

Knowledge Centre

Article No 5.

City of Cape Town Building Plans:

A Practical Drawing & Submission Checklist

Preparing a building plan for municipal approval is not simply a matter of producing an attractive floor plan. A professional drawing set must communicate the proposed development accurately, consistently and unambiguously. Each drawing — whether a site plan, floor plan, section, elevation or drainage drawing — has a specific purpose in demonstrating compliance with planning, building and construction requirements.

The City of Cape Town's Building Plan Preparation and Submission Guideline provides practical requirements for the preparation of building-plan submissions, while SANS 10400-A establishes national requirements concerning the information that must be conveyed on building drawings. The two should therefore be considered together when preparing a submission.

1. The site plan — establishing the development within its context

The site plan is the starting point for understanding a building application. It places the proposed building within the property and establishes its relationship to the site boundaries, street, neighbouring properties, services and other site features.

The property boundaries and their dimensions are particularly important because they establish the physical limits within which the proposed development must occur. Building lines must be clearly indicated and dimensioned, while servitudes and rights of way must also be identified where applicable. This enables the plan examiner to establish whether the proposed building is positioned correctly on the property.

The site plan should also identify the street onto which the property fronts, the direction of true north, site levels and relevant municipal services. Existing and

proposed access points are important because vehicle access can affect street trees, municipal infrastructure and parking arrangements.

SANS 10400-A specifically requires site plans to show, where applicable, the site dimensions and boundaries, building lines, servitudes, north point, street name, municipal services, existing drainage, existing and proposed buildings, demolition and access arrangements.

Why this matters

A correctly prepared site plan allows the municipality to answer fundamental questions:

Where is the property? Where is the building positioned? How close is it to the boundaries? Does it comply with the applicable building lines? How does it relate to the street and municipal services?

2. Existing, proposed and demolished work

One of the most important conventions in a building-plan submission is the ability to distinguish what already exists from what is being proposed and what is to be demolished.

The City drawing conventions provide for proposed work to be shown in red, existing work to remain uncoloured, and work proposed for demolition to be indicated with black dotted lines.

This convention is more than a graphical preference. It enables the plan examiner to understand the scope of the application immediately.

For example, when an extension is proposed to an existing dwelling, the examiner should be able to distinguish:

- the existing dwelling;
- the new extension;
- structures being removed; and
- the relationship between the new and existing construction.

Maintaining the same convention consistently across the drawing set also reduces ambiguity.

3. Floor plans — explaining how the building functions

The floor plan is generally the drawing with which the client is most familiar, but for municipal purposes it has a much broader role.

A compliant layout drawing needs to communicate the use, dimensions and physical arrangement of the building. Rooms should therefore be clearly identified according to their intended use, while walls, doors, windows, stairs, sanitary fixtures and other significant elements should be shown.

SANS 10400-A requires layout drawings to include sufficient information to demonstrate foundations, floors, walls, windows, doors, stairs, roofs, sanitary fixtures, structural elements and the intended use and dimensions of rooms or other spaces.

Why dimensions matter

Dimensions allow the municipality to verify compliance rather than having to interpret the drawing graphically.

Dimensions should therefore be:

- accurate;
- coordinated;
- legible; and
- sufficient to demonstrate compliance.

A common source of problems is inconsistency between the dimensions shown on the plan and the dimensions that can be derived from other drawings.

4. Sections — explaining the building vertically

A floor plan explains a building horizontally. A section explains it vertically.

Sections are particularly important because many aspects of building compliance cannot be established adequately from a floor plan alone. These include:

- floor-to-ceiling heights;
- changes in floor levels;
- roof geometry;
- building height;
- foundation relationships;
- ground levels;

- stair dimensions;
- headroom; and
- the relationship between the building and the surrounding ground.

The section should therefore be selected strategically. It should pass through areas where the important construction and compliance information can be demonstrated.

The City guideline also requires section lines to be clearly identified on the relevant floor plan so that the examiner can immediately establish where the section has been taken.

5. Elevations — showing the external appearance

Elevations provide the municipality with the external view of the proposed building.

They allow the examiner to assess matters such as:

- building height;
- roof form;
- windows and doors;
- external finishes;
- ground levels;
- boundary elements; and
- the relationship between the existing and proposed portions of the building.

Elevations should correspond directly with the floor plans and sections. A window shown on an elevation should correspond with the window shown on the floor plan; roof levels should agree with the section; and floor levels should be consistent throughout the drawing set.

This coordination is one of the simplest but most important quality-control checks before submission.

6. Levels — connecting the drawings to the real site

Levels provide the vertical reference system for the building.

A floor plan might show that a new extension is positioned correctly in plan, but the section and site plan must demonstrate how that extension sits on the actual site.

Relevant levels may include:

- existing ground level;
- proposed finished ground level;
- finished floor level;
- road/verge level;
- adjoining ground levels; and
- changes in level across the site.

SANS 10400-A specifically identifies the relationship between floor levels, existing ground, proposed finished ground and relevant public-street levels as information that may need to be shown on layout drawings.

7. Drainage — demonstrating how water leaves the building

Drainage drawings are not merely plumbing diagrams. They demonstrate how wastewater and stormwater will be managed and how the proposed building connects to the municipal infrastructure.

The drawing should allow the examiner to understand:

- where sanitary fixtures discharge;
- the route of soil and waste pipes;
- pipe sizes and gradients;
- inspection openings and manholes;
- connection points; and
- the relationship between drainage and the building.

Stormwater is equally important. The site must provide a suitable means of dealing with rainfall without creating problems for the building, neighbouring properties or public areas.

SANS 10400-A specifically requires stormwater drainage to be shown on layout drawings where such drainage is required by the local authority.

8. Colour conventions — making the application immediately understandable

Colour conventions provide a visual shorthand for the plan examiner.

The distinction between existing, proposed and demolished work is particularly important on alteration and addition applications.

For construction drawings, the prescribed conventions can also distinguish materials such as masonry, concrete, steel, timber and glass.

These conventions should be applied consistently throughout the drawing set. Changing conventions from one drawing to another can create uncertainty about what is actually being proposed.

9. Drawing scales — balancing detail and context

The scale selected for a drawing must be appropriate to the information being communicated.

A site plan needs sufficient scale to show the whole property and its relationship to surrounding features, whereas a construction detail may require a much larger scale.

The City guideline provides specific scales for different categories of drawings. The scale must be clearly stated on the drawing.

It is important not to rely solely on measuring a printed drawing. A clearly stated drawing scale provides the formal reference, while dimensions provide the precise numerical information required for checking.

10. Coordination — the most important final check

A good municipal drawing set should be read as one coordinated document, rather than a collection of individual drawings.

Before submission, check that:

Plan → Section → Elevation → Site Plan → Drainage

all tell the same story.

For example:

- The building dimensions must agree.
- Floor levels must agree.
- Window and door positions should agree.
- Roof geometry must agree.
- Building setbacks must agree.
- Room uses must agree.

- Drainage must correspond with the sanitary fixtures.
- Existing and proposed construction must be consistently represented.

A discrepancy that appears minor on one drawing can become significant when viewed against another drawing.

The purpose of the checklist

The accompanying Crinnov Municipal Drawing Audit Checklist is intended to turn these principles into a practical quality-control procedure.

Rather than asking “*Have I drawn the plans?*”, the checklist encourages the designer to ask:

“Have I provided sufficient information for the municipality to understand, assess and approve the proposed work?”

That is the fundamental purpose of a municipal building-plan drawing set.

The checklist can therefore be used as a pre-submission audit, working systematically through the site plan, layout drawings, sections, elevations, drainage, fire requirements and supporting documentation.

A note about responsibility

The checklist is intended as a practical drawing-quality and submission aid, not as a replacement for the applicable legislation, National Building Regulations, SANS standards, zoning provisions, municipal by-laws or current City of Cape Town requirements.

Requirements can change, and certain projects will trigger additional requirements depending on their occupancy classification, size, location, construction, heritage status, zoning or other circumstances.

For that reason, the checklist should always be used together with the current municipal requirements and applicable legislation/standards.