2D Drawings – Level of Detail Specification



2D Measured Building Survey

Level of detail

The level of detail should be chosen based on the intended use of the final drawings. It should be noted that, provided the subject is comprehensively scanned during the data collection phase, additional information can be added to the product as the project progresses. For example, a simple floor plan showing only the structure can be supplemented with sanitary fittings, partition walls or MEP equipment. Such additions should consist only of adding new elements to existing drawings, without modifying the original accuracy and level of generalization.

The three levels of detail described below are a guide to help understand how they differ. For each type of drawing, there are examples presenting the most common information that might be included on a basic, standard or high-detail drawing. Any elements can be added to or removed from each example to create a product tailored to your specific needs. A checklist of optional requirements is included at the end of this document.

Accuracy bands

The selected drawing scale determines the line accuracy, the level of generalization of elements and the size of annotations in the final 2D product. This rule allows the drawings to be plotted at the preferred scale and ensures the legibility of the elements shown. For the chosen option, we aim to preserve element alignment, wall parallelism and 90-degree angles between walls within the accuracy band and the building's local coordinate system. If curvatures smaller than the accuracy value also need to be shown, please describe this in the box below the table.

The accuracy bands for 2D products at typical scales, according to the RICS guidance “Measured surveys of land, buildings and utilities”, are described below. If the project requirements go beyond the following table (e.g. a 1:20 scale is needed), please use the box provided to explain.

Band Name	Accuracy	Plot Scale	Typical Product	Annotations size
D	+/- 10 mm	1:50	Floor and reflected ceiling plans, external and internal elevations, cross sections, elevational sections	10 mm
E	+/- 25 mm	1:100	Floor and roof plans, reflected ceiling plans, RoL, external and internal elevations, cross sections, elevational sections	15 mm
F	+/- 50 mm	1:200	2D and 3D topographical survey, RoL elevations	25 mm

Other client requirements:

General rules

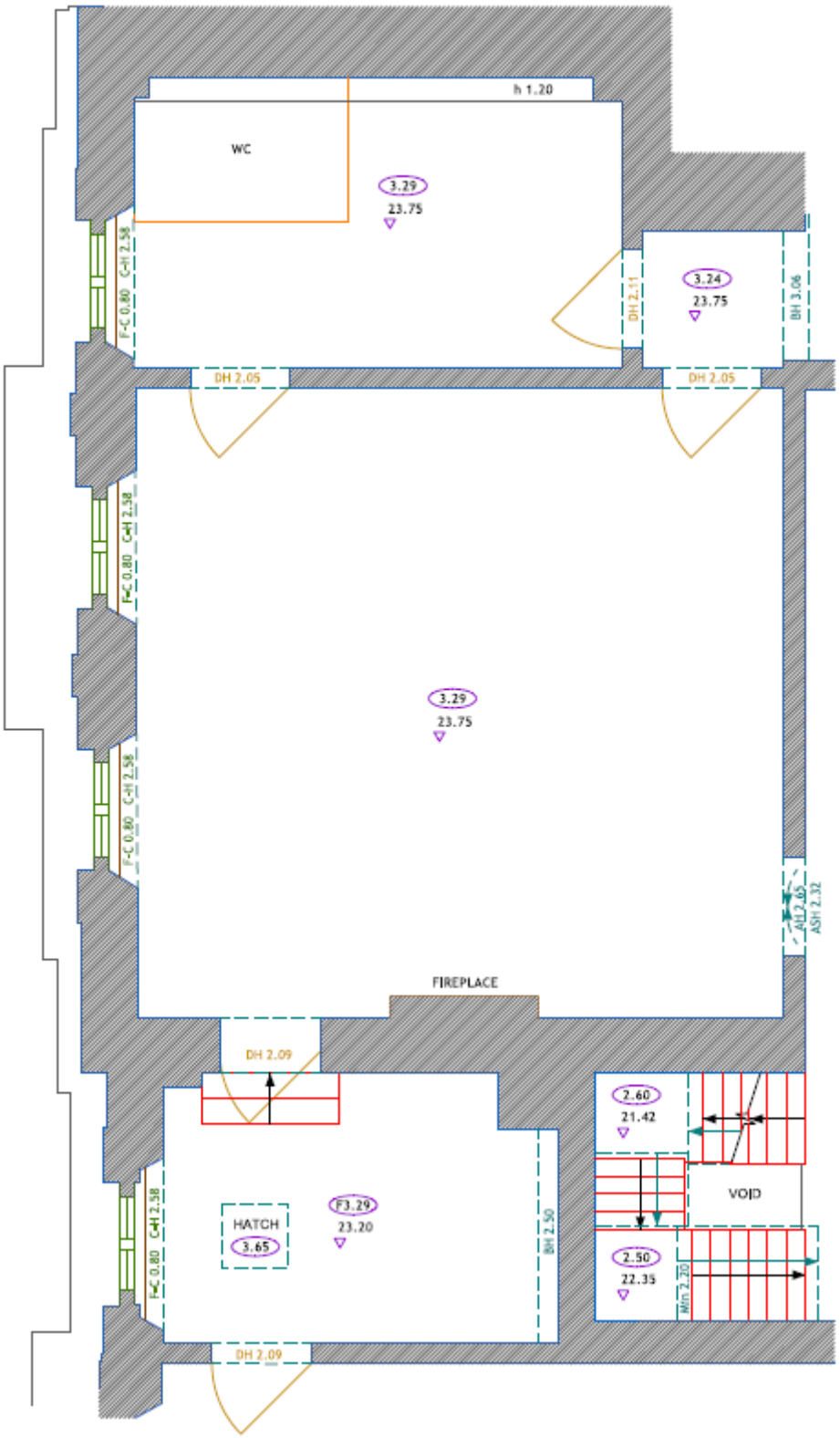
Every project is different and requires a case-by-case approach. We have developed our own product standards, but we are flexible and can adjust them to the client's requirements. As a result, we can work with layers and standards provided by the client. The language used for layers and annotations can also be changed according to the client's preferences. If you have any special requirements, please use the boxes at the end of this document. Our CAD drawing layer specification is set out in Annex 1.

Below are a few practices that we follow:

- Elements not visible in the point cloud are drawn in their assumed position using a dash-dot line.
- Structural building elements (walls, columns, etc.) are drawn in the same position on all floors, within the accuracy band.
- Elements that look identical (windows, doors, etc.) are drawn once and copied to the other places where they occur. The distances between them are also preserved within the applied accuracy.
- Every drawing is prepared based on the drawings already produced for a given building, so that all drawings of one property match one another.

FLOOR PLANS 1:50 – SPECIFICATION

Level 1 – Basic Detail



Included information:

Plan details:

- Main building structure in cutline (about 1.30 m above floor level)
- Major structural elements below and above the cutline
- Simplified window frames
- Door swings
- Balconies and sills
- Staircases and ramps with direction arrow
- Partitions and fireplaces in outline

Levels and Heights:

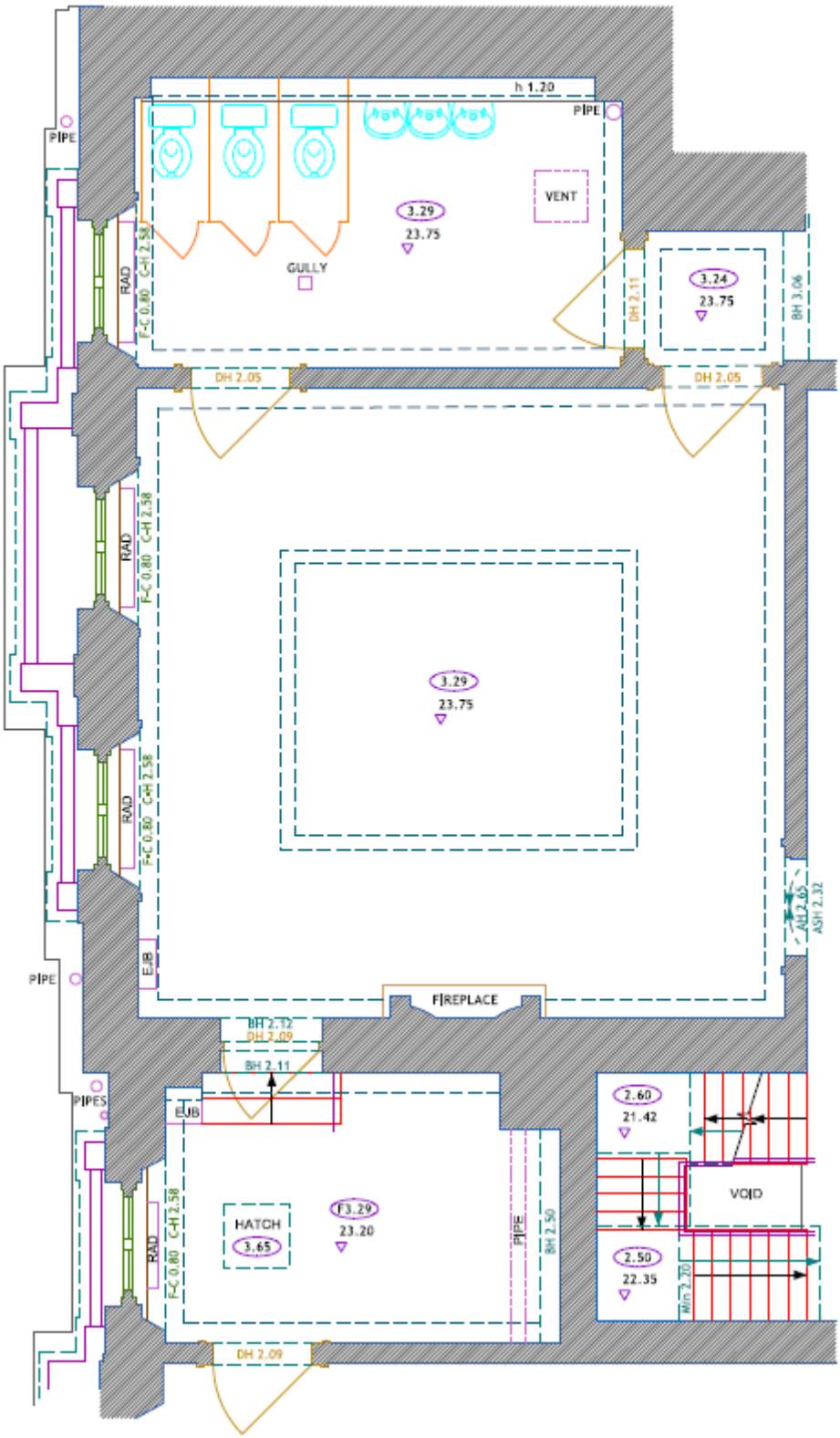
- Major floor levels and ceiling heights
- Beams, arches and hatches
- Doors
- Windows (floor-to-sill and sill-to-head heights)
- Parapets

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Level 2 – Standard Detail



Included information:

Plan details:

- Building structure in cutline (about 1.30 m above floor level)
- Structural elements below and above the cutline
- Simplified window frames
- Simplified door frames with swings
- Balconies and sills
- Staircases and ramps with direction arrow
- Simplified shapes of partitions and fireplaces
- Simplified railings/barriers
- Main services (also overhead)
- Inspection covers/gullies
- Ceiling details in outline
- Sanitary fittings as symbols

Levels and Heights:

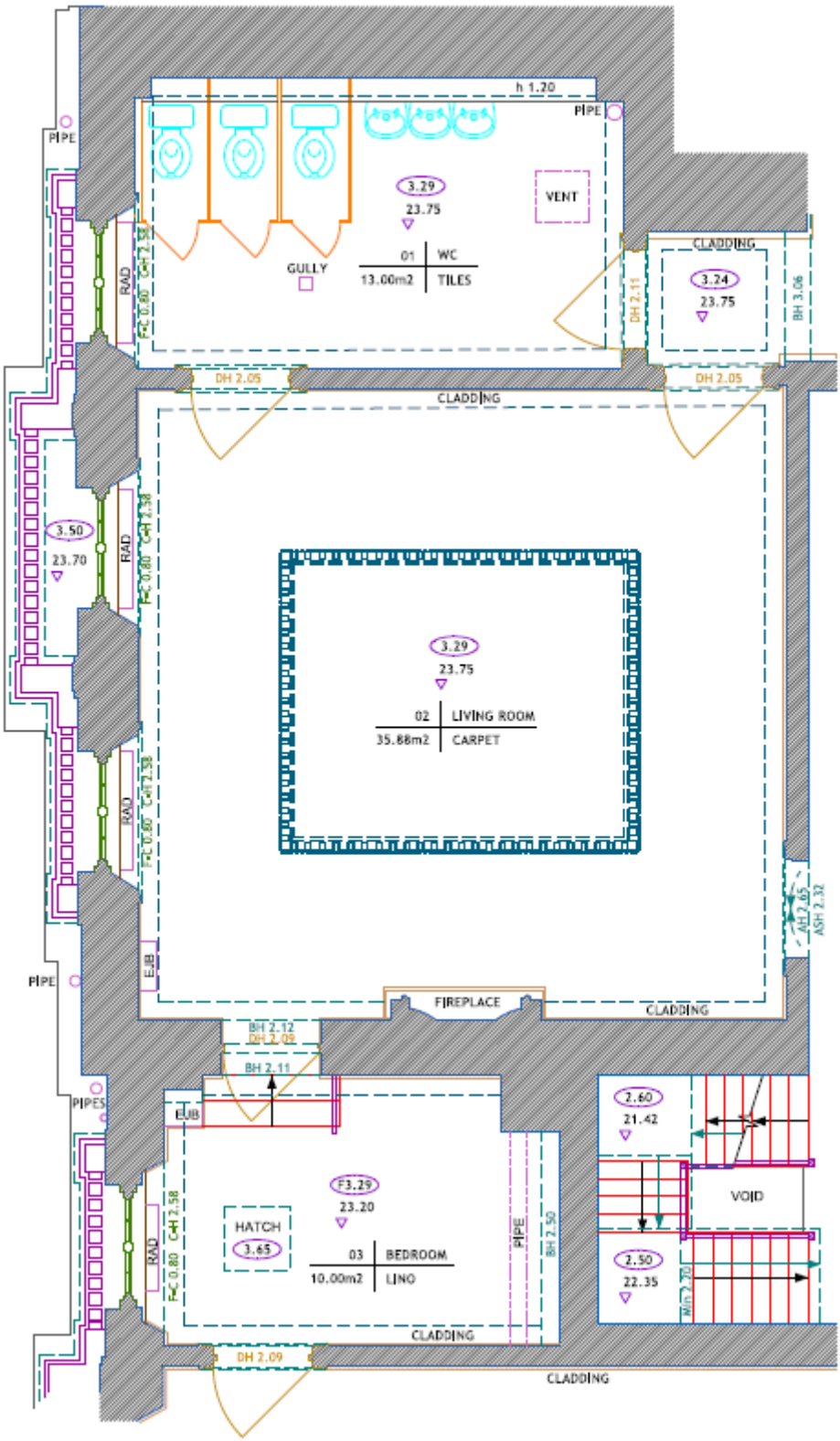
- Floor levels and ceiling heights
- Beams, arches and hatches
- Doors
- Windows (floor-to-sill and sill-to-head heights)
- Parapets

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Level 3 – High Detail



Included information:

Plan details:

- Building structure in cutline (about 1.30 m above floor level)
- Structural elements below and above the cutline
- Window frames with muntins
- Detailed door frames with swings
- Balconies and sills
- Staircases and ramps with direction arrow
- Detailed shapes of partitions and fireplaces
- Railings and barriers
- Main services (also overhead)
- Inspection covers/gullies
- Simplified ceiling details
- Sanitary fittings
- Cladding

Levels and Heights:

- Floor levels and ceiling heights
- Beams, arches and hatches
- Doors
- Windows (floor-to-sill and sill-to-head heights)
- Parapets

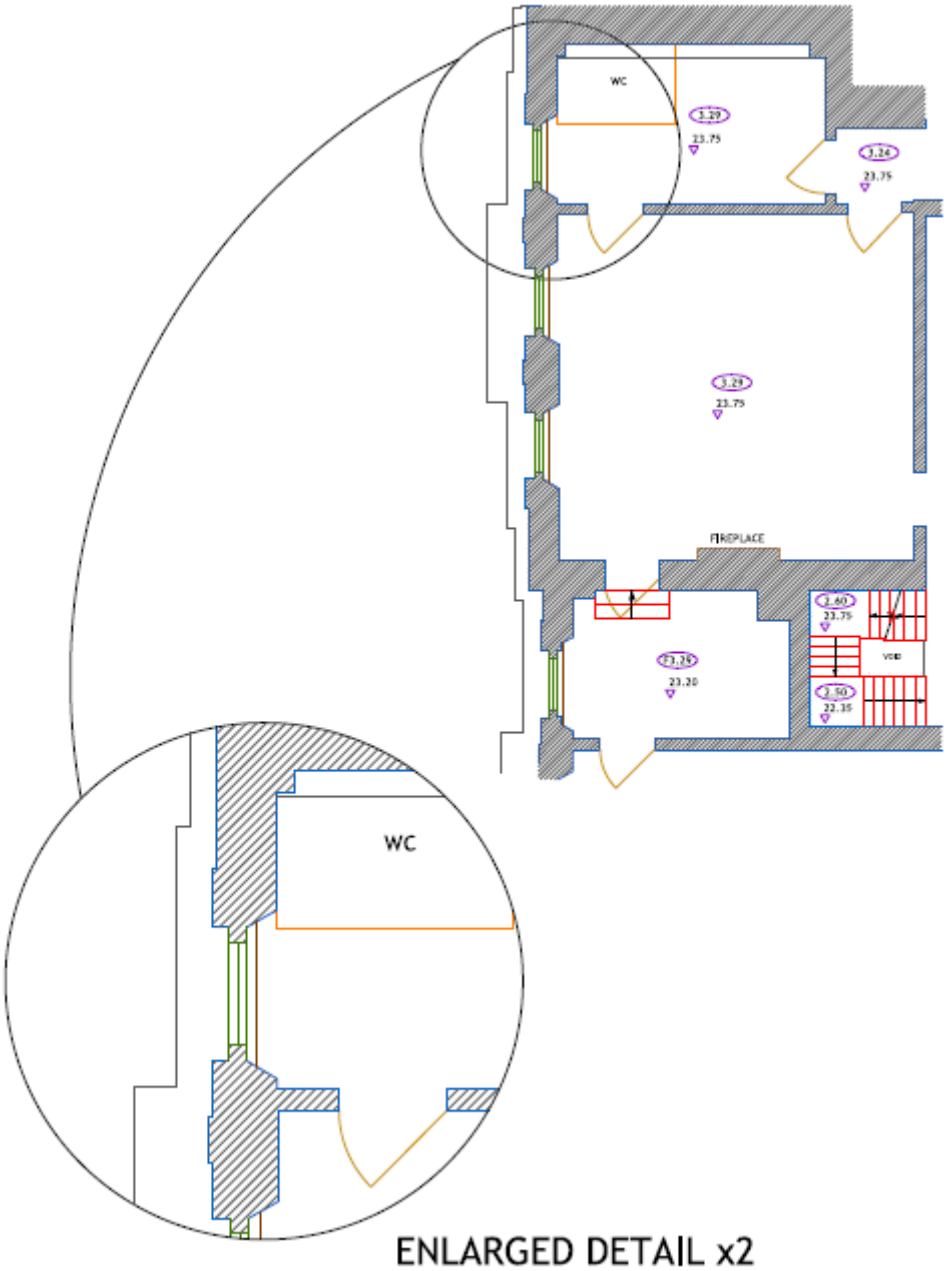
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FLOOR PLANS 1:100 – SPECIFICATION

Level 1 – Basic Detail



Included information:

Plan details:

- Main building structure in cutline (about 1.30 m above floor level)
- Major structural elements below the cutline
- Simplified window frames
- Door swings
- Balconies and sills
- Staircases and ramps with direction arrow
- Partitions and fireplaces in outline

Levels and Heights:

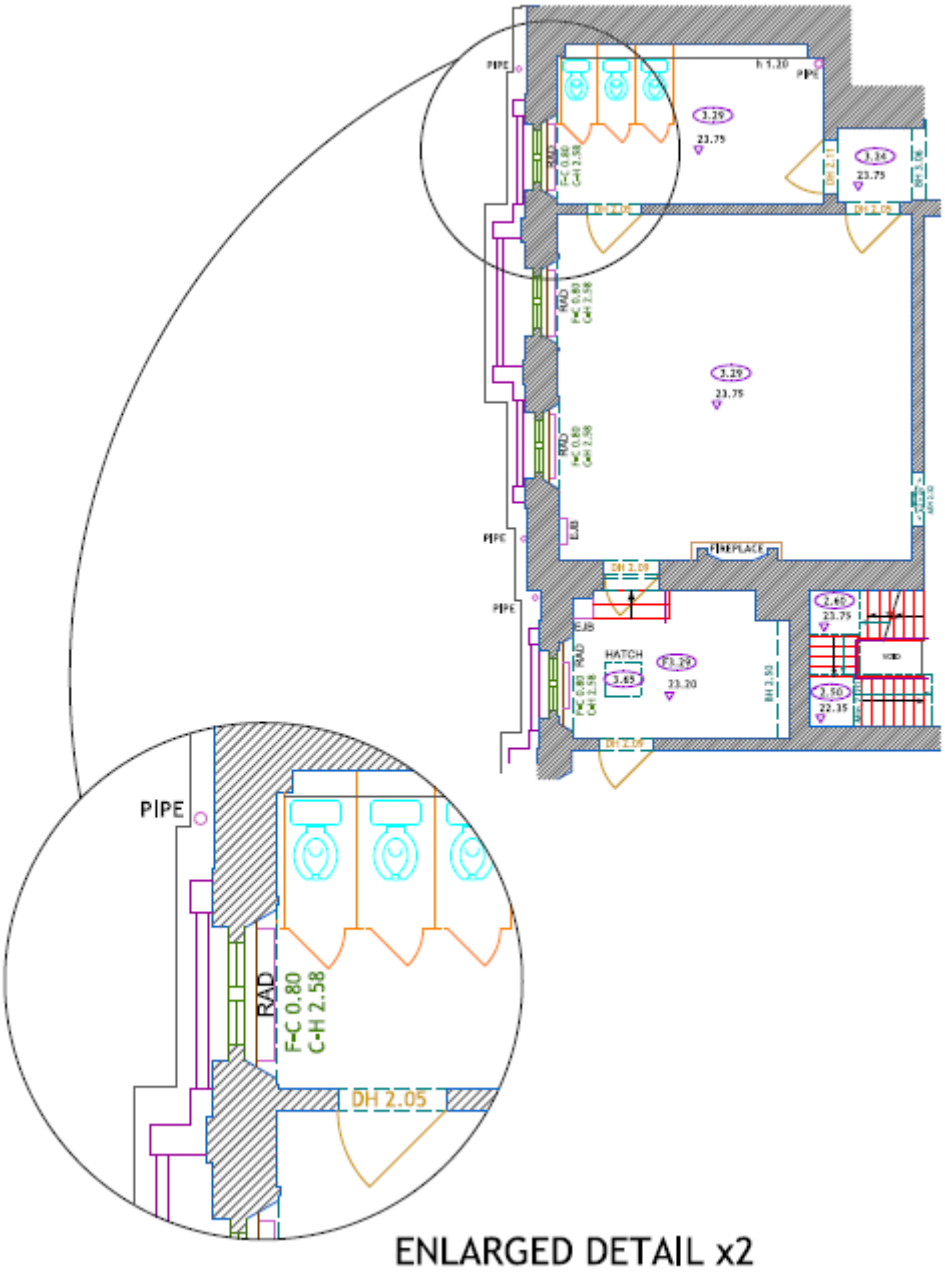
- Major floor levels and ceiling heights

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Level 2 – Standard Detail



Included information:

Plan details:

- Main building structure in cutline (about 1.30 m above floor level)
- Major structural elements below and above the cutline
- Simplified window frames
- Door swings
- Balconies and sills
- Staircases and ramps with direction arrow
- Simplified shapes of partitions and fireplaces
- Simplified railings/barriers
- Main services in and below the cutline
- Sanitary fittings as symbols

Levels and Heights:

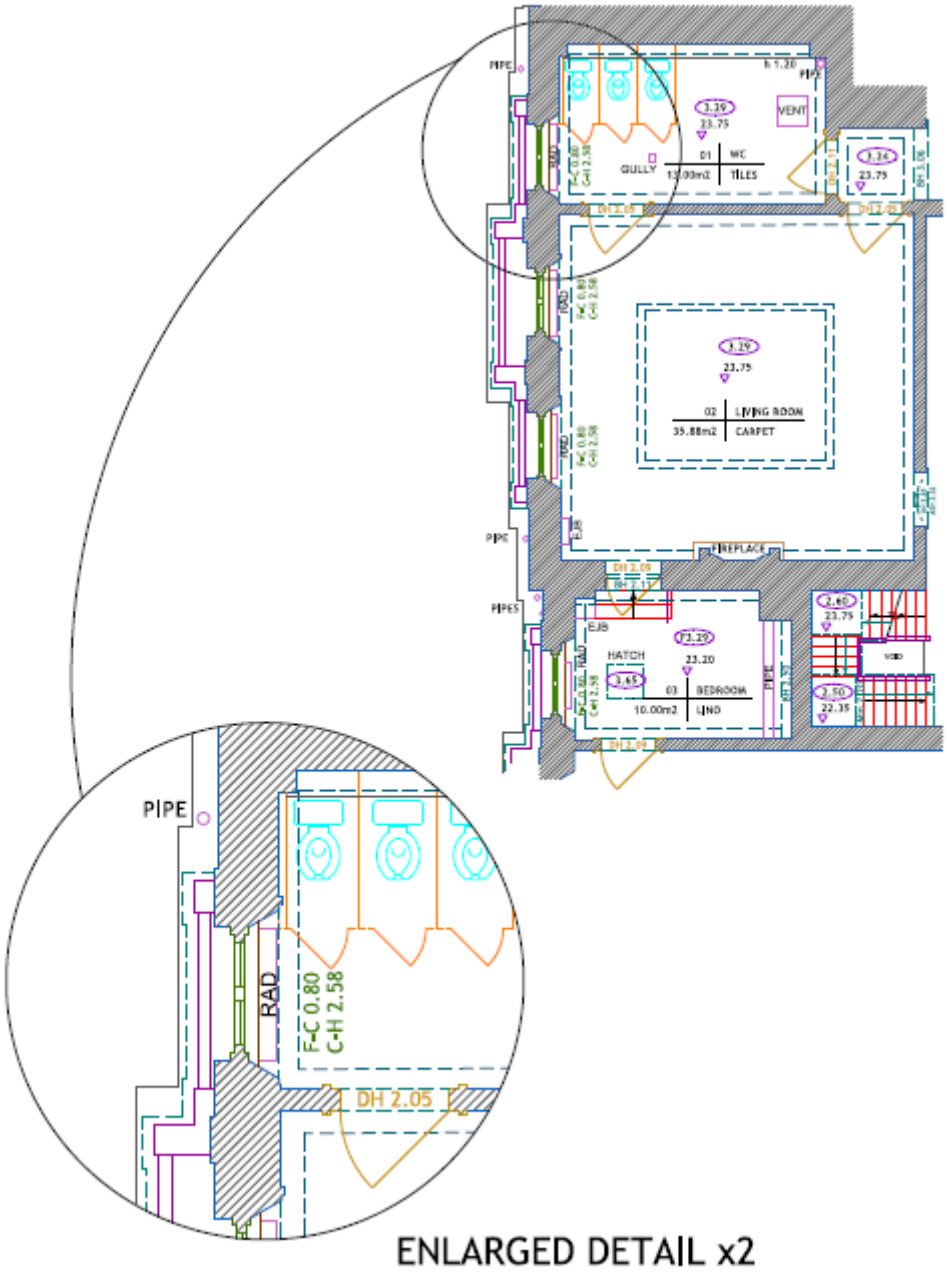
- Floor levels and ceiling heights
- Beams, arches and hatches
- Doors
- Windows (floor-to-sill and sill-to-head heights)
- Parapets

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Level 3 – High Detail



Included information:

Plan details:

- Building structure in cutline (about 1.30 m above floor level)
- Structural elements below and above the cutline
- Simplified window frames
- Simplified door frames with swings
- Balconies and sills
- Staircases and ramps with direction arrow
- Simplified shapes of partitions and fireplaces
- Simplified railings/barriers
- Main services (also overhead)
- Inspection covers/gullies
- Ceiling details in outline
- Sanitary fittings as symbols

Levels and Heights:

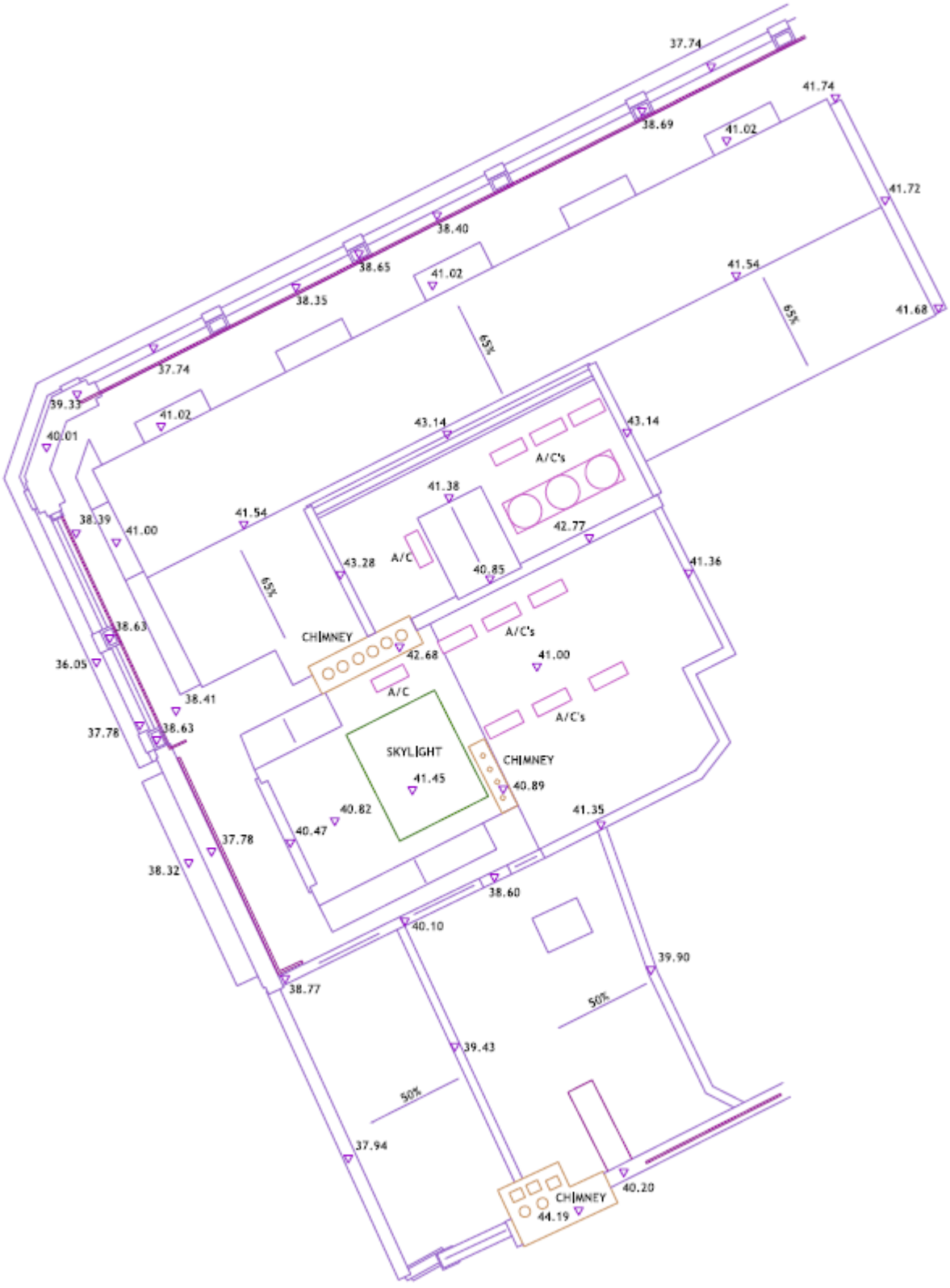
- Floor levels and ceiling heights
- Beams, arches and hatches
- Doors
- Windows (floor-to-sill and sill-to-head heights)
- Parapets

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ROOF PLAN SPECIFICATION



Included information:

Plan details:

- Roof ridges and eaves
- Dormers
- Chimneys
- Skylights
- Main services (vents, A/C units, downpipes)
- Drainage equipment (drainage channels, gullies and gutters)
- Hatches
- Platforms
- Ramps
- Slope symbols

Levels:

- Ridges and eaves
- Chimneys
- Dormers
- Flat roof
- Steps
- Hatches
- Skylights
- Copings

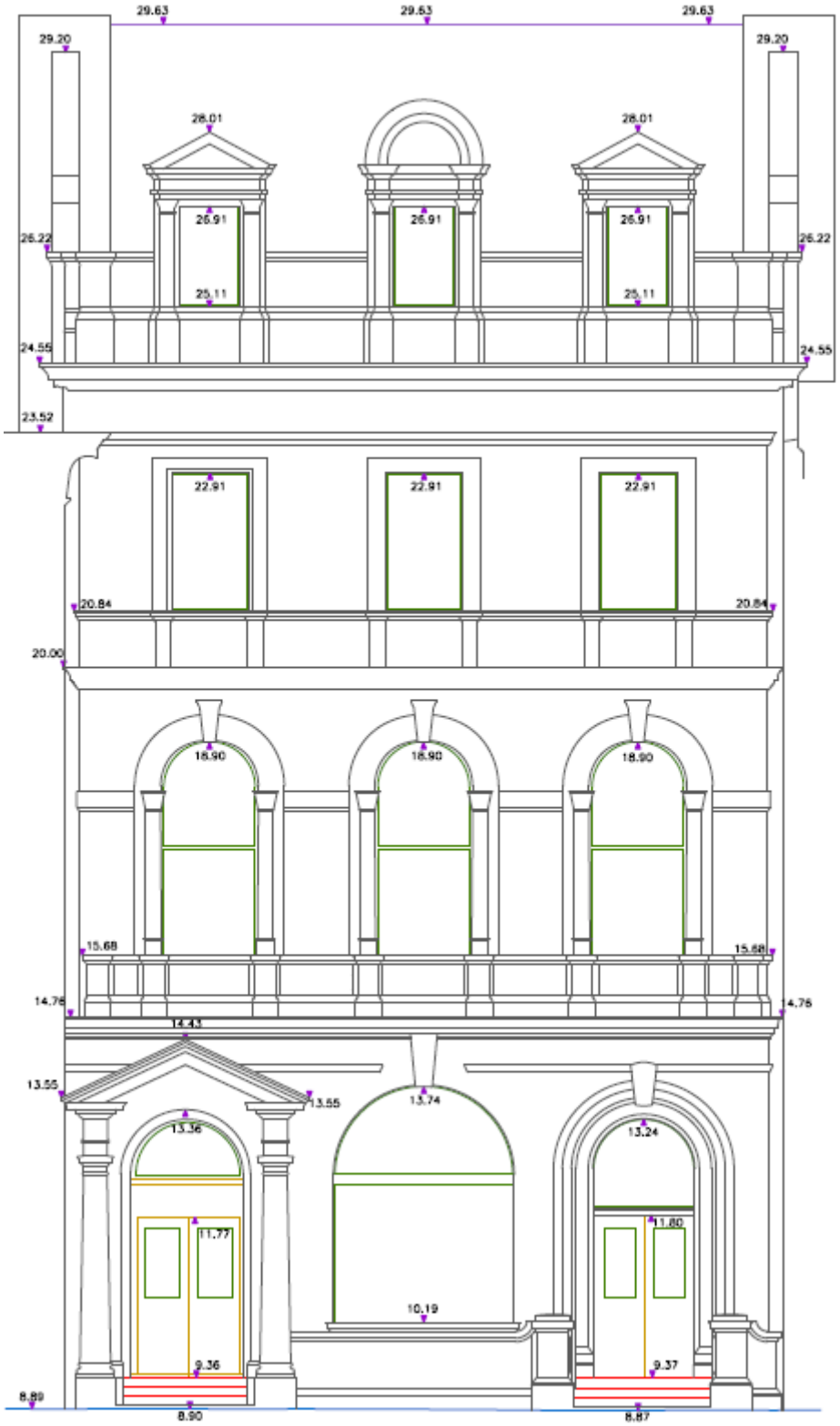
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EXTERNAL ELEVATIONS SPECIFICATION

Level 1 – Basic Detail



Included information:

Elevation details:

- Building structure in outline
- Simplified parapet and wall details
- Simplified window and door frames
- Stairs and steps in outline
- Ground line

Levels:

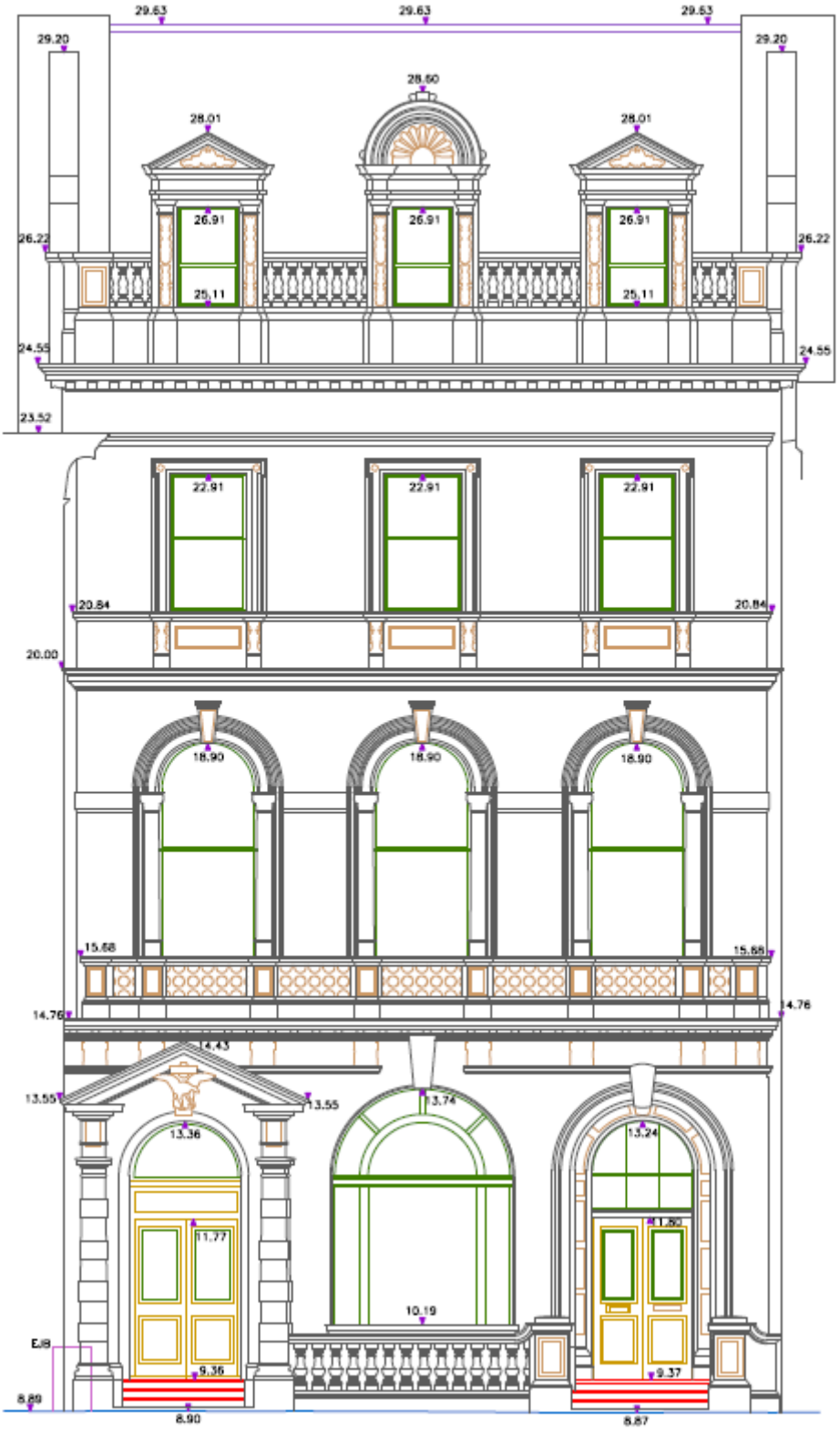
- Roof
- Openings
- Main parapets
- Sills
- Ground

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Level 2 – Standard Detail



Included information:

Elevation details:

- Building structure in outline
- Parapets and wall details
- Window and door frames with major muntins
- Stairs and steps
- Ground line
- Decorative elements in outline

Levels:

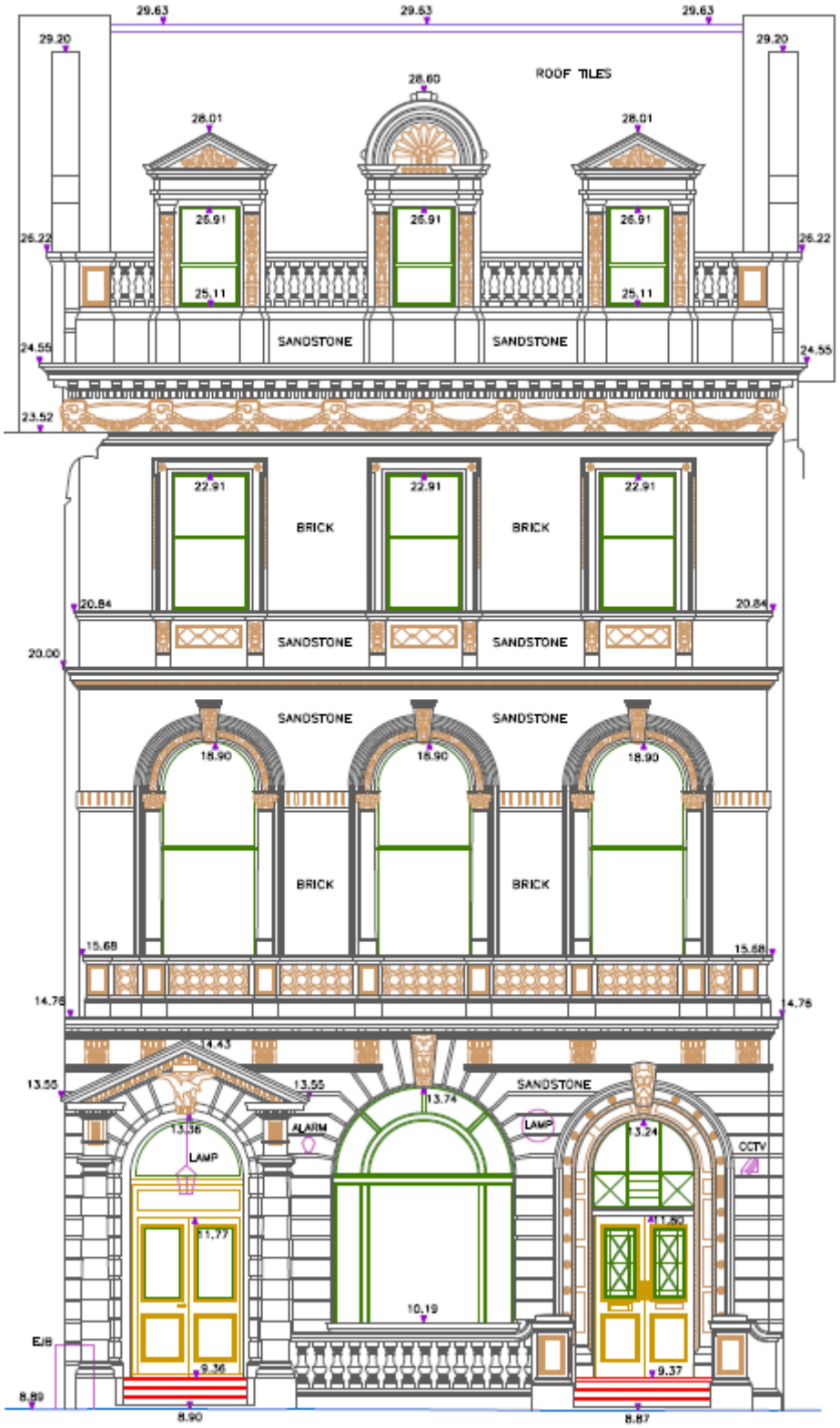
- Roof
- Openings
- Main parapets
- Sills
- Ground

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Level 3 – High Detail



Included information:

Elevation details:

- Detailed building structure
- Parapets and wall details
- Window and door frames with all muntins and handles
- Stairs and steps
- Ground line
- Detailed decorative elements
- Services

Levels:

- Roof
- Openings
- Main parapets
- Sills
- Ground

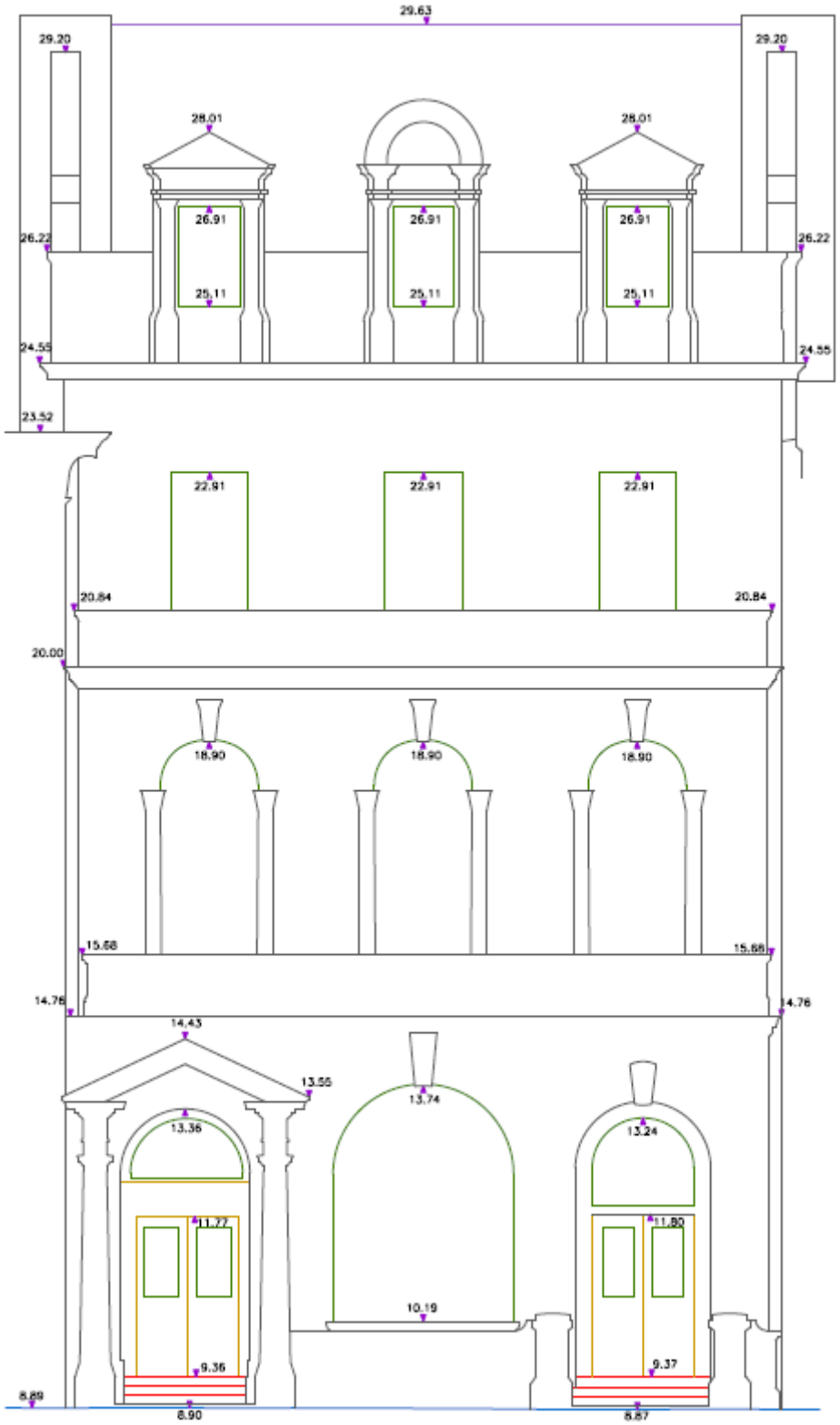
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RoL ELEVATIONS SPECIFICATION

Level 1 – Basic Detail



Included information:

Elevation details:

- Main building structure in outline
- Parapets and walls in outline
- Openings
- Stairs and steps in outline
- Ground line

Levels:

- Roof
- Openings
- Main parapets
- Ground

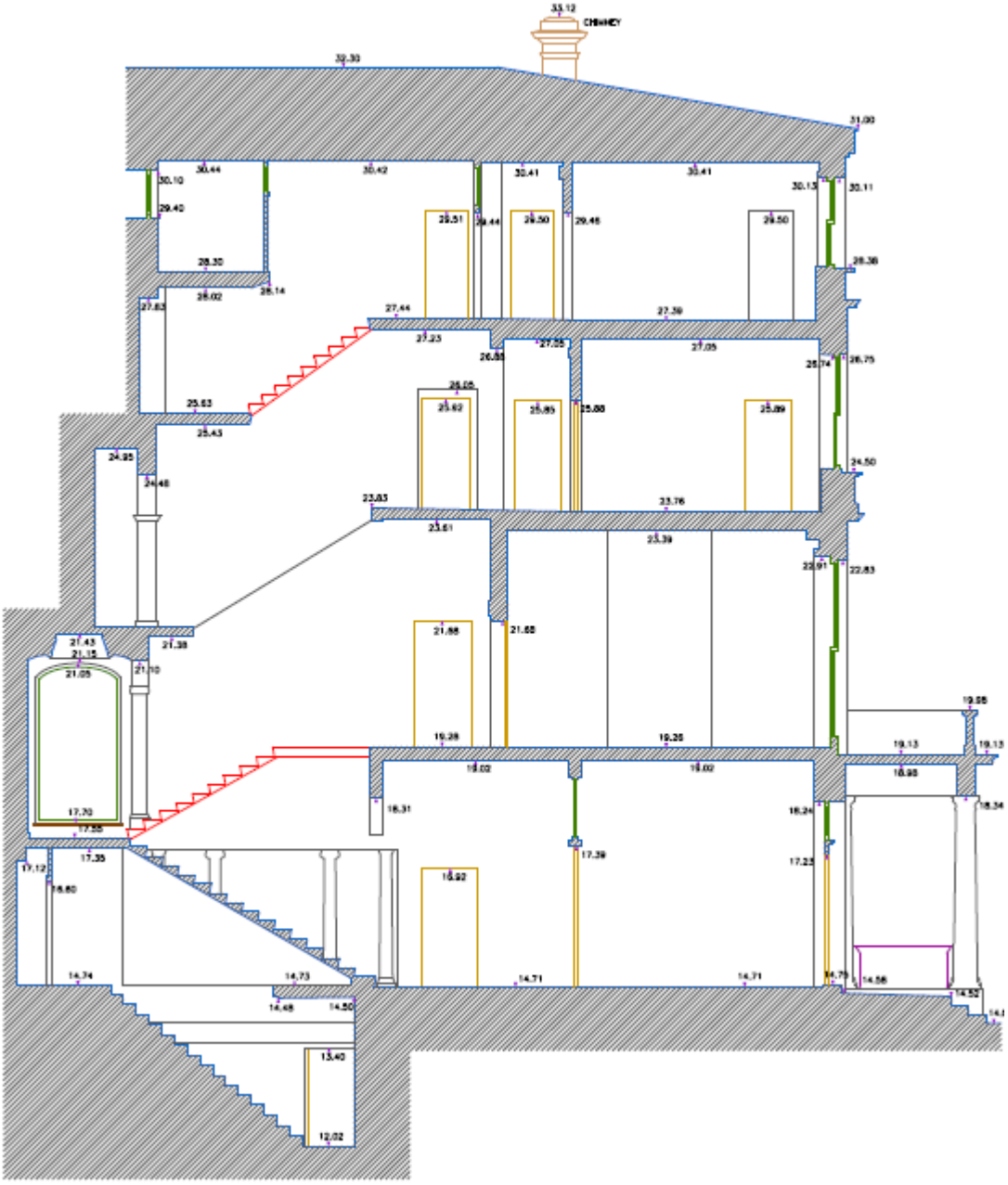
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SECTIONAL ELEVATION SPECIFICATION

Level 1 – Basic Detail



Included information:

Section/Elevation details:

- Simplified building structure
- Simplified window frames
- Door openings
- Door wings symbol in cutline

Levels:

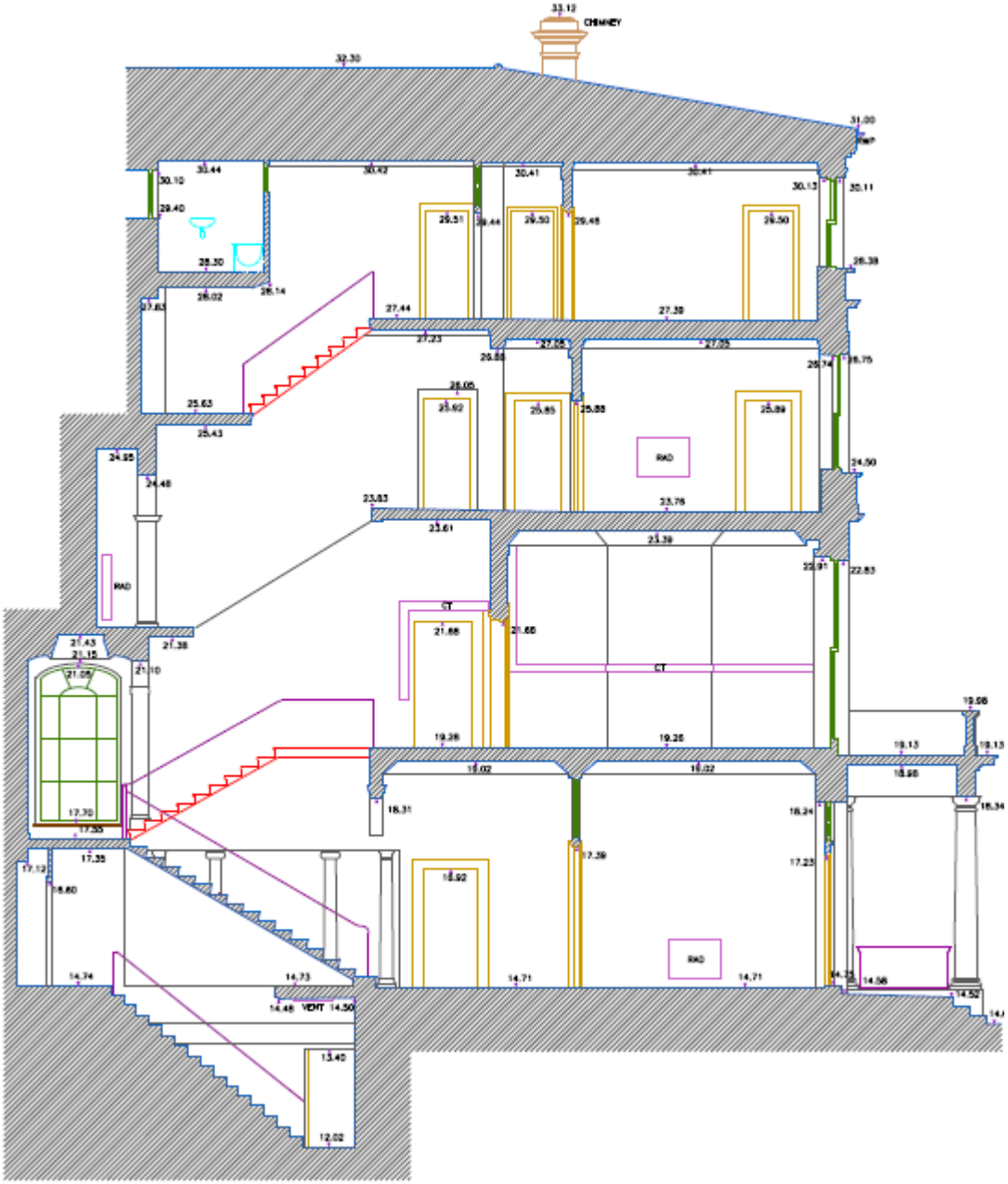
- Floor and ceiling
- Openings
- Parapets
- Ground

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Level 2 – Standard Detail



Included information:

Section/Elevation details:

- Building structure
- Simplified window and door frames
- Door wings symbol in cutline
- Main services
- Sanitary fittings
- Wall details in outline

Levels:

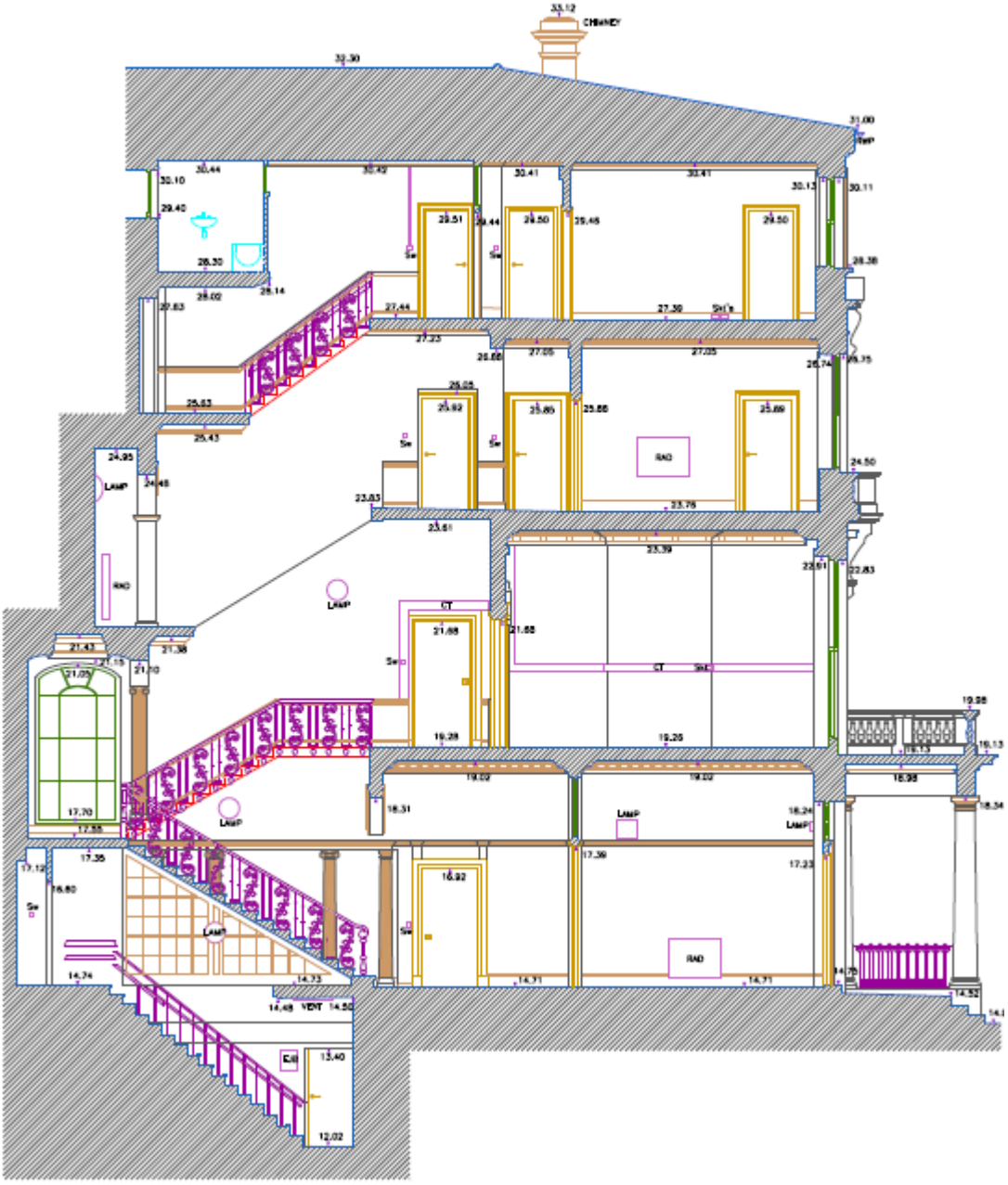
- Floor and ceiling
- Openings
- Parapets
- Ground

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Level 3 – High Detail



Included information:

Section/Elevation details:

- Detailed building structure
- Detailed window frames with muntins
- Detailed door frames
- Door handles in elevation
- Door wings symbol in cutline
- All services
- Sanitary fittings
- Wall decorative elements
- Railings and barriers

Levels:

- Floor and ceiling
- Openings
- Parapets
- Ground

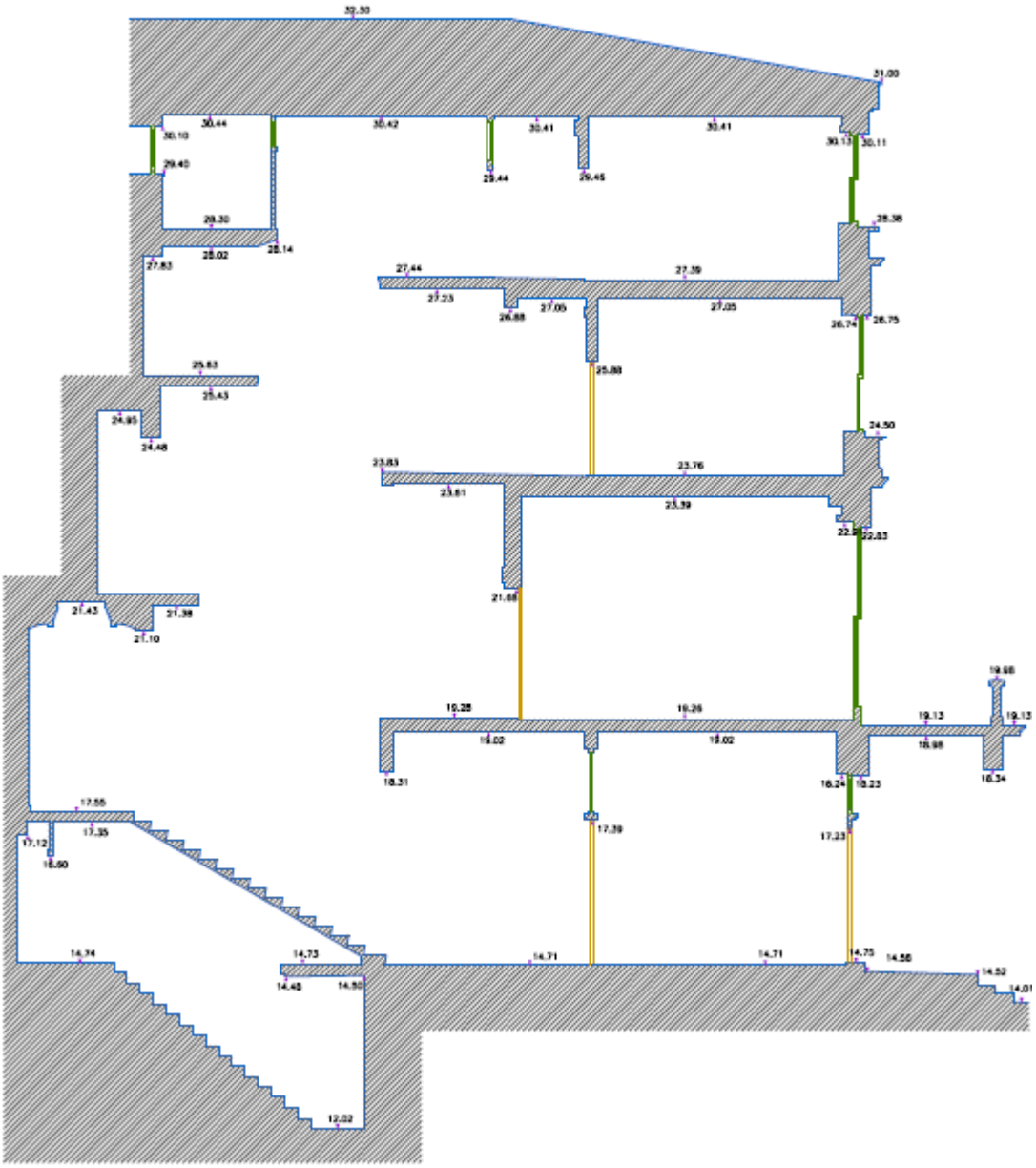
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CROSS SECTIONS SPECIFICATION

Level 1 – Basic Detail



Included information:

Section details:

- Simplified building structure
- Simplified windows
- Door wings symbol

Levels:

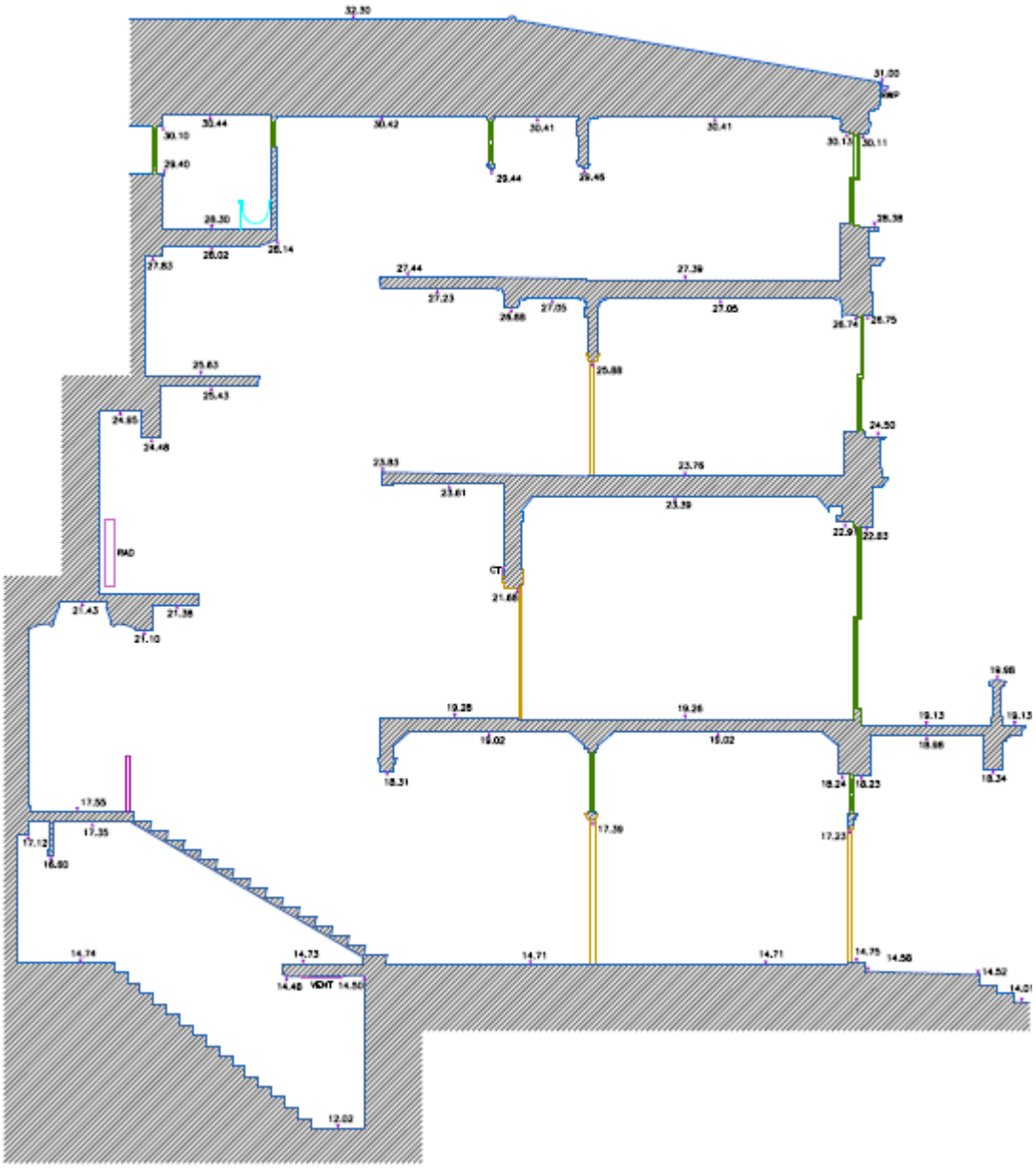
- Floor and ceiling
- Openings
- Parapets
- Ground

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Level 2 – Standard Detail



Included information:

Section details:

- Building structure
- Simplified window and door frames
- Door wings symbol
- Main services
- Sanitary fittings
- Simplified wall details

Levels:

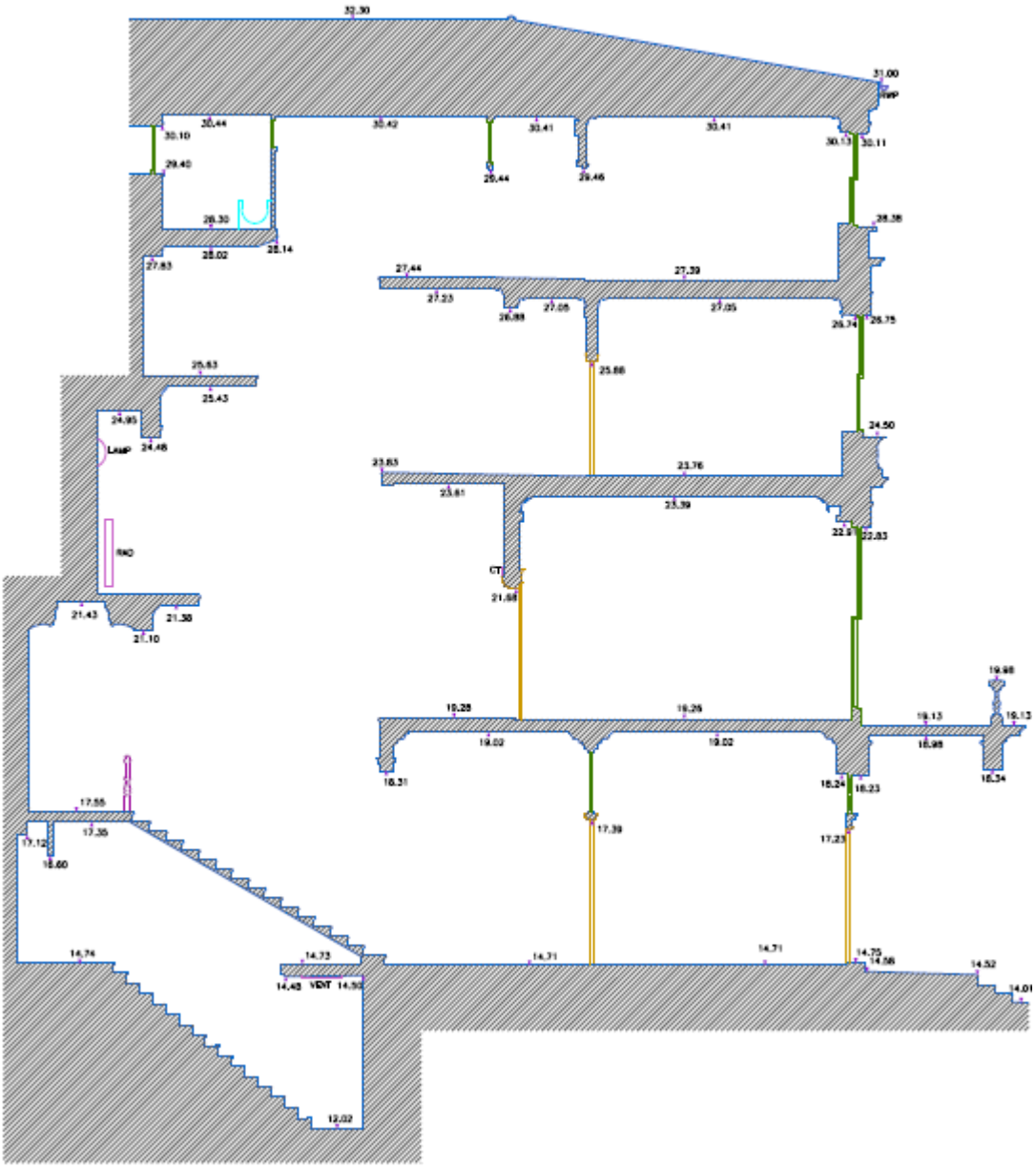
- Floor and ceiling
- Openings
- Parapets
- Ground

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Level 3 – High Detail



Included information:

Section details:

- Detailed building structure
- Detailed window frames with muntins
- Detailed door frames
- Door wings symbol
- Services
- Sanitary fittings
- Wall details
- Railings and barriers

Levels:

- Floor and ceiling
- Openings
- Parapets
- Ground

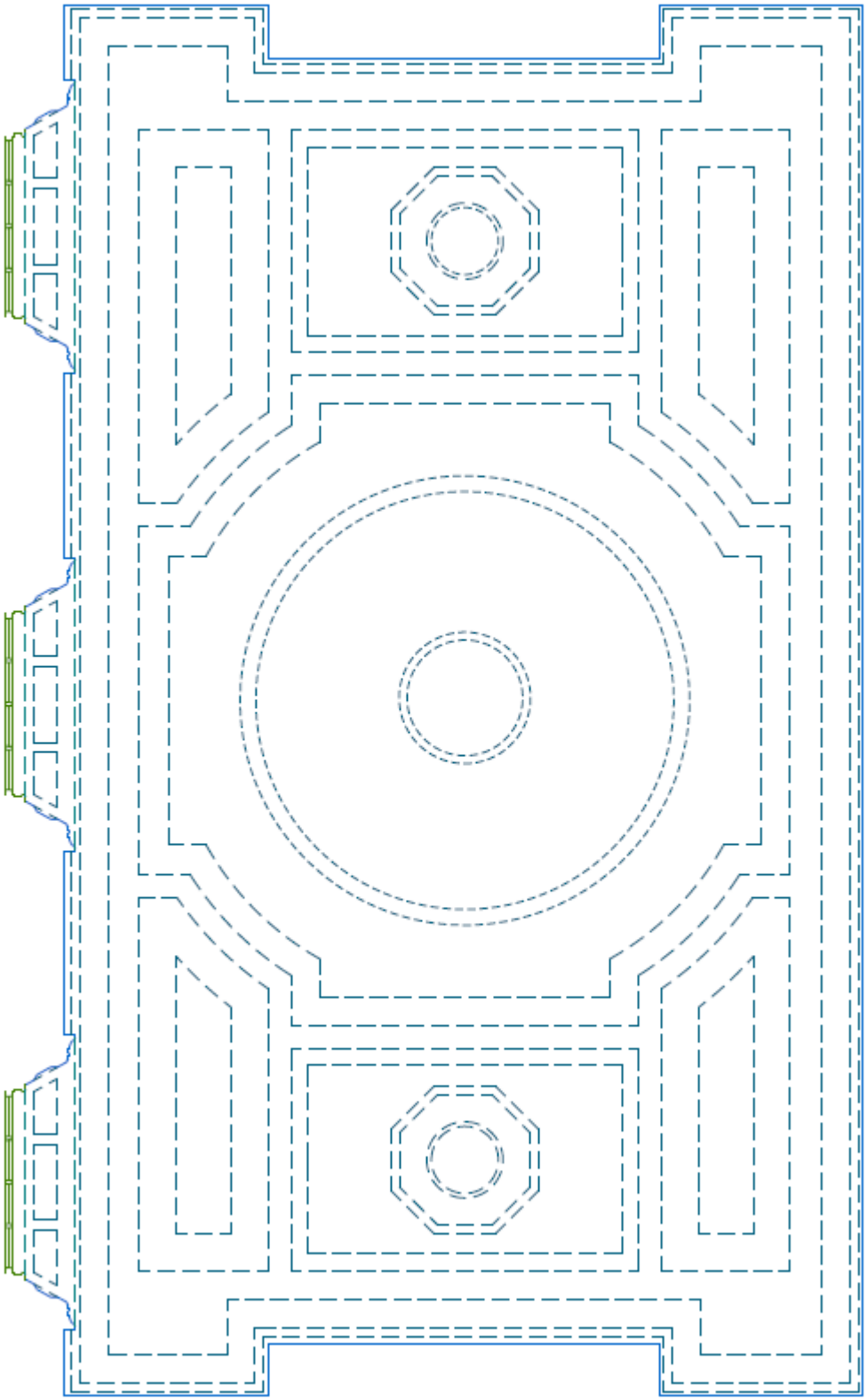
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REFLECTED CEILING PLAN SPECIFICATION

Level 1 – Basic Detail



Included information:

Plan details:

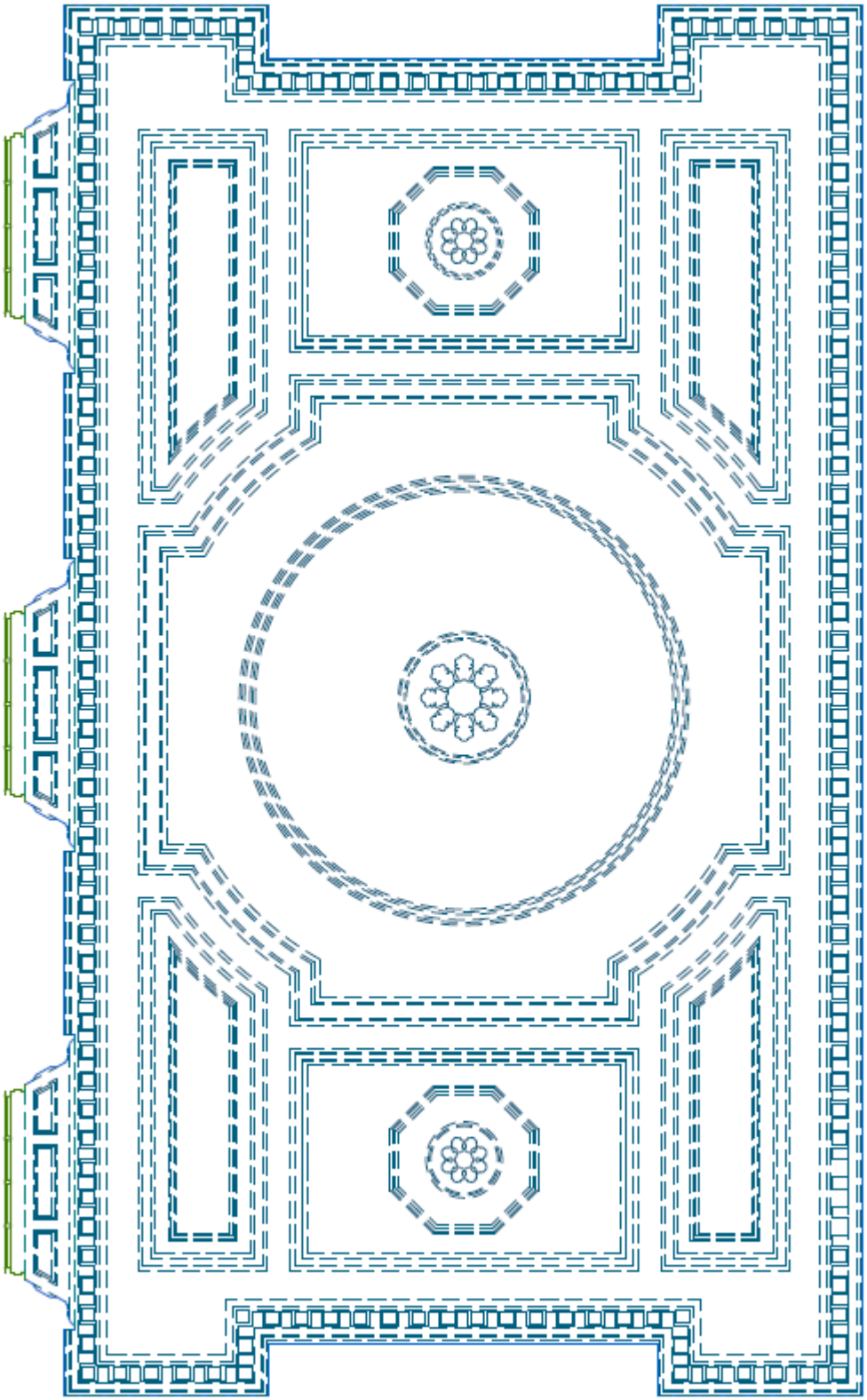
- Building cutline under the ceiling
- Simplified decorative ceiling elements in outline

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Level 2 – Standard Detail



Included information:

Plan details:

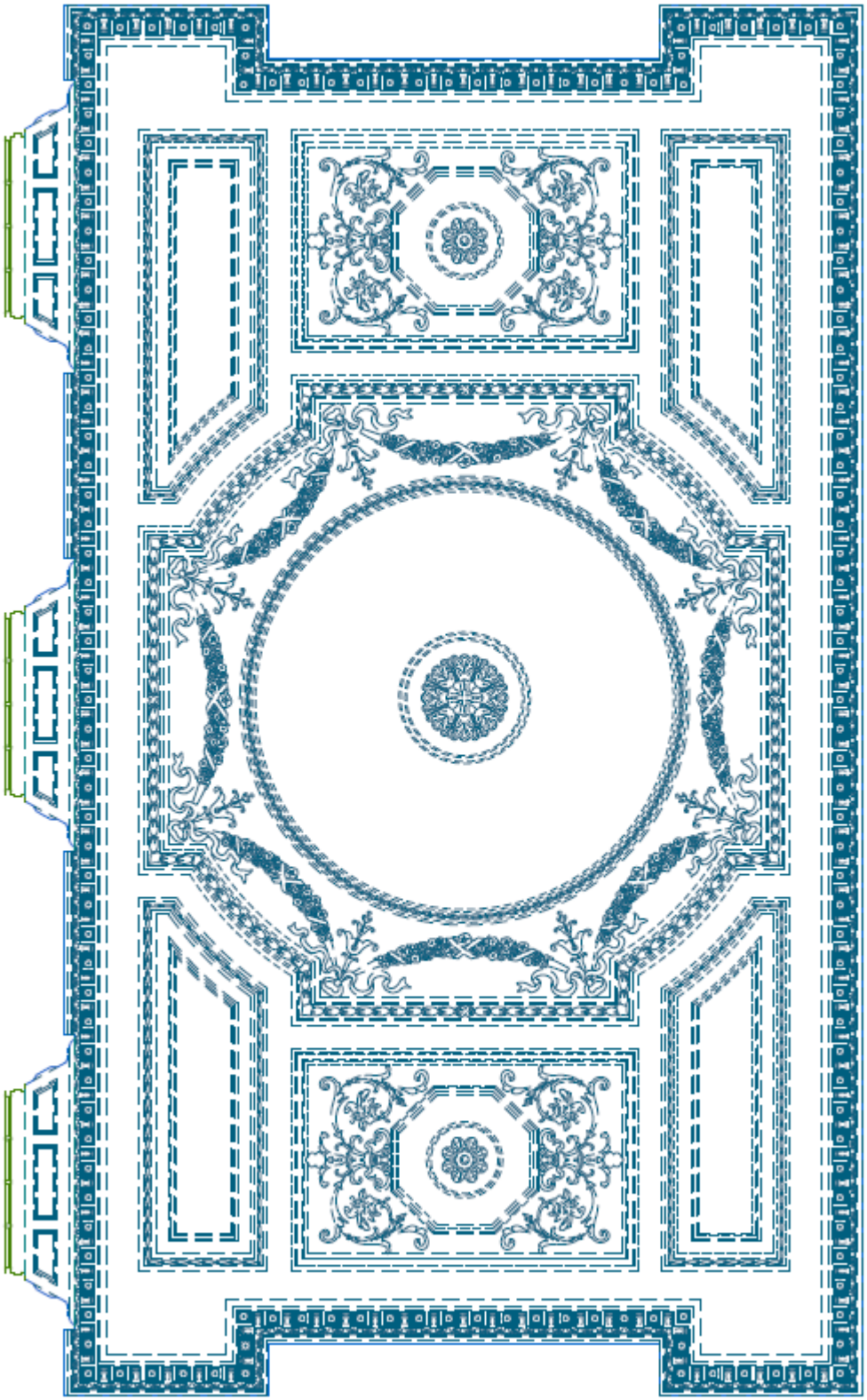
- Building cutline under the ceiling
- Simplified decorative ceiling elements

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Level 3 – High Detail



Included information:

Plan details:

- Building cutline under the ceiling
- Detailed decorative ceiling elements

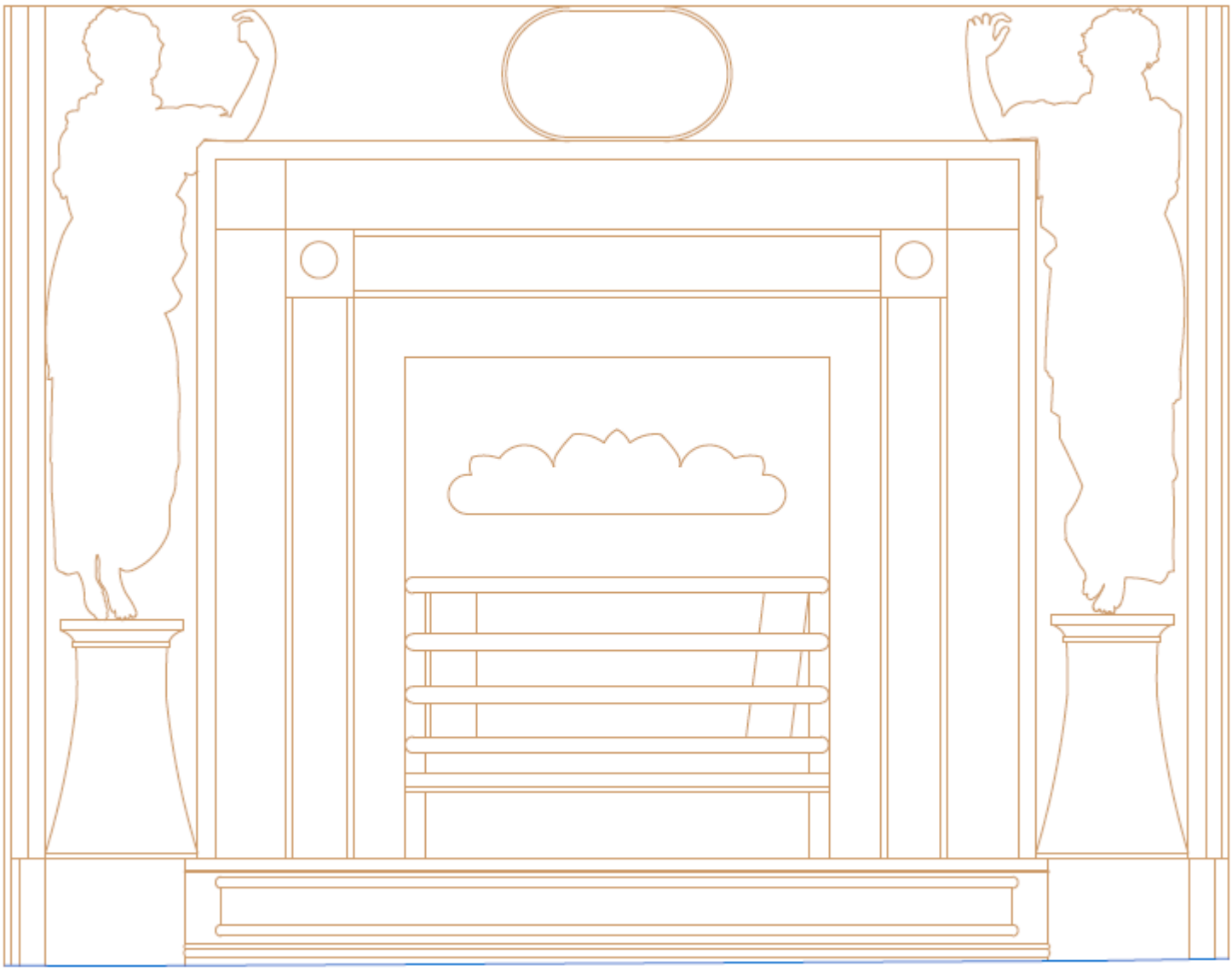
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DECORATIVE ELEMENTS

Level 1 – Basic Detail



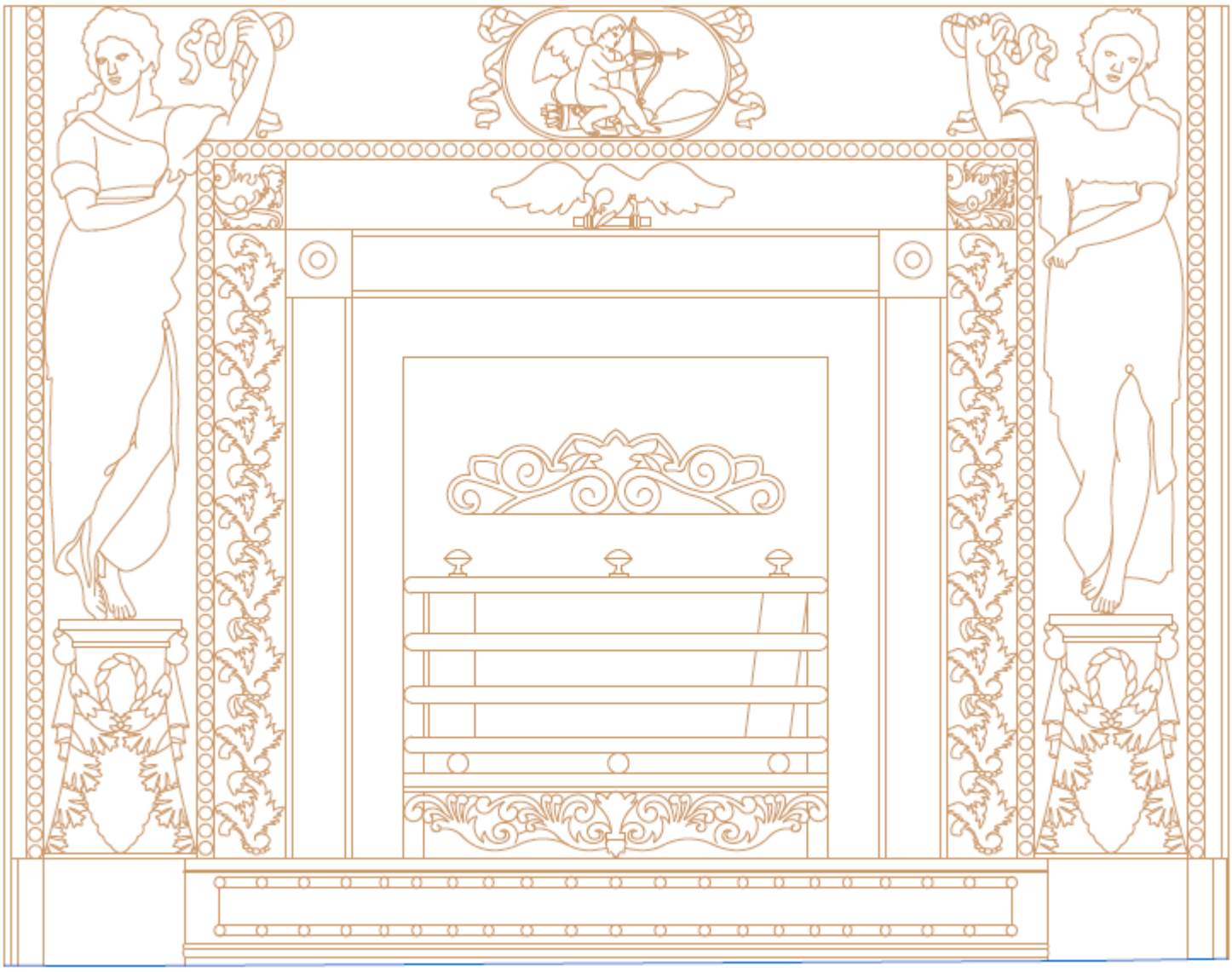
All decorative elements drawn as outlines to show the main shape of elements.

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Level 2 – Standard Detail



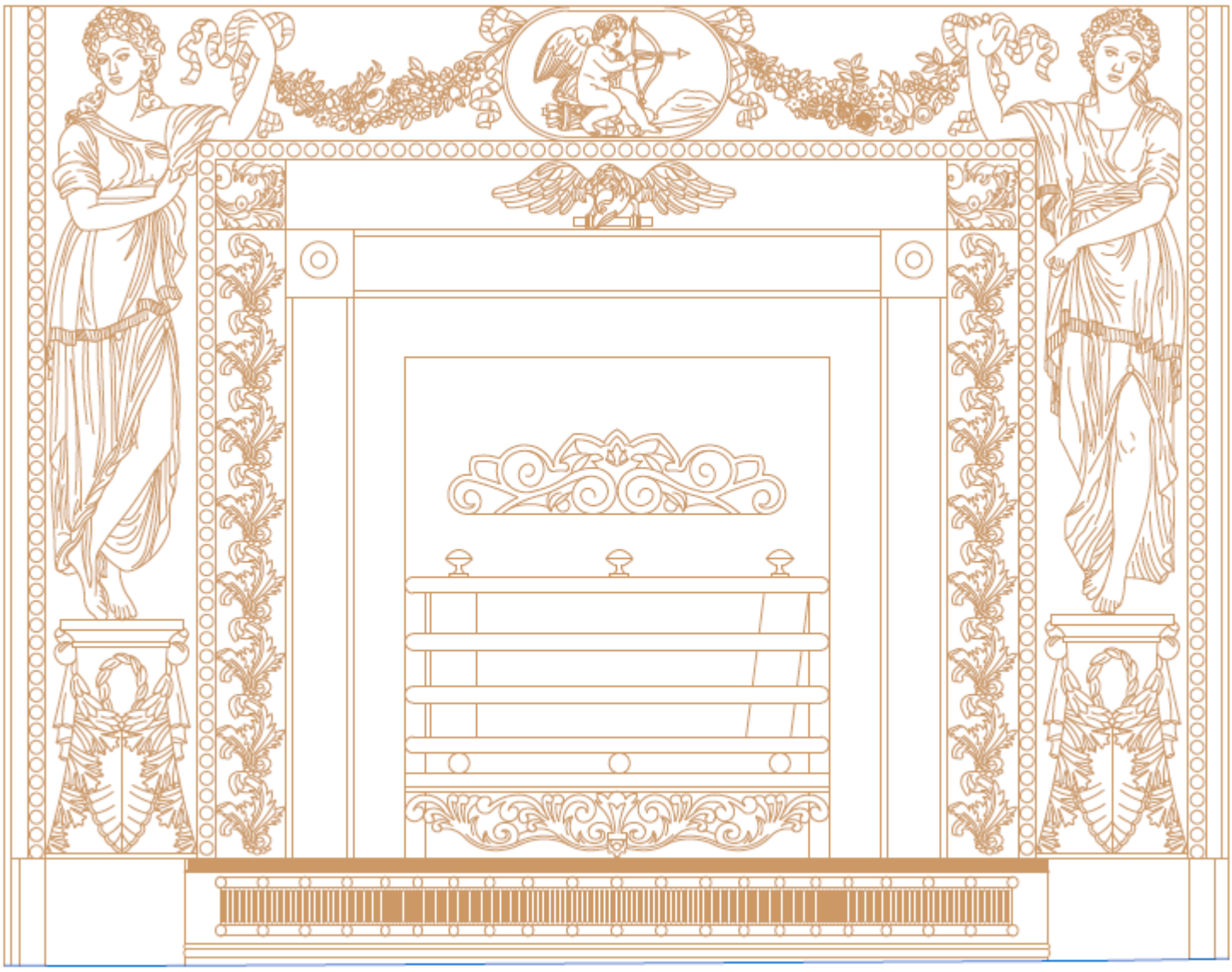
Decorative elements drawn as outlines and simplified elements inside.

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Level 3 – High Detail



Decorative elements drawn in as much detail as the data allows.

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Project name:

2D CAD Requirements Checklist

FLOOR PLANS

Not Required ☐

Level of Detail	**L1** ☐	**L2** ☐	**L3** ☐
Scale		**1:100** ☐	**1:50** ☐

Additional elements:	**Required**
• Sanitary fittings	☐
• Fixed furniture	☐
• MEP elements	☐
• Ceiling services (lamps, smoke detectors, etc.)	☐
• Small electrical equipment shown as symbols (sockets, switches, etc.)	☐
• Decorative elements (cornices, dado rails, skirtings)	☐
• Loose furniture	☐
• Room areas	☐
• Floor materials	☐
• Room types	☐
• Room numbers	☐
• Stair annotations (number of steps × avg. height / avg. depth)	☐
• Door widths	☐
• Window widths	☐
• Dimensions	☐
• Other (please describe below)	☐

Other requirements:

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ROOF PLANS

Not Required ☐

Scale **1:100** ☐ **1:50** ☐

Additional elements:	**Required**
• Railings and barriers	☐
• Electrical equipment (lamps, CCTV cameras, antennas)	☐
• Roof materials	☐
• Roof slope value [%]	☐
• Dimensions	☐
• Other (please describe below)	☐

Other requirements:

ELEVATIONS

Not Required ☐

Level of Detail **RoL** ☐ **L1** ☐ **L2** ☐ **L3** ☐

Scale **1:200** ☐ **1:100** ☐ **1:50** ☐

Additional elements:	**Required**
• Electrical equipment (lamps, CCTV cameras, antennas)	☐
• Drainage/ventilation equipment (RWPs, gutters, pipes, vents, A/C units)	☐
• Stonework	☐
• Brickwork	☐
• Wall materials	☐
• Other (please describe below)	☐

Other requirements:

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CROSS SECTIONS

Not Required ☐

SECTIONAL ELEVATIONS

Not Required ☐

Level of Detail	**L1** ☐	**L2** ☐	**L3** ☐
Scale		**1:100** ☐	**1:50** ☐

Additional elements: **Required**

- Electrical equipment (lamps, CCTV cameras, antennas) ☐
- Drainage/ventilation equipment (RWPs, gutters, pipes, vents, A/C units) ☐
- Small electrical equipment (sockets, switches, etc.) ☐
- Stonework ☐
- Brickwork ☐
- Wall materials ☐
- Other (please describe below) ☐

Other requirements:

REFLECTED CEILING PLANS

Not Required ☐

Level of Detail	**L1** ☐	**L2** ☐	**L3** ☐
Scale		**1:100** ☐	**1:50** ☐

Additional elements: **Required**

- Ceiling services (lamps, smoke detectors, etc.) ☐
- Floor levels ☐
- Room heights ☐
- Other (please describe below) ☐

Other requirements:

INTERNAL ELEVATIONS

Not Required ☐

Level of Detail	**L1**	☐	**L2**	☐	**L3**	☐
Scale	**1:100**	☐	**1:50**	☐	**1:20**	☐

Additional elements: **Required**

- Electrical equipment (lamps, CCTV cameras, cable trays) ☐
- Small electrical equipment (sockets, switches, etc.) ☐
- Stonework ☐
- Brickwork ☐
- Wall materials ☐
- Other (please describe below) ☐

Other requirements:

TOPOGRAPHICAL SURVEY

Not Required ☐

Type	**2D**	☐	**3D**	☐		
Scale	**1:200**	☐	**1:100**	☐		

Additional elements: **Required**

- Road markings ☐
- Cross grid every 10 m (please describe below if other interval needed) ☐
- Other (please describe below) ☐

Other requirements:

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ANNEX 1

3Deling AutoCAD Layers Specification for Measured Surveys

LAYER NAME	COLOR	LINE STYLE	ELEMENTS INCLUDED
BALUSTRADE	214	CONTINUOUS	Balustrade, handrail, barrier
BUILDING	251	CONTINUOUS	Structural walls, on floor plans – under the cutline
CHIMNEY	33	CONTINUOUS	Chimney
CUTLINE	152	CONTINUOUS	Structural walls in cutline
DETAILS	33	CONTINUOUS	Non-structural elements – cladding, decorative elements, etc.
DETAILS OH	146	DASHED	Overhead details, cornices
DOOR	40	CONTINUOUS	Door frames in cutline and door swing symbol
DOOR HEIGHT	40	CONTINUOUS	Door height and width (optional)
FENCE	214	CONTINUOUS	Fence, iron railings on Topo
GRID	251	CONTINUOUS	Cross grid
HATCH	251	CONTINUOUS	Filling between structural cut lines
HEIGHT	202	CONTINUOUS	Room height
INSPECTION COVERS	24	CONTINUOUS	Inspection cover outline
KERB	9	CONTINUOUS	Kerb top edges
LEVELS	202	CONTINUOUS	Floor and ceiling levels, levels on sections and elevations
LEVELS OH	92	CONTINUOUS	Overhead levels on Topo
OVERHEAD	136	DASHED	Structural elements above the cutline (floor plan)
PARTITION	30	CONTINUOUS	Non-structural/temporary walls
RAINWATER	173	CONTINUOUS	Gutters, gullies and drainage channels
ROAD	23	CONTINUOUS	Edges of the road
ROAD MARKINGS	0	CONTINUOUS	Road markings (colour adjusted to existing)
ROOF	193	CONTINUOUS	Roof outline
SANITARY	4	CONTINUOUS	Sanitary ware
SERVICES	213	CONTINUOUS	Services in and under the cutline
SERVICES OH	213	DASHED	Services above the cutline
SILL	36	CONTINUOUS	Sill
STAIRS	10	CONTINUOUS	Stairs, steps and ramps
STREET FURNITURE	130	CONTINUOUS	Street furniture (lamps, road signs, etc.)
STRUCTURE	11	CONTINUOUS	Steel structure
SURFACE DETAIL	67	CONTINUOUS	Changes in surface outlines
TEXT	7	CONTINUOUS	General text
VEGETATION	3	CONTINUOUS	Trees, bushes in outline
WALL	160	CONTINUOUS	External walls that are not a part of the building
WINDOW	76	CONTINUOUS	Window frames
WINDOW HEIGHT	76	CONTINUOUS	Window and sill heights, window width (optional)