



SUVEGA AUTOMATED & INTELLIGENT BUILDING PLAN APPROVAL SYSTEM

GUIDELINES FOR PREPARATION OF DRAWINGS-
SINGLE FAMILY RESIDENTIAL BUILDING

SALIENT FEATURES

- ▶ Software based verification of building plans and details, for compliance with the various provisions in Kerala Municipality Building Rules.
- ▶ The drawings can be prepared using any drafting software, including the open source/ free software.
- ▶ An over all transformation in the concept of conventional plan scrutiny process.
- ▶ Minimises the human interventions in plan scrutiny.
- ▶ Facilitate prompt approvals of permit applications.
- ▶ Improved transparency in the building permit process.
- ▶ Better precision in interpretations of the various rules.
- ▶ Facility for checking conformity with the rules of the plans and details prior to official submission.
- ▶ Only the rule complied plans and details can be officially submitted for permit application.

PREPARATION OF DRAWINGS

GENERAL

- ▶ All drawings shall be drawn in 1:1 scale, in meters, in model space.
- ▶ All required details as per this guide line shall be submitted in a single drawing, drawn in model space.
- ▶ All details shall be furnished using closed polygon with polylines, lines, texts, dimensions etc. to be incorporated in layers, index colours as specified in this guideline.
- ▶ It is advisable to keep the .dxf drawing with bare minimum details, which are required by the system for rules validation.
- ▶ The drawing shall be saved in .dxf format and to be uploaded for rule validation.
- ▶ Separate drawings (Floor plan, elevations, sections, site plan, service plan, soak pit/ leach pit/ open well details etc.) incorporating all details as per KMBR, set to the scale and paper size specified, shall be prepared, saved as pdf, and these pdf files are to be separately uploaded after the dxf. drawings uploaded for rule validation, is accepted by the system.

PREPARATION OF DRAWINGS

GENERAL (Contd..)

- ▶ In pdf drawing uploaded, one blank space of 10 cm x 10 cm shall be kept on bottom right corner of every sheets, for approval stamping.
- ▶ All polygons with polylines shall be closed polygons, closed using <close> command in Auto CAD or similar in other software.
- ▶ The drawings shall be prepared by matching the various entries in the drawings with the properties of layers of the supplied layer matrix, downloadable from the Suvega site.
- ▶ The layer template file, (layer set Suvega- Single family residential building _01_12_18.las), which can be downloaded along with these guidelines contains all the layers which are used by the system and can be made use while creating dxf. drawings required for rule validation.
- ▶ Wherever details are to be furnished as dimensions, these are to be incorporated using dimension tools, and shall not be exploded/ edited.

PREPARATION OF DRAWINGS

GENERAL (Contd..)

- ▶ Wherever one or more polygons/ dimensions/ lines/ depicting different parameters are required to overlap, it shall be ensured that, no gaps/ spaces are left in between.
- ▶ The use of layers/ Texts/ colour conventions specified by these guidelines to designate a parameter shall be restricted to that entity only and shall not be used elsewhere in the drawing.

PREPARATION OF DRAWINGS

BUILT UP AREA - OF PROPOSED HOUSE	Built up area enclosed to be drawn as closed polygon, using poly line, polygon features, in layer BLK_1_FLR_i_BLT_UP_AREA in index colour for <25>. IN FLOOR PLANS
DEDUCTIONS FROM BUILT UP ARE FOR FLOOR AREA CALCULATIONS - OF PROPOSED HOUSE	Area to be deducted for calculating floor area, to be drawn as closed polygon, using poly line, polygon features, in layer BLK_1_FLR_i_BLT_UP_AREA_DEDUCT, in index colour <25> IN FLOOR PLANS
BUILT UP AREA OF EXISITING BUILDINGS	Area enclosed to be drawn as closed polygon, using poly line, polygon features, BLK_1_FLR_i_BLT_UP_AREA_EXISITNG in index colour <25>, IN FLOOR PLANS
DEDUCTIONS FROM BUILT UP ARE FOR FLOOR AREA CALCULATIONS - OF EXISTING HOUSE	Area to be deducted for calculating floor area, to be drawn as closed polygon, using poly line, polygon features, BLK_1_FLR_i_BLT_UP_AREA_DEDUCT_EXISTING in index colour for <25>., IN FLOOR PLANS
GENERAL STAIRS - STAIRCASE	General Stair case 1, including wall thickness, shall be drawn as polygon in layer BLK_1_FLR_i_STAIR_1, IN FLOOR PLANS
PLOT BOUNDARY	Closed polygon using polyline/ polygon, in site plan, in layer PLOT_BOUNDARY, IN SITE PLAN
SHADES AND OVERHANGS	Closed polygon using polyline/ polygon, in site plan, in BLK_1_SHADE_OVERHANG, IN SITE PLAN
COVERGAE	Covered areas as closed polygon using polyline/ polygon, in site plan in layer BLK_1_COVERED_AREA , IN SITE PLAN
COVERGAE DEDUCTION	Covered areas deductions of each buildings in shall be drawn in site plan as closed polygons in layer BLK_1_COVERED_AREA_DEDUCT, IN SITE PLAN
HEIGHT OF BUILDING	Height of building of diffrent blocks of buildings shall be drawn as dimension using layer specified, in layer BLK_1_HT_OF_BLDG, IN BUILDING SECTION

PREPARATION OF DRAWINGS

FRONT YARD	To be drawn as closed polygon, using poly line, polygon features, BLK_1_LVL_0_FRONT_YARD, IN SITE PLAN
SIDE YARD 1	To be drawn as closed polygon, using poly line, polygon features, BLK_1_LVL_0_SIDE_YARD1, , IN SITE PLAN
SIDE YARD 2	To be drawn as closed polygon, using poly line, polygon features, BLK_1_LVL_0_SIDE_YARD2, , IN SITE PLAN
REAR YARD	To be drawn as closed polygon, using poly line, polygon features, BLK_1_LVL_0_REAR_YARD, , IN SITE PLAN
BUILDING FOOT PRINT	To be drawn as closed polygon, using poly line, polygon features in layer BLK_1_LVL_0_BLDG_FOOT_PRINT., , IN SITE PLAN
OPEN STAIR	Open stairs shall be drawn in layer BLK_1_OPEN_STAIR, and the distance from plot boundary to open stair shall be marked as dimension in layer BLK_1_OPEN_STAIR, , IN SITE PLAN
RAIN WATER HARVESTING SYSTEM	
RWH Tank	Rain water harvesting tank shall be drawn using polygon/ poly line in layer RWH, IN SITE PLAN
RWH Tank Capacity	RWH Tank capacity shall be represented as text "RWH_CAPACITY_L=XXXX" in layer RWH, IN SITE PLAN
SOLAR- ASSISTED HEATING AND LIGHTING SYSTEM	
SOLAR- ASSISTED HEATING AND LIGHTING SYSTEM	Shall be drawn as polygon using polyline in layer SOLAR , IN SITE PLAN
Over head electric line 01	
Over head electric line to be represented asine in layer OHEL_1 IN SITE PLAN	
Voltage to be given as text, VOLTAGE_KV_1=XXX in VOLTAGE_1 layer, IN SITE PLAN	
Horizontal clearance from OHEL 1 to the building, as dimension in layer HORIZ_CLEAR_OHEL_1 , IN SITE PLAN	
Vertical clearance from OHEL 1 to building, as dimension in layer VERT_CLEAR_OHEL_1, IN SITE PLAN	

PREPARATION OF DRAWINGS

TYPES OF STREETS/ ROADS

All notified roads , To be marked as closed polygon in layer NOTIFIED_ROAD, **IN SITE PLAN**

In case of Cul-de-sac of whatever width but not exceeding 250 m length and pedestrian lane and street upto average 3m width and internal roads and streets of whatever width within or leading to any residential colony, abutting the plot shall be marked as CULD_1 polygon layer, To be marked as closed polygon in in layer, CULD_1 , **IN SITE PLAN**

Lanes not exceeding 75 m length leading to one or more individual plots, abutting the plot shall be marked as lane_1 polygon layer, To be marked as closed polygon in in layer LANE_1, **IN SITE PLAN**

All non - notified roads , to be marked as closed polygon in in layer, NON_NOTIFIED_ROAD , **IN SITE PLAN**

Distance from Centre Line off roads/ streets

The shortest dimensions from each of the building footprint polygons to the centrelines of all roads abutting or giving access to the plot shall be marked as dimension in DIST_CL_ROAD layer and in <index colour 1> for Notified road, in <index colour 2> for Non-Notified road, in <index colour 6> for Cul-de-sac and in <index colour 5> for Lane **IN SITE PLAN**

Distance from the buildings and the street

The shortest dimensions from each of the building footprint polygons to the centrelines of all roads abutting or giving access to the plot shall be marked as dimension in SHORTEST_DIST_TO_ROAD layer and in <index colour 1> for Notified road, in <index colour 2> for Non-Notified road, in <index colour 6> for Cul-de-sac and in <index colour 5> for Lane **IN SITE PLAN**

MAXIMUM HEIGHT OF BUILDINGS

BLK_1_MAX_HEIGHT_CAL

The shortest distance between the building foot print polygon and the opposit side boundary of the wider road abutting the plot, shall be dimensioned using BLK_1_MAX_HEIGHT_CAL layer **IN SITE PLAN**

BLK_1_MAX_HEIGHT_CAL_SET_BACK

The distance by which the building is set back from the building line shall be marked in polygon in layer BLK_1_MAX_HEIGHT_CAL_SET_BACK **IN SITE PLAN**

PREPARATION OF DRAWINGS

Open Well	To be marked as polygon, in layer WELL, in index colour 01 for existing WELL and index colour 02 for proposed WELL , IN SITE PLAN
Waste disposal facility	Closed polygon using polyline/ polygon in layer WASTE_DISPOSAL, In index colour 01 for Existing and index colour 02 for proposed. , IN SITE PLAN

The shortest distances from the well to the nearest point on different entities to be marked as dimensions in layer DIST_WELL, in <index colour 1> for Notified road, in <index colour 2> for Non-Notified road, in <index colour 6> for Cul-de-sac and in <index colour 5> for Lane, <index colour 7> from plot boundaries, <index colour 8> from any waste treatment facilities and index colour 09 for distance between waste treatment facilities and plot boundaries.

IN SITE PLAN

PREPARATION OF DRAWINGS

DETAILS TO BE FURNISHED AS TEXT IN DRAWINGS IN PLAN_INFO LAYER

- ▶ Whether any openings are provided above 2.10 m, where the side yard is less than 1.0 m in general plots, or less than or equal to 0.6 m in case of small plots?

OPENING_ABOVE_2.1_ON_SIDE_LESS_1M_OR_LESS_EQUALTO_0.6M= **YES/NO/NA**

- ▶ Whether any openings are provided below 2.10 m, where the side yard is less than 1.0 m in general plots, or less than or equal to 0.6 m in case of small plots?

OPENING_BELOW_2.1_ON_SIDE_LESS_1M_OR_LESS_EQUALTO_0.6M= **YES/NO/NA**

- ▶ Whether any openings are provided above 2.10 m, where the rear yard is less than 1.0 m?

OPENING_ABOVE_2.1_ON_REAR_LESS_1M= **YES/NO/NA**

- ▶ Whether any openings are provided below 2.10 m, where the rear yard is less than 1.0 m?

OPENING_BELOW_2.1_ON_REAR_LESS_1M= **YES/NO/NA**

PREPARATION OF DRAWINGS

DETAILS TO BE FURNISHED AS TEXT IN DRAWINGS IN PLAN_INFO LAYER

- ▶ Whether NOC to abut the adjacent plot on side is available?

NOC_TO_ABUT_SIDE=**YES/NO/NA**

- ▶ Whether NOC to abut the adjacent plot on side is available?

NOC_TO_REAR_SIDE=**YES/NO/NA**

- ▶ Whether the construction is a Govt. or aided school?

WHETHER_GOVT_OR_AIDED_SCHOOL=**YES/NO/NA**

- ▶ No of mechanical parking provided?

MECHANICAL_PARKING=**XXX**

- ▶ Existing Floor Area to be demolished?

EXISTING_FLOOR_AREA_TO_BE_DEMOLISHED_M2=**XXXX**