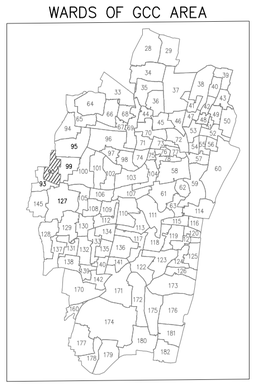
## LIST OF POINTS

| Sl No. | MANHOLE ID | DRAIN Closed(C) /Open(O) | MSL LEVEL | | | DRAIN DIMENSIONS | |
|---|---|---|---|---|---|---|---|
| | | | Drain Top(m) | Invert (m) | Road Edge (m) | Width (m) | Depth (m) |
| 1 | A1 (OL) | C | 10.751 | – | 10.750 | – | – |
| 2 | A2 | C | – | – | – | – | – |
| 3 | A3 | C | – | – | – | – | – |
| 4 | A4 | C | 10.914 | 9.565 | 10.910 | 1.370 | 1.099 |
| 5 | A5 | C | 10.963 | 9.068 | 10.990 | 1.180 | 1.725 |
| 6 | A6 | C | 10.997 | 9.084 | 11.098 | 1.190 | 1.693 |
| 7 | A7 | C | 10.624 | 9.137 | 10.680 | 1.430 | 1.117 |
| 8 | B1 (OL) | C | 10.305 | 9.121 | 10.299 | 1.720 | 0.914 |
| 9 | B2 | C | 10.396 | 9.431 | 10.106 | 1.130 | 0.635 |
| 10 | B3 | C | 10.627 | 9.470 | 1.538 | 1.130 | 0.691 |
| 11 | B4 | C | 10.711 | – | 10.601 | – | – |
| 12 | B5 | C | 11.163 | 9.827 | 11.075 | 1.220 | 1.146 |
| 13 | B6 | C | 11.013 | 10.001 | 10.963 | 0.980 | 0.782 |
| 14 | B7 | C | 11.011 | 9.934 | 10.949 | 0.880 | 0.847 |
| 15 | B8 | C | 11.002 | 10.162 | 10.884 | 0.890 | 0.650 |
| 16 | B9 | C | 10.989 | 9.944 | 10.914 | 0.980 | 0.855 |
| 17 | B10 | C | 10.988 | 10.058 | 10.818 | 0.980 | 0.740 |
| 18 | B11 | C | 11.019 | 10.085 | 10.900 | 0.960 | 0.744 |
| 19 | B12 | C | 11.367 | 10.232 | 11.182 | 1.600 | 0.935 |
| 20 | B13 | C | 10.891 | 10.480 | 11.200 | 0.580 | 0.401 |
| 21 | B14 | C | 10.590 | 10.247 | 10.576 | 0.880 | 0.173 |
| 22 | B15 | C | 11.174 | 10.075 | 11.165 | 1.180 | 0.909 |
| 23 | B16 | C | 11.117 | 10.066 | 11.060 | 0.860 | 0.781 |
| 24 | B17 | C | 11.094 | 10.119 | 11.005 | 1.100 | 0.755 |
| 25 | B18 | C | 11.169 | 10.078 | 11.025 | 1.120 | 0.731 |
| 26 | B19 | C | 11.192 | 9.954 | 11.011 | 1.100 | 0.898 |
| 27 | B20 | C | 11.200 | 9.934 | 11.208 | 1.070 | 1.056 |
| 28 | B21 | C | 11.010 | 10.028 | 11.008 | 1.120 | 0.982 |
| 29 | B22 | C | 11.095 | 10.297 | 11.103 | 0.590 | 0.798 |
| 30 | B23 | C | 11.391 | 10.800 | 11.107 | 0.590 | 0.561 |
| 31 | B24 | C | 11.074 | 10.165 | 10.988 | 0.590 | 0.909 |
| 32 | B25 | C | 11.235 | 10.404 | 11.115 | 0.560 | 0.771 |
| 33 | B26 | C | 11.262 | 10.721 | 11.136 | 0.500 | 0.451 |
| 34 | B27 | C | 10.906 | 9.986 | 10.915 | 0.380 | 0.920 |
| 35 | B28 | C | 10.693 | 10.142 | 10.939 | 0.530 | 0.551 |
| 36 | B29 | C | 11.086 | 10.507 | 10.959 | 0.390 | 0.489 |
| 37 | C1 (OL) | C | 10.216 | 8.359 | 10.168 | 1.230 | 1.657 |
| 38 | C2 | C | 10.294 | 8.767 | 10.244 | 1.320 | 1.277 |
| 39 | C3 | C | 10.598 | 9.047 | 9.967 | 1.450 | 1.351 |
| 40 | C4 | C | 10.137 | 8.645 | 9.910 | 1.480 | 1.262 |
| 41 | C5 | C | 9.933 | 8.834 | 9.946 | 1.400 | 0.869 |
| 42 | C6 | C | 10.398 | 8.873 | 10.405 | 1.340 | 1.325 |
| 43 | C7 | C | 10.111 | 9.376 | 10.231 | 0.670 | 0.615 |
| 44 | C8 | C | 10.159 | – | 10.298 | – | – |
| 45 | C9 | C | 10.264 | 9.598 | 10.666 | 0.780 | 0.586 |
| 46 | C10 | C | 10.318 | 9.508 | 10.403 | 0.780 | 0.810 |
| 47 | C11 | C | 10.433 | 9.613 | 10.357 | 0.750 | 0.690 |
| 48 | C12 | C | 10.308 | 9.741 | 10.312 | 0.810 | 0.467 |
| 49 | C13 | C | 10.152 | 8.770 | 10.211 | 1.180 | 1.142 |
| 50 | C14 | C | 10.294 | 8.933 | 10.271 | 1.170 | 1.131 |
| 51 | C15 | C | 10.352 | 9.048 | 10.352 | 1.340 | 1.084 |
| 52 | C16 | C | 10.366 | 8.979 | 10.380 | 1.180 | 1.137 |
| 53 | C17 | C | 10.363 | 9.061 | – | 1.200 | 0.922 |
| 54 | C18 | C | 10.157 | – | 10.244 | – | – |
| 55 | C19 | C | 10.238 | – | 10.292 | – | – |
| 56 | C20 | C | 10.566 | 9.138 | 10.579 | 1.100 | 1.138 |
| 57 | C21 | C | 10.150 | 9.690 | 10.185 | 0.590 | 0.460 |
| 58 | C22 | C | 10.328 | 9.063 | 10.310 | 0.890 | 1.015 |
| 59 | C23 | C | 10.395 | 9.466 | 10.203 | 1.070 | 0.829 |
| 60 | C24 | C | 10.433 | 9.582 | 10.249 | 0.840 | 0.721 |
| 61 | C25 | C | 10.448 | 9.626 | 10.423 | 0.800 | 0.672 |
| 62 | C26 | C | 10.403 | 9.956 | 10.333 | 0.600 | 0.367 |
| 63 | C27 | C | 10.340 | 9.926 | 10.397 | 0.580 | 0.374 |
| 64 | C28 | C | 10.316 | 9.689 | 10.343 | 0.580 | 0.597 |
| 65 | C29 | C | 10.393 | 10.077 | 10.519 | 0.780 | 0.196 |
| 66 | C30 | C | 10.446 | 9.659 | 10.518 | 1.010 | 0.687 |
| 67 | C31 | C | 10.682 | 9.848 | 10.568 | 0.830 | 0.694 |
| 68 | C32 | C | 10.551 | 9.635 | 10.444 | 0.820 | 0.816 |
| 69 | C33 | C | 10.313 | – | 10.312 | – | – |
| 70 | C34 | C | 10.435 | – | 10.465 | – | – |
| 71 | C35 | C | 10.556 | 9.092 | 10.287 | 1.370 | 1.284 |
| 72 | C36 | C | 10.361 | 8.943 | 10.336 | 0.950 | 1.218 |
| 73 | C37 | C | 10.426 | 9.086 | 10.445 | 1.060 | 1.110 |
| 74 | C38 | C | 10.499 | 9.443 | 10.480 | 1.140 | 0.906 |
| 75 | C39 | C | 10.492 | 9.167 | 10.525 | 1.090 | 1.095 |
| 76 | C40 | C | 10.186 | 8.376 | 10.125 | 1.580 | 1.610 |
| 77 | C41 | C | 10.350 | 8.933 | 10.298 | 1.080 | 1.207 |
| 78 | C42 | C | 10.297 | 9.379 | 10.098 | 1.100 | 0.678 |
| 79 | C43 | C | 10.264 | 9.122 | 10.071 | 1.170 | 0.972 |
| 80 | C44 | C | 10.113 | 9.086 | 10.113 | 0.980 | 0.727 |
| 81 | C45 | C | 10.148 | 9.179 | 10.048 | 1.060 | 0.699 |
| 82 | C46 | C | 10.266 | 9.259 | 10.105 | 0.980 | 0.777 |
| 83 | C47 | C | 10.222 | 9.233 | 10.215 | 1.060 | 0.839 |
| 84 | C48 | C | 10.516 | 9.517 | 10.383 | 0.980 | 0.849 |
| 85 | C49 | C | 10.058 | 9.494 | 10.322 | 0.820 | 0.414 |
| 86 | C50 | C | 10.513 | 9.447 | 10.436 | 0.890 | 0.916 |
| 87 | C51 | C | 10.178 | 8.314 | 10.159 | 1.000 | 1.654 |
| 88 | C52 | C | 10.007 | 8.684 | 9.992 | 1.100 | 1.073 |
| 89 | C53 | C | 9.921 | 8.704 | 9.877 | 1.100 | 1.037 |
| 90 | C54 | C | 9.769 | 8.599 | 9.715 | 1.000 | 1.000 |
| 91 | C55 | C | 10.412 | 8.287 | 9.830 | 1.500 | 1.925 |
| 92 | C56 | C | 10.197 | 8.467 | 10.063 | 1.620 | 1.550 |
| 93 | C57 | C | 10.128 | 8.095 | 10.083 | 1.650 | 1.813 |
| 94 | C58 | C | 10.251 | 8.945 | 10.053 | 1.370 | 1.106 |
| 95 | C59 | C | 10.347 | 9.013 | 10.253 | 1.100 | 1.204 |
| 96 | C60 | C | 10.412 | 9.328 | 10.269 | 1.080 | 0.854 |
| 97 | C61 | C | 10.410 | 9.429 | 10.193 | 1.120 | 0.861 |
| 98 | D1 | C | 10.016 | 8.981 | 9.817 | 0.760 | 0.885 |
| 99 | D2 | C | 10.158 | 9.409 | 9.961 | 1.007 | 0.599 |
| 100 | D3 | C | 10.219 | 9.371 | 10.150 | 1.400 | 0.698 |
| 101 | D4 | C | 10.489 | 9.639 | 10.369 | 0.980 | 0.730 |
| 102 | D5 | C | 10.485 | 9.070 | 10.036 | 1.480 | 1.215 |
| 103 | E1 | C | 9.893 | 8.877 | 9.873 | 1.130 | 0.756 |
| 104 | E2 | C | 10.115 | 8.768 | 10.122 | 1.370 | 1.147 |
| 105 | E3 | C | 10.381 | 9.288 | 16.130 | 1.200 | 0.953 |
| 106 | E4 | C | 10.532 | 9.642 | 10.397 | 1.400 | 0.790 |
| 107 | E5 | C | 9.844 | 9.308 | 10.120 | 1.300 | 0.376 |
| 108 | E6 | C | 10.488 | 9.606 | 10.417 | 1.070 | 0.712 |
| 109 | E7 | C | 10.363 | 9.389 | 10.250 | 1.070 | 0.834 |
| 110 | E8 | C | 10.301 | – | 10.218 | – | – |
| 111 | E9 | C | 10.530 | 9.544 | 10.495 | 1.070 | 0.866 |
| 112 | E10 | C | 10.471 | 9.577 | 10.468 | 1.010 | 0.744 |
| 113 | E11 | C | 10.321 | 9.034 | 10.311 | 1.290 | 1.087 |
| 114 | E12 | C | 10.227 | – | – | – | – |
| 115 | E13 | C | 10.338 | – | 10.374 | – | – |
| 116 | E14 | C | 10.156 | 8.816 | – | 1.230 | 1.070 |
| 117 | E15 | C | 10.164 | 8.752 | 10.202 | 1.320 | 1.172 |
| 118 | E16 | C | 10.262 | 8.741 | 10.261 | 1.170 | 1.231 |
| 119 | E17 | C | 10.359 | 9.097 | 10.403 | 1.260 | 1.132 |
| 120 | E18 | C | 10.091 | 8.745 | 10.135 | 1.160 | 1.116 |
| 121 | E19 | C | 10.277 | 9.015 | 10.299 | 1.180 | 1.022 |
| 122 | E20 | C | 10.344 | 9.156 | 10.312 | 1.150 | 0.988 |
| 123 | E21 | C | 10.467 | 9.167 | 10.381 | 1.120 | 1.060 |
| 124 | E22 | C | 10.355 | 9.110 | 10.283 | 1.190 | 1.045 |
| 125 | E23 | C | 10.184 | – | 10.203 | – | – |
| 126 | E23A | C | – | – | 10.045 | – | – |
| 127 | E24 | C | 10.122 | 8.837 | 10.118 | 1.490 | 1.005 |
| 128 | E24A | C | 10.017 | 8.809 | 10.016 | 1.190 | 1.011 |
| 129 | E25 | C | 10.042 | 8.699 | 10.015 | 1.140 | 1.113 |
| 130 | E25A | C | 9.921 | – | 9.904 | – | – |
| 131 | E26 | C | 9.827 | – | 9.778 | – | – |
| 132 | E27 | C | 9.931 | 9.094 | 9.734 | 1.200 | 0.687 |
| 133 | E28 | C | 10.204 | 9.367 | 10.130 | 0.650 | 0.667 |
| 134 | E29 | C | 10.012 | 9.166 | 10.053 | 0.760 | 0.666 |
| 135 | E30 | C | 10.071 | 9.187 | 10.031 | 0.820 | 0.734 |
| 136 | F1 | C | 9.956 | 8.898 | 9.967 | 0.980 | 0.758 |
| 137 | F2 | C | 9.935 | 8.843 | 9.919 | 0.910 | 0.862 |
| 138 | F3 | C | 10.057 | 8.977 | 9.988 | 1.090 | 0.870 |
| 139 | F4 | C | 10.711 | 9.097 | 9.968 | 0.860 | 1.444 |
| 140 | F5 | C | 10.034 | 8.791 | 9.990 | 1.000 | 1.073 |
| 141 | F6 | C | 10.207 | 8.961 | 10.036 | 0.960 | 1.076 |
| 142 | F7 | C | 10.116 | 8.927 | 10.082 | 1.030 | 0.899 |
| 143 | F8 | C | 10.134 | 8.815 | 10.110 | 1.000 | 1.019 |
| 144 | F9 | C | 10.145 | 8.909 | 10.093 | 0.870 | 0.946 |
| 145 | F10 | C | 10.182 | – | 1.195 | – | – |
| 146 | F11 | C | 9.982 | – | 9.943 | – | – |
| 147 | F12 | C | 9.836 | 8.719 | 9.831 | 0.800 | 0.917 |
| 148 | F13 | C | 10.034 | – | 10.031 | – | – |
| 149 | F14 | C | 9.999 | – | 9.962 | – | – |
| 150 | F15 | C | 10.123 | 8.786 | 10.126 | 0.950 | 1.187 |
| 151 | F16 | C | 10.331 | – | 10.357 | – | – |
| 152 | F17 | C | 10.309 | – | 10.302 | – | – |
| 153 | F18 | C | – | – | – | – | – |
| 154 | F19 | C | 10.350 | – | 1.333 | – | – |
| 155 | F20 | C | 10.045 | – | 9.987 | – | – |
| 156 | F21 | C | 10.003 | 8.993 | 10.002 | 0.890 | 0.690 |

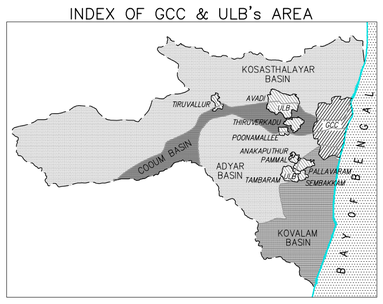
LEGEND

- Drain Outlet
- Drain With Reverse Gradient
- "–" : Manhole's Inside not Accessible

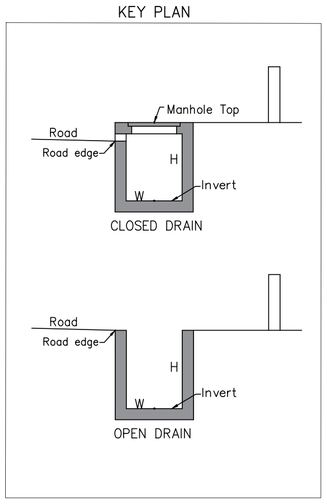
WARDS OF GCC AREA



INDEX OF GCC & ULB's AREA




KEY PLAN




LIST OF CONTROL POINTS

| Sl. No. | Point No. | Latitude | Longitude | Easting(m) | Northing(m) | MSL RL(m) | Remarks |
|---|---|---|---|---|---|---|---|
| 1 | T111 | 13°05'14.673"N | 80°11'44.277"E | 412801.334 | 1446940.600 | 10.61 | On top of Drain RCC |




SCALE 1 : 5,000

250m 200 150 100 50 0 250 500m

1CM=50m

PROJECTION:
The metric grid on this sheet is the UTM grid, Zone 44 N, WGS 84 Spheroid, M.S.L. Datum.
All Dimensions are in Metres.

WARNING:
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SHEET HISTORY:
Base map compiled from the details/data provided by Greater Chennai Corporation (GCC)
Surveyed between 26th December to 30th December 2020

Produced for the Project of Real Time Flood Forecasting and Spatial Decision Support System For Chennai by SECON-JBA under the World Bank funded Project Development Grant Fund (PDGF).

Roads: main; others; mud. Cart track.

Temple. Chhatri. Shrine. Mosque. Idgah. Tomb. Church.

Railways: broad gauge with station; bridge; metro.

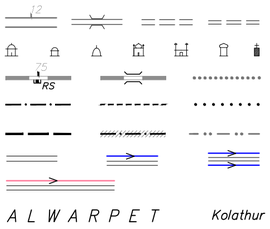
Boundary: state; district; taluk.

Boundary: CMA; zone; ward.

Roads: without drain; with oneside drain; with both side drain.

Road with reverse gradient drain.

Spaced names: locality; village.




Drains: stormwater; feeder with flow direction. Invert level.

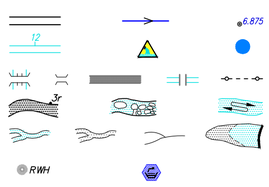
Canal. Outlet.Inundated area by privious flood,.

Bridge with piers. Culvert. Flyover. Subway. Sewage line.

River:dry with water channel; with island & rocks.Tidal river.

Streams: perennial; non perennial; Single line: defined. Tank.

Rain water Harvesting.Stormwater pumping station.




| | |
|---|---|
| CLIENT | GREATER CHENNAI CORPORATION (GCC)<br>REPRESENTING COMMISSIONERATE OF REVENUE ADMINISTRATION AND DISASTER MANAGEMENT |
| FUNDED BY | PROJECT DEVELOPMENT GRANT FUND (PDGF)<br>(Managed by Tamil Nadu Urban Infrastructure Financial Services Limited) |
| PROJECT | PLANNING, SETTING UP AND OPERATIONALIZING REAL TIME FLOOD FORECASTING SPATIAL DECISION SUPPORT SYSTEM FOR CHENNAI |
| TITLE | BASE MAP - STORM WATER DRAIN<br>WARD No. 90, ZONE VII - AMBATTUR |
| PROJECT CONSULTANTS | SECON - JBA Consulting<br>(India) (U.K.) JV |
| SHEET No. 29 OF 114 | SCALE 1:5000 |
| DRAWING No. | CFM/SWD/WARD–29 |
| REV. | 0 |