including premixing in pugmill/plant well graded crushed stone aggregate, with watering and spreading by to required profile and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD including all material , labour , machinery with all leads and lifts etc. complete. | Cum | B Clause 406 | #REF! | | | |

| | | | | | | | | |
|----|------|--|-----|--------------------|-------|--|--|--|
| 3 | 4.3 | Providing and applying primer coat using bituminous emulsion complying to IS:8887 over prepared surface of granular base with emulsion at a temperature between 20 - 45 deg. C and applying a uniform coat with the aid of self propelled bitumen pressure spraying bar with nozzles of constant volume of pressure system @10Kg/10Sqm including all material , labour , machinery with all leads and lifts etc. complete. | Sqm | B Clause 502 | #REF! | | | |
| 4 | 4.4 | Providing and applying tack coat by using bituminous emulsion complying to IS: 8887 over prepared surface preheated to a temperature between 20 - 50 deg. C and applying a uniform coat with the aid of self propelled bitumen pressure sprayer with self heating arrangement and spraying bar with nozzles of constant volume or pressure system at the rate of 3Kg/10Sqm on primed / blacktop surface and curing etc. including all material, labour,machinery, with all leads and lifts etc. complete. | Sqm | B Clause 503 | #REF! | | | |
| 5 | 4.5 | Providing and laying Bituminous Macadam of maximum 100 mm compacted thickness on prepared surface using 30 - 40 grade bitumen providing necessary aggregates with specified gradation mixing with mechanical means in hot mix plant of suitable capacity of batch mix type and electronically controlled mixing to the specified temperature, transporting and laying the mix with self propelled paver finisher with electronic sensor device and initial compaction with minimum 80 - 100 KN static weight smooth wheeled roller followed by intermediate rolling with minimum 80 – 100 KN static weight vibratory roller/pneumatic tyred roller having minimum 150 – 250 KN weight having a tyre pressure of atleast 0.7 Mpa and finished with minimum 60 - 80 KN weight smooth wheeled tandem roller to achieve desired density including all material, labour, machinery with all leads and lifts (Excluding tack coat) etc. complete. | Cum | B Clause 504 | #REF! | | | |
| 6 | 4.6 | Providing and laying Dense Bituminous macadam in a single layer of 50mm to 100 mm compacted thickness on prepared surface using 30 - 40 grade bitumen including providing necessary aggregates with specified gradation mixing with mechanical means in hot mix plant of suitable capacity of batch mix type and electronically controlled mixing of the specified temperature, transporting and laying the mix with self propelled paver finisher with electronic sensor device in full width and initial compaction with minimum 80 - 100 KN static weight vibratory roller/pneumatic tyred roller having minimum 150 – 250 KN weight having a tyre pressure of atleast 0.7 MPa and finished with minimum 60 – 80 KN weight smooth wheeled tandem roller to achieve desired density including all material, labour, machinery with all leads and lifts (excluding tack coat) complete. | Cum | B Clause 507 | #REF! | | | |
| 7 | 4.7 | Providing and laying Bituminous Concrete in a single layer of 25mm to 50 mm compacted thickness on prepared surface using 30-40 bitumen of grade approved by the engineer including providing necessary aggregates with specified gradation mixing with mechanical means in hot mix plant of suitable capacity of batch mix type and electronically controlled mixing to the specified temperature, transporting and laying the mix with self propelled paver finisher with electronic sensor device in full width and initial compaction with minimum 80 - 100 KN static weight smooth wheeled roller followed by intermediate rolling with minimum 80 - 100 KN static weight vibratory roller / pneumatic tyred roller having minimum 150 - 250 KN weight having a tyre pressure of atleast 0.7 MPa and finished with minimum 60 - 80 KN weight smooth wheeled tandem roller to achieve desired density including all material, labour, machinery with all leads and lifts etc. complete (excluding tack coat) and including cement filler @2% by weight of mix. | Cum | B Clause 509 & 521 | #REF! | | | |
| 8 | 4.8 | Providing and laying 20 mm thick mix seal surfacing 'A' type as renewal coat for maintenance of the existing road surface during construction including supplying of all materials , clearing the base, heating the bitumen and aggregates and rolling with power roller 8 10 tonne using 30/40grade bitumen. | Sqm | B Clause 512 | #REF! | | | |
| 9 | 4.9 | Deleted | | | | | | |
| 10 | 4.10 | Deleted | | | | | | |
| 11 | 4.11 | Deleted | | | | | | |

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|---------------------------|------|--|-------------------------------------|----------------------|-------|--|--|--|
| 12 | 4.12 | Providing and laying interlocking 80mm thick Concrete paving blocks in carraigeway including sand bed of thickness 50 mm and precast concrete head strips etc. complete as per drawing and specifications. | Sqm | ASP - 8 | #REF! | | | |
| 13 | 4.13 | Filling pot hole and patch repair with premix surfacing (20 mm)Removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 511, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2 | Sqm | MORT&H | #REF! | | | |
| 14 | 4.14 | Providing and laying slurry seal consisting of a mixture of fine aggregates, portland cement filler, bituminous emulsion and water on a road surface including cleaning of surface, mixing of slurry seal in a suitable mobile plant, laying and compacting to provide even riding surface | Sqm | MORT&H | #REF! | | | |
| Total of Section 4 | | | | | | | | |
| Sec-5 | | | Road Markings, etc. | | | | | |
| 1 | 5.1 | Providing and laying hot applied thermoplastic road marking compound in approved colour and shade for road marking on bituminous/ concrete road surface in centre line 100mm wide 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic Material including cleaning the surface of all dirt, dust, and other foriegn matter, demarcation at site/premarking, finishing and managing the traffic control etc.complete. The thermoplastic compound shall be of approved colour and shade. Marking to be done as per specifications, detailed drawings and as directed. | Sqm | B Clause 803 | #REF! | | | |
| 2 | 5.2 | Providing and applying two coats of synthetic enamel paint including primer to kerb as per Technical Specification and as directed by the engineer. | Sqm | MORT&H | #REF! | | | |
| 3 | 5.3 | Providing and laying hot applied thermoplastic road marking compound in approved colour and shade for road marking on bituminous/ concrete road surface in edge line 150mm wide 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic Material,including cleaning the surface of all dirt, dust, and other foriegn matter, demarcation at site/premarking, finishing and managing the traffic control etc.complete and as per specifications, detailed drawings and as directed. | Sqm | B Clause 803 | #REF! | | | |
| 4 | 5.4 | Providing and laying hot applied thermoplastic road marking compound in approved colour and shade for road marking on bituminous/ concrete road surface in pedestrian crossings, chevrons, directional arrows etc, 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic .Material,including dispensing drop on glass beads of approved make and as per BS 6088 at the rate 250 gms per sqm. including cleaning the surface of all dirt, dust, and other foriegn matter, demarcation at site/ premarking, finishing and managing the traffic control etc.complete. Marking to be done as per specifications, drawings and as directed. | Sqm | B Clause 803 | #REF! | | | |
| Total of Section 5 | | | | | | | | |
| Sec-6 | | | TRAFFIC SIGNS/ROAD FURNITURE | | | | | |
| 1 | 6.1 | Supplying and fixing informatory road sign boards made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications. | | B Section 800 A SP-5 | | | | |
| | a) | Boards of area not exceeding 1 sq. m. | Nos | | #REF! | | | |
| 2 | 6.2 | Supplying and fixing utility/services road sign boards made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications. | | B Section 800 A SP-5 | | | | |
| | a) | Boards of area not exceeding 1 sq. m. | Nos | B Section | #REF! | | | |
| 3 | 6.3 | Supplying and fixing cautionary/warning road sign boards (Equilateral triangle 900 mm side) made up with high intensity grade retro-reflective type sheeting complete as per drawing and technical specifications. | Nos | | #REF! | | | |

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| 4 | 6.4 | Supplying and fixing regulatory/mandatory road sign boards (Circular 600 mm dia) made up with high intensity grade retro-reflective type sheeting complete as per drawing and Technical specifications. | Nos | B Section 800 A SP-5 | #REF! | | | |
| 5 | 6.5 | Supplying/Erecting and fixing in position road overhead retro-reflective informatory sign boards including fixing on overhead gantry structure including the cost of gantry and other supports and including cost of back frame complete as per drawing and specifications. | Nos | B Section 800 A SP-5 | #REF! | | | |
| 6 | 6.6 | Supplying and fixing in position road cantilever overhang retro-reflective informatory sign boards including fixing on specified galvanized overhang structure including the cost of overhang and other supports but including cost of back frame complete as per drawing and specifications. | Nos. | B Section 800 A SP-5 | #REF! | | | |
| 7 | 6.7 | Providing and fixing aluminium casted CAT EYE STUD of size 10 cm *10 cm at the base with zinc coated nails of size 12 mm dia of 12 cm long having both side (dual direction) high impact ABC 3 nos of eyes of 16 mm dia on both side containing 7 beads each i.e . 42 beads in retro reflective etc. complete | Nos. | MORT&H | #REF! | | | |
| 8 | 6.8 | Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high above ground level, painted black and white in 15 cm wide strips, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to IRC-79 and the drawings. | Nos. | MORT&H | #REF! | | | |
| | | Total of Section 6 | | | | | | |
| Sec - 7 | | Traffic Management | | | | | | |
| | | <i>Traffic Management</i> | | | | | | |
| 1 | 7.1 | Traffic Management and Regulation during construction Maintaining, Managing, Operating the traffic plying on road during day and night smoothly and safely as and when required C262without hindrance to traffic during entire construction activity by providing necessary equipments such as, various road signs, delineators, barricading, | | B Section 100 ASP 6 | | | | |
| | a) | Installation of a steel portable barricade with horizontal rail 300 mm wide, 2.5 m in length fitted on a 'A' frame made with 45x45x5 mm angle iron section, 1.5 m in height, horizontal rail painted (2 coats) with yellow and white strips, 150 mm in width at an angle of 45o, 'A' frame painted with 2 coats of yellow paint, complete as per IRC:SP:55-2001. | Nos | | #REF! | | | |
| | b) | Providing Red lanterns or warning lights of similar type on the barricades. | Nos | | #REF! | | | |
| | c) | Provision of metal drum / empty bitumen drum delineator, 300 mm in diameter 800 mm high filled with earth for stability painted in circumferential strips of alternate black and white 100 mm white fitted with reflectors 3 nos. of 7.5 cm dia. All as per IRC-SP:55-2001. | Nos | | #REF! | | | |
| | d) | Installation of a steel portable barricade with horizontal sheet of 800 mm wide, 3.0 m in length fitted on a 'wooden bamboos of diameter 200 mm 1.5 m in height, horizontal sheet painted (2 coats) with yellow and white stripes, 150 mm in width at an angle of 45o, complete as directed by Engineer. | Nos | | #REF! | | | |
| | | Total of Section 7 | | | | | | |
| Sec - 8 | | Utility Relocation Items | | | | | | |
| | | <i>Utility Relocation Items</i> | | B Section 100 | | | | |
| 1 | 8.1 | Water Pipe Line | | | | | | |
| | | Relocation of water pipelines by nominated sub-contractors. (Provisional Sum) | Per 100 m | | #REF! | | | |
| 2 | 8.2 | Sewerage Line | | | | | | |
| | | Relocation of sewerage services by nominated sub-contractors.(Provisional Sum) | Per 100 m | | #REF! | | | |
| 3 | 8.3 | Electricity, (M.S.E.B.) | | | | | | |