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Date .....

यो जो संग सम्बन्धित छ

इटहरी उप महानगरपालिकामा भवन निर्माण गर्ने निवेदन तथा नक्सामा एकरुपता ल्याउन तपसिल बमोजिमको ढाँचामा निवेदन पेश गर्न यो सुचना प्रकाशित गरीएको छ ।

२०६६/१२/२२
कृष्ण प्रसाद सापकोटा
प्रमुख प्रशासकीय अधिकृत

DRAWING SHEET FORMAT FOR ITAHARI SUB- METROPOLITIAN CITY.

A. For Architectural Drawing in A3 size paper.

SHEET A_1: Location map (no scale but should be readable) and Site plan (1:100 or 1:150, 1:200 if the scale 1:100 does not suit) Requirement for Location map Location plan should be traced from google map (or other maps) with distinguished site.

- At least two reference points (with distance) nearest to the site. GPS coordinate of site and reference points.
- Name of access roads.
- North direction should always point towards the upper (header) side of the drawing sheet.
- Requirements for Site Plan
- Well defined Boundary (road, building, land plots, rivers, open space etc).
- Name of access road, width, Right of way.
- Setback line.
- Building footprint with dimension and area, distance of building from centerline and edge of road, distance from adjoining boundaries.
- Location and size of septic tank soak pit and underground water tank.
- Water supply line, electrical line, Telephone line with distance to the site.
- Existing building if any.
- At least two number of trees.
- North direction should always point towards the upper (header) side of the drawing sheet.
- Other features specified by Municipality By-Laws.

SHEET A_2: All level floor plans (Scale 1:100 for all, 1:200 or other suitable scale if the scale 1:100 does not suit but should be acceptable to municipality)

SHEET A_2.a: Ground floor plan, First floor plan .....and so on. Note: Do not include more than two floor plans in a single sheet.

SHEET A_3: Building Elevations (Scale 1:100 for all, 1:200 or other suitable scale if the scale 1:100 does not suit but should be acceptable to municipality)

SHEET A_3.a: Front elevation at top left corner and Side elevation at top right corner rotated clockwise...and so on. Opening Schedule should be provided in tabulated form in the same sheet with elevation wherever thought suitable within the 'drawing area'. Note: All the elevations can be included in a single sheet provided that all the necessary details are readable.

SHEET A_4: Sectional Elevations (Scale 1:100 for all, 1:200 or other suitable scale if the scale 1:100 does not suit but should be acceptable to municipality)

SHEET A_4.a: Section in both directions through the highest point of proposed building (in many cases through the staircase) including foundation

SHEET A_4.b: Section cut from other locations if necessary. .....and so on. Requirements for Sectional elevations: Sections should be through the highest point of the building.

- Section line should be selected such that maximum details can be presented from a single
- Section. All the building levels should be shown with clear label and dimension (foundation level,
- Plinth level, floor levels, sill and lintel levels etc) All the necessary features should be provided with dimensions.
- Note: Additional sheets may be used to elaborate the Architectural designs. Then the naming of sheets shall be like Sheet A_1.a, Sheet A_1.b, Sheet A_2.a, and Sheet A_2.b and so on.

B. For Structural Drawing in A3 size paper

SHEET S_1: Building Layout Plan (scale 1:100) and Trench plan (scale 1:100) All the necessary reference point and distances required for building layout on site. Trench plan should be with dimension of trench, c/c dimension, grid names, and size of footing, reference dimension from land boundary.

SHEET S_2: Foundation details (Plan and section of each type) and Toe wall section (scale 1:25) Soil type and bearing capacity should be specified along with foundation details.

SHEET S_3: Column details Column layout plan with grid names, naming of columns, c/c dimension and diagonal

- Dimension (scale 1:100) Column section in tabular form (scale 1:20) and stirrup hook details (Scale 1:20)
- Longitudinal section of column from foundation to roof showing stirrups and lapping
- Details (1:50).

SHEET S_4: Beam Details

SHEET S_4.a: Foundation beam layout plan (Scale 1:100), Plinth tie beam layout plan (Scale 1:100), Typical floor beam layout plan (first, second.....) (Scale 1:100) .....and so on.

SHEET S_4.b: Longitudinal section showing a complete frame (in x-x and y-y direction) (Scale 1:50) and Cross section (at mid span and support) (Scale 1:20)

SHEET S_4.c: Beam bar lapping and curtailment details (Lap length should be specified in the drawing) (Scale 1:20).Development length can be shown in Tabular form.

SHEET S_5: Beam column joint details (plan and sections) (showing reinforcement at joints, confinement reinforcements, internal and external joints) (Scale 1:20).

SHEET S_6: Slab details Slab reinforcement Bottom plan (with c/c dimensions and grid names) (Scale

- 1:100) Slab reinforcement Top X-direction plan (with c/c dimensions and grid names)
- (Scale 1:100) Slab reinforcement Top Y-direction plan (with c/c dimensions and grid names)
- (Scale 1:100) Slab section end to end (in x-x and y-y direction) (Scale 1:50) with enlarged
- Details (Scale 1:10). Also chair details should be included (Scale 1:5)

SHEET S_7: Staircase Details

SHEET S_7.a. Staircase plan and sectional elevation with dimension (Scale 1:50) Staircase Reinforcement details of each flight (Scale 1:50)

SHEET S_8: Sill, lintel, parapet band sections (Scale 1:5), plan (Scale 1:20), Elevation (Scale 1:50)

SHEET S_9: Septic tank and soak pit details (Scale 1:50).

SHEET S_10: General information on Construction (Construction methodology, Construction material Specifications, Limitations etc)

1. Additional details of structure as per design requirement.

2. Extra details of structure if designer feel it necessary to be included in design.

Notes: - Additional sheets may be used to elaborate the structural designs. Then the naming of¬ sheets shall be like Sheet S_1.a, Sheet S_1.b,....., Sheet S_2.a, Sheet S_2.b .....& so on. Any variation on scale and other information may be allowed only if it is acceptable to municipality. Grade of concrete and steel should be provided in a note along with reinforcement details. Where it is necessary to use more than one scale on a drawing, the main scale only shall be inscribed in the title block, and all other scales adjacent to the item reference number of the part concerned, nor adjacent to the reference letter of a detail view (or section).

For Building drawing layouts, scales, folding of drawing sheets and drawing symbols refer IS 962¬ : 1989

For Class 'B' Buildings:

A Report of Detailed Structural analysis including the following should be submitted along with Detail Architectural and Structural drawings.

General site information such as geography, soil type and bearing capacity of soil.

- ♣ Preliminary design of structural members.
- ♣ Load Calculation.
- ♣ Load patterns, load cases and load combinations
- ♣ Seismic weight calculation.
- ♣ Base shear calculation.
- ♣ Analysis results and verifications.
- ♣ Design methodology and required information.
- ♣ Design results and verifications.
- ♣ Manual design of critical members.
- ♣ Manual Design of Slab, Staircase, Foundations and other additional structural members if provided.
- ♣ Check for short column.
- ♣ Check for stress in columns.
- ♣ Check for soft and weak story.
- ♣ Check for mass irregularity and stiffness irregularity.
- ♣ Check for torsion.
- ♣ Check for storey drift.
- ♣ Check for strong column weak beam.
- ♣ Check for beam column joint etc.
- ♣ And other information that are required for earthquake resistance design and thought necessary by
- ♣ The designer Soft copy of drawings and analysis model should be provided if thought necessary by municipality.
- ♣ Soil test report should be submitted for buildings as specified by basic By-Laws 2072.

♣ Basic By- laws 2072 and NBC should be strictly followed unless any equivalent document published by municipality. Drawings should be submitted with following details;

Cover page in a format as specified by municipality in A3 OR A4 size paper.

- Table of content in A4 size paper.
- Architectural and Structural drawings as specified above.
- In case some difficulties please immediately contact to municipality.

Note:-Except Residential Buildings All " A " and " B " class buildings should include Sanitary and Electrical drawings and design as per NBC.