

Drawing Office Practice for Interior Design (General Rules)

March 13, 2023

JAPAN SOCIETY FOR INTERIOR STUDIES

Table 0 - Cited standards

JIS	Title	Related ISO
JIS Z 8311	Technical drawings - Sizes and layout of drawing sheets	ISO 5457
JIS Z 8312	Technical drawings - General principles of presentation - Basic convention for lines	ISO 128-20
JIS Z 8313-0	Technical drawings - Lettering - Part 0 : General requirements	ISO/FDIS 3098-0
JIS Z 8313-1	Technical drawings - Lettering - Part 1 : Currently used characters	ISO 3098-1
JIS Z 8313-2	Technical drawings - Lettering - Part 2 : Greek characters	ISO 3098-2
JIS Z 8313-5	Technical drawings - Lettering - Part 5 : CAD lettering of the Latin alphabet, numerals and marks	ISO 3098-5
JIS Z 8313-10	Technical drawings-Lettering - Part 10 : Japanese characters (Kana and kanji)	not exist
JIS Z 8314	Technical drawings-Scales	ISO 5454
JIS Z 8317-1	Technical drawings-Indications of dimensions and tolerances - Part 1: General principles	ISO 129-1

Table 1 - Paper size

name	size
A1	594 × 841
A2	420 × 594
A3	297 × 420
A4	210 × 297

Table 2 - Types of lines and their uses

types of line	name by use		use
continuous line	wide line	visible outline	visible outlines of parts in view
			visible outlines of parts in cut and section
	medium line	visible outline	visible outlines of furnitures
	narrow line	ridge	ridges of furnitures
		dimension line	straight or curved line on a drawing between two features, or between a feature and an extension line, or between two extension lines indicating the dimension graphically
		extension line	line connecting figure(s) to be dimensioned and the ends of the corresponding dimension line
		leader line	line connecting information or requirements or a reference line with a feature or a dimension liene
		hatching	line indicating cut
		arrow line	arrow lines representing stairs, slopes and slope areas
diagonal line	diagonals for indication of openings, holes and recesses		
dashed line	narrow line	hidden outline	line that represents the shape of an invisible part of an object
long-dashed short-dashed line	medium line	visible outline	visible outlines of curtains, blinds, carpets, etc.
	narrow line	line of cutting plane	when drawing a cross-section, indicate the position of the cut in the corresponding figure
		centre line	line on a drawing indivating the geometrical centre of the represented feature(s)
		reference line	line that is the basis for position determination
	line indicating the opening direction of the door	indicate the opening direction of the door for refernce	
long-dashed double-dotted line	narrow line	fictitious outline	shows the shape before processing and the position of moving parts
line with zigzags	narrow line	line of limit of partial or interrupted view and section	limits of partial or interrupted views, cuts and sections

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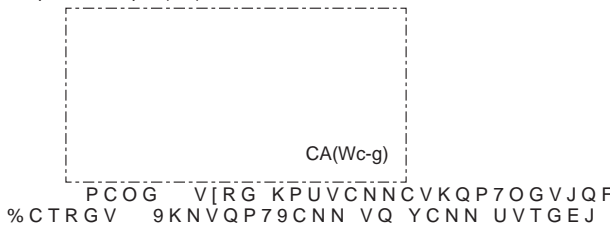
1. Carpet

Attached Table 1-1 Carpets

name		abbreviation
Carpets in General		CA
types of carpet	Wilton Carpets	Wc
	Tufted Carpets	Tc
	Needle punched Carpets	Nc
Installation methods	Wall-to-Wall	Stretch-in technique -g
		Glue down technique - a
	Loose-lay	none

Carpet s, the abbreviation is CA, its area should be indicated by narrow long-dashed short-dashed lines (or drawing), and their types and installation methods shall be appended by the character symbols. When indicating the material of the carpet, its general name should be added.

Applied example of a carpet (CA)



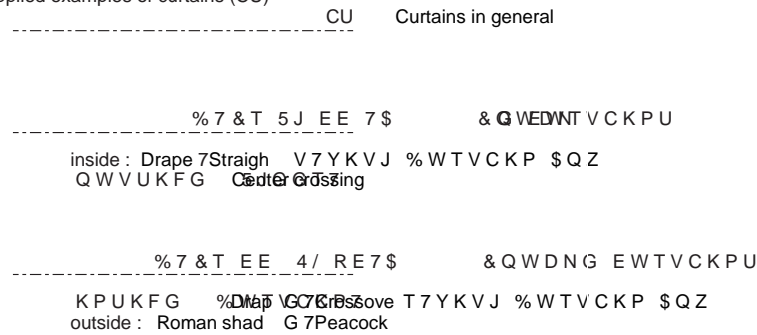
2. Window T reatment

Attached Table 1-2 Window treatments

name		character symbols	
Horizontal opened /closed	Curtains in general		CU
	types of carpet	Drape	Dr
		Sheer	Sh
	Installation methods	Straight	none
		Center crossing	cc
		Crossover	cr
		High gather	hg
		Scalloped	sk
		Separated	sp
	Vertical blind	VB	
Panel screen	PS		
Vertical opened /closed	Roman shade		RM
	Installation methods	Plain	pl
		Sharp	sh
		Balloon	bl
		Austrian	as
		Mousse, Tiny shade	ms
		Peacock	pc
	Prairie	pr	
	Roll screen	RS	
	Pleated screen	PL	
Venetian blind	VN		
Fixed	cafe curtain	Cf	

Window treatments should be indicated by long-dashed short-dashed lines (or narrow continuous wavy lines), and their types should be indicated by character symbols. For curtains and roman shades, their installation methods (styles) should be appended by character symbols.

Applied examples of curtains (CU)



3. Paint

Attached Table 1-3 Paintings

name	character symbols	JIS
Ready mixed paints (Synthetic resin type)	SOP	JIS K 5516
Phthalic resin enamel	FE	JIS K 5572
Vinyl chloride resin enamel	VE	JIS K 5582
Clear lacquer	LC	JIS K 5531
Lacquer enamel	LE	JIS K 5531
Synthetic resin emulsion paint	EP	JIS K 5663
Glossy synthetic resin emulsion paint	EP-G	JIS K 5660
Multicolor paint	EP-M	JIS K 5667
Oil stain	OS	
wood protective paint	WP	
Urethane resin varnish coating	UC	
Urethane resin enamel	UE	

*JIS K 5516; 5572; 5582; 5531; 5663; 5660 are all classified as ICS 83.140.99; 87.040; 91.180.

*JIS K 5567 is classified as ICS 87.040; 91.180.

Coating should be indicated by abbreviations using character symbols, and their color should be indicated by symbols in the Munsell color system or color charts, etc.

*QOG #RRNKPEG

Attached Table 1-4 Home appliance

name		character symbols
Air conditioner in general		RC or AC
Installation methods	Indoor unit Floor type	-F
	Indoor unit Wall-mounted type	-W
	Indoor unit Ceiling mounted type	-C
	Outdoor unit Ground mounting	-OF
Television		TV
Speaker		SP
Desktop PC		PC
Freezer-refrigerator		RF
Microwave		MO
Gas ovens		GP
Dish washer (-dryer)		DWD
IH cooking heater		IH
Electric washing machine		CW
Electric washer-dryer		CWD

[Attached Table 2 Graphical Symbols]

1. Hot/cold water supply facilities

Attached Table 2-1 Hot/cold water supply facilities

name	Character Symbols	Drawing Symbols
Water meter	WM	
Gas meter	GMET	
Water tap		
Hot water mixing faucet		
Electric water heater	EWH	
Gas water heater	GWH	

2. Electrical facilities

Attached Table 2-2 Electrical facilities (JIS C 0303)

name	Character Symbols	Drawing Symbols
Integral watt-hour meter	Wh	
Distribution board		
Switch		
Outlet (wall-mounted)		
Telephone Outlet		
Chime		
TV	TV	
Exhaust fan		
Air conditioner	RC or AC	

3. Lighting and wiring facilities

Attached Table 2-3 Lighting and wiring facilities (JIS C 0303)

name	Character Symbols	Drawing Symbols	
General lighting			
Ceiling-mounted light (down light)	DL		
Ceiling lights (ceiling lights)	CL		
Ceiling pendant lights	PL		
Chandeliers	CH		
Wall mounted lights (bracket lights)	BL		
Stands	Table stand	TS	
	Floor stand	FS	
Hook and loop ceiling			

Drawing Office Practice for Interior Design (General rules) - Commentary -

Foreword

Technical drawing standard for architecture and building in Japan was established after “Technical drawing (JIS Z 8302 1952)” and following “Technical drawing general code of drawing practice (JIS Z 8310 1984)” and “Drawing office practice for architecture and building (General rules) (JIS A 0150 1958)” .

After 1975 housing and interior design industry was growing up very rapidly and new needs for visual drawing methods of interior space design, not only for the vacant space but also the space full of furniture, fabrics, building equipment and home electric appliance.

We tried to collect, classify, and compare local drawing methods and symbols recently invented in various local business fields. Then we proposed this Interior Design General Rules, consistent with conventional or international rules, more plausible and simpler, and more benefitable and easier to use than ever.

The commentary simply explains

1. purpose and background,
2. applied example,
3. referenced standard,
4. sample drawing.

This “Drawing office practice for interior design (General rules)” was presented to be a standard of drawing practice in housing and interior industry fields. We appreciate many practitioners and researchers. Without their invention, research and development, our proposal could not be realized.

JASIS General Drawing Rules Subcommittee 13/March/2023

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This General rules/Commentary became a standard of Japan Society for Interior Studies (JASIS) July 2014, and was made public for various housing and interior-design fields. We added necessary correction to this standard and announced it at the 28th meeting of JASIS on 23 Aug. 2016.

Summary

1. Purpose of Standard Making Purpose of the formulation of the standard

“Technical drawings – General code of drafting practices (JIS Z 8310)” is on the highest order of Japanese Industrial Standard (JIS) and provides extensive requirements of wide fields related to drawing practice, such as architecture/building, civil engineering, and mechanics.

Architecture/building drawing standard (JIS A 0150) useful for interior drawing practice is based on General code (JIS Z 8310) mentioned above, adopted ISO technical contents without change, furthermore added other necessary contents not defined in ISO.

Our Interior Drawing Standard is also based on JIS A 0150, and still more basic policy as follows.

- (1) considering usual interior drawing practice
- (2) consistent with technical drawing JIS for other fields
- (3) consistent with technical drawing ISO
- (4) considering in CAD drawing practice

Furthermore, basic articles of drawing should be referred and defined according to basic articles of Architecture/Building JIS or Civil Engineering JIS. Reference should be done not only by number or name of JIS but also by summary of contents which is important in interior drawing practice.

“1.scope of application” was defined considering usual process of interior drawing practice. Graphic drawing or computer graphics are out of application.

2. 2. Features of this Standard

Important characteristics of this standard is visual expression of presentation, which was not defined in architecture/building JIS and was developed only in private or local practice. We carefully examined uses of types and thickness of lines, symbols for interior elements, codes of specification in practice, and made new standard.

- (1) We use continuous line in plan, wide line for interior finish line to emphasize interior zone, medium line for furniture, home electric appliance, and other visible outline to show scale and position clearly, and narrow line for ridge or dimension line.
- (2) We show door open-90 degree and storage door open-30 degree.
- (3) We show carpet area with long-dashed short-dashed medium line, and installation method with character symbols.
- (4) We show window treatment (curtain, blind) with long-dashed short-dashed medium line, and type with character symbols.
- (5) We show classification of painting with JIS character symbols etc.
- (6) We show electric equipment, lighting equipment, and wiring equipment with JIS graphic symbol or character symbols, and other frequently used types of recently introduced home electric appliance with new graphic symbol or character symbol. we defined in this standard.

3. Characteristics of the Drawing Made According to This Standard

Drawing representation will be based on architectural drawing methods, but we take the special characteristics of interiors into consideration. Interior elements such as furniture, window treatments, carpets, appliances, lighting fixtures, ornamental plants, and framed pictures are usually not important in architecture, must also be represented.

It is assumed that CAD will be used in the drawing. The standard scale is 1/50, but it is assumed to have a higher expressive density than a hand-drawn drawing of the same scale. Line thicknesses are clearly used for different purposes. There shall be three types of line thicknesses: thick lines for expressing cross sections, medium lines for expressing element contours, and thin lines for expressing reference lines, dimension lines, and details. The actual line thickness setting depends on the output environment, including the output device (printer), and is difficult to specify clearly.

If the drawings are based on actual measurements of the existing building frame, the dimensions should be based on interior dimensions, and the location of openings and effective dimensions should also be noted.

In case of new construction, the base line should be used as the basis, but the internal dimensions of wall finishes should also be described. Articles described once should not be duplicated.

Furniture should be described not only by shape but also by name and dimensions. Chairs, etc., should be separated from desks to indicate that the working dimensions have been secured. Furniture(stand-alone) should be placed away and drawn apart from the wall surface to distinguish it from the furniture that is built in.

4. History of R&D

Since the Showa Era, there had been requests from various fields of practice and education for the establishment of Drawing standard for interior design. The Japan Society of Interior Designers, Kanto Branch started a research study in 1998, and based on past studies, scrutinized the current status and demands for expression methods in the interior design industry and interior design education. After the establishment of the CAD Subcommittee, we studied drawing methods that conform to JIS and ISO standards. As a result, the “ Drawing office practice for interior design (General rule) 1st draft” was created. Based on this draft, questionnaires and hearings were conducted, and the next draft was compiled after further study.

Commentary

1. Scope

This drawing standard should be applied to all stages from proposal/planning to production/construction of interior spaces and components. However, interior drawing for presentation may not always be based on this standard, because various expression methods, such as color tables, material sample attachment, coloring, or CAD/ CG are adopted.

2. Normative references

In addition to normative references described in this drawing standard, refer to standards related to technical terms (Terms relating to technical drawing JIS Z 8114, Glossary of terms used in CAD JIS B 3401) and standards related to painting symbols (Ready mixed paints (Synthetic resin type) JIS K 5516) etc., as necessary.

3. Drawing sheets

The type of drawings used for interior drawing is based on terms of architecture in JIS Z 8114. However, these terms are sometimes not clear for beginners, and difficult expression methods peculiar to interior need kind explanation as follows.

(1) Floor plan

The floor plan is a horizontal cross-sectional plan depicting the space at a height of about 1m above the floor. It is common to express not only the building frame, openings, finishing material, and equipment, but also interior elements such as furniture, fabrics, home appliances, and other living utensils. Further, spatial display is assumed to be based on internal dimensions and element display is assumed to be based on external dimensions.

(2) Interior elevation

The Interior elevation is a drawing of the front view as seen from a position about 1m away from the front wall. The left and right ends depict the wall and adjacent openings as cross sections. This drawing is the second most important drawing next to the floor plan for interior planning, and it should include interior elements, skirting boards/rims, interior finishing materials, dimensions, room names, etc.

(3) Ceiling plan

The ceiling plan is a mirrored drawing of figures at a height of approximately 0.5 m below the ceiling. It shows the ceiling and small walls as well as openings above and surrounding the specified inner height. This drawing must also show ceiling finishes, curtain boxes, lighting fixtures, and so on.

4. Scales

Although the 1/30 scale has long been used in the interior and architecture fields due to the tradition of the Shakkan method, it is not adopted here because, due to the spread of CAD,

- (1) even drafted at a scale of 1/50, it is possible to express a scale of 1/30 with sufficient resolution,
- (2) the magnification required for printing can be specified,
- and (3) it is not an international standard such as ISO.

5. Lines

There are three-line thicknesses: thick lines, medium lines, and thin lines (thickness ratios: 4:2:1); we have not adopted standard extra-thick lines or medium-thick lines for JIS architecture. The extra-thick line is considered to be too thick and thick lines are desirable for frequently used outline lines. When the above ratio is adopted, the line thicknesses can appear unnatural after printing due to the performance of the CAD drawing printer, so it is not always necessary to adhere to this ratio. In some cases, gray lines may be used instead of black.

6. Lettering

Lettering is based on current standards technical drawing -Lettering- (JIS Z 8313, etc.), and the font is usually Gothic. Characters may be displayed as points in CAD drawing, but the finished dimensions should carefully watch to be appropriate.

7. Dimensioning

There are various ways to indicate space dimensions, such as by using the core dimensions of walls (or columns) or by using the internal dimensions of finished surfaces (or structural surfaces). In architectural drawing, core dimensions have been used mainly for convenience in construction work. On the other hand, interior drawing emphasizes internal dimensions because the actual dimensions of the space are important in daily life. However, it is not prohibited to indicate the core dimensions as well in order to express the correspondence with architectural drawings in which the frame is planned with core dimensions.



8. General Drawing

Curtains, blinds, and carpets are generally drawn as single dotted lines on floor plans. When used for presentation purposes, they are sometimes drawn with solid lines to emphasize texture and appearance. Furniture, appliances, etc. should be indicated with solid lines. However, in some cases, single dotted lines may be used.

(1) to show an example of arrangement for reference,

or (2) to indicate that the item is outside the scope of the order. In such cases, it is preferable to clearly indicate in letters.

9. Applying Lines

Openings should be shown closed in principle. However, doors attached to partition walls should be shown 90 degrees open. Doors of storage rooms, refrigerators, etc. should be shown with the doors open at 30 degrees. In order to check the space required for opening and closing doors, they may be shown 90 degrees open. Closets or storage rooms are generally expressed as . To make it easier to include text, it may be expressed simply as .

10. Attached Table 1

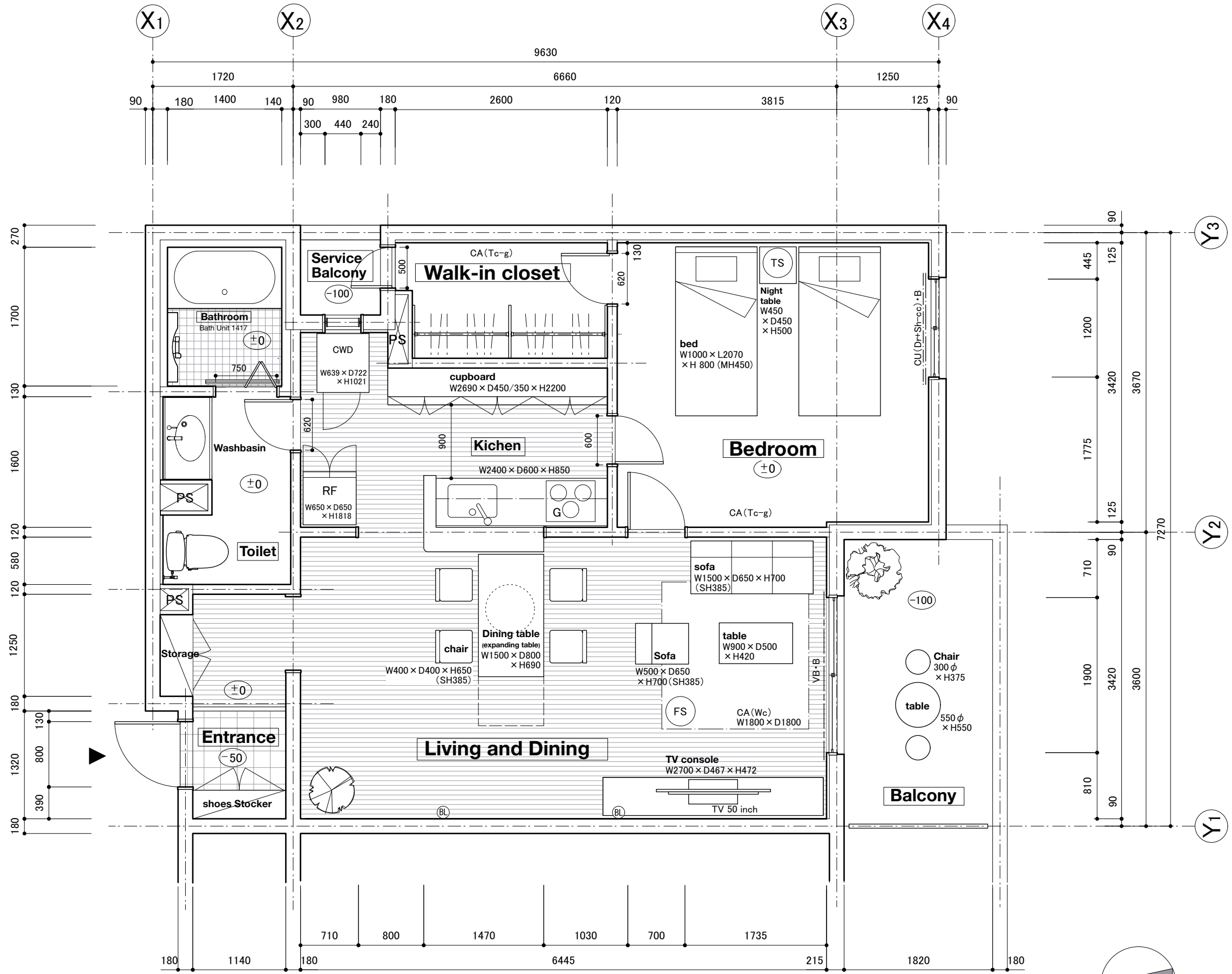
Character symbols for carpeting (Attached Table 1-1) and window decorations (Attached Table 1-2) are excerpted and included as they appeared continuously in the Handbook for Interior Coordinators (previous sales edition [February 20, 2006], first integrated edition [November 20, 2013]). In addition, paint symbols (Attached Table 1-3) and home appliance equipment (Attached Table 1-4) were partially supplemented and included from several related documents.

11. Attached Table 2

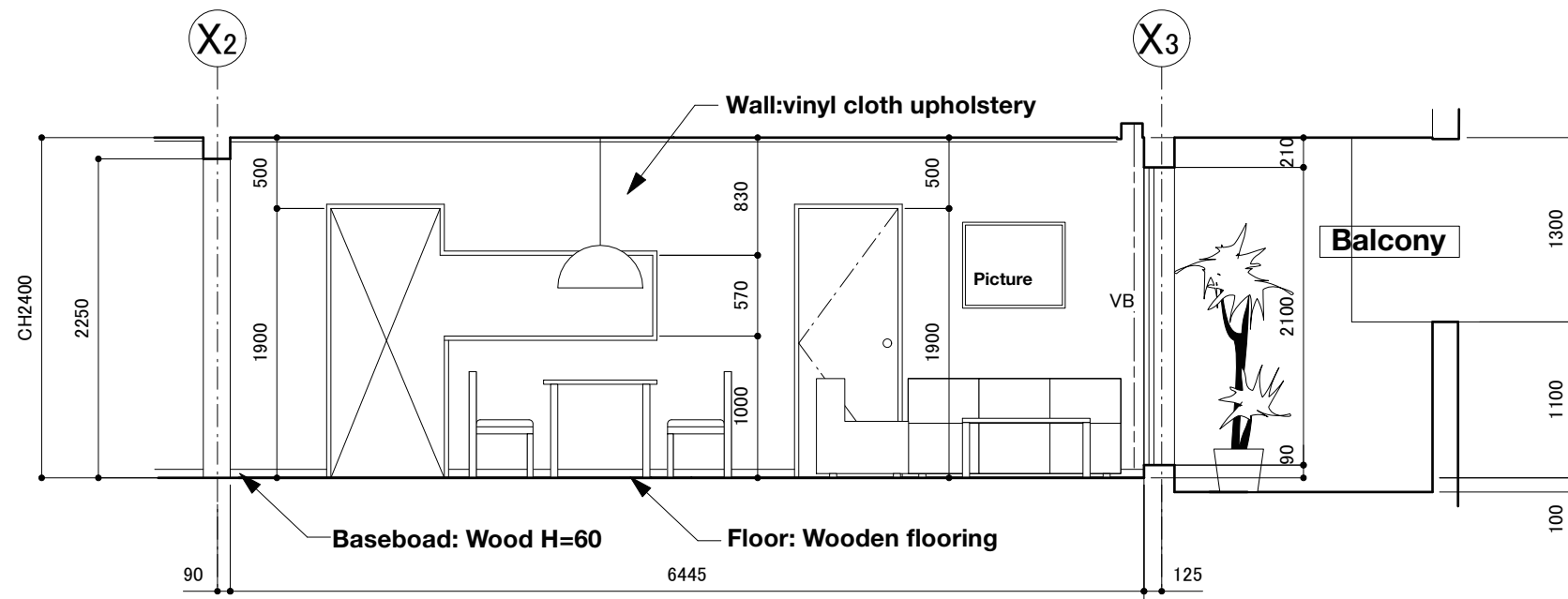
Although the related JIS was followed, some modifications were made to ensure consistency between the same type of symbols as are customary in the interior design field.

12. Reference Drawings

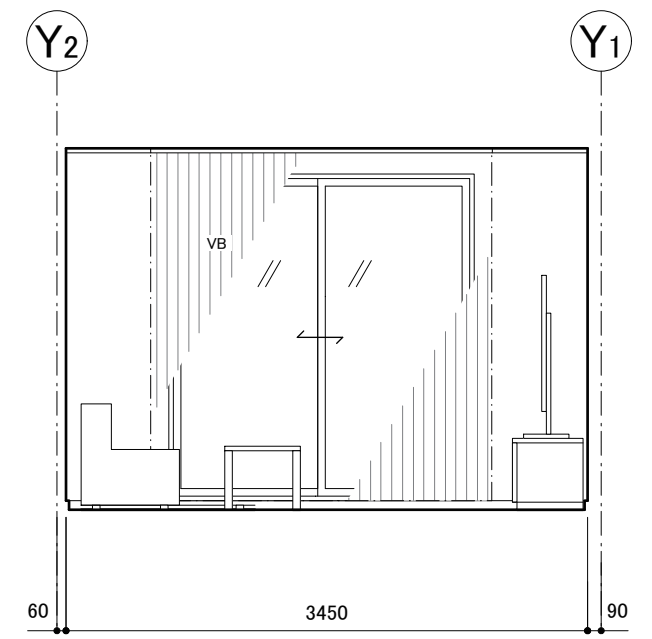
This reference drawing has been drawn in accordance with our Drawing standard as a reference for future interior drawings.



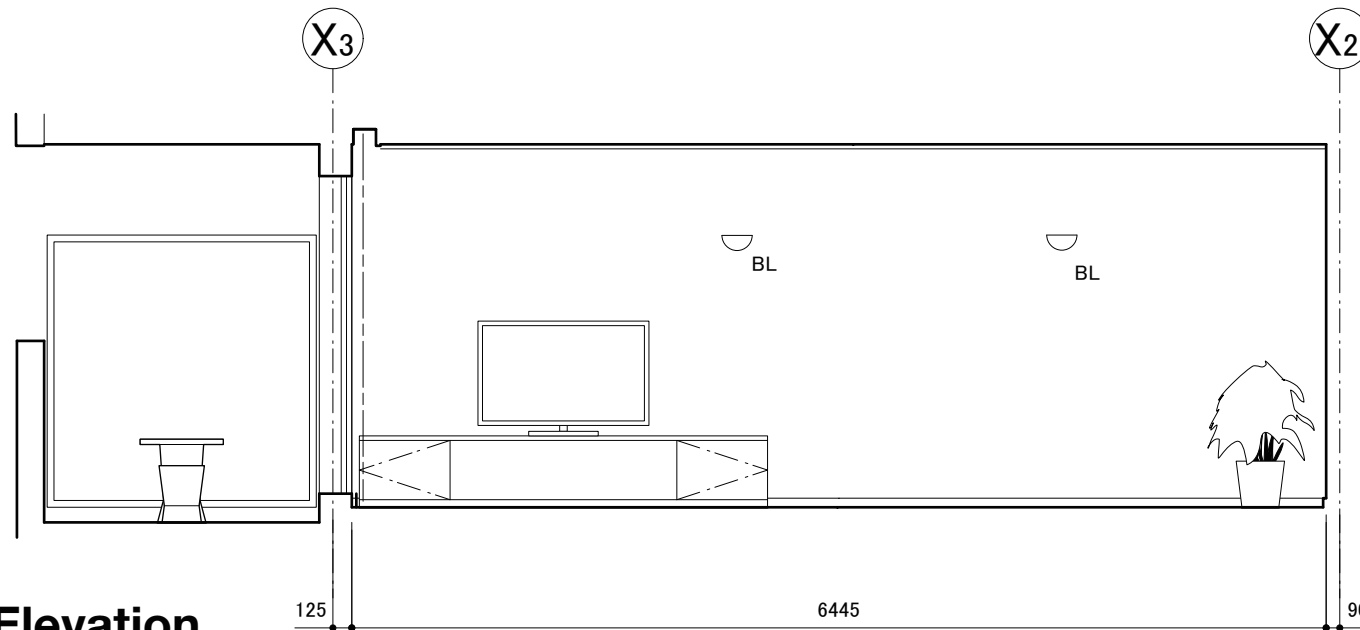
Floor Plan of Dwelling Unit S:1/50



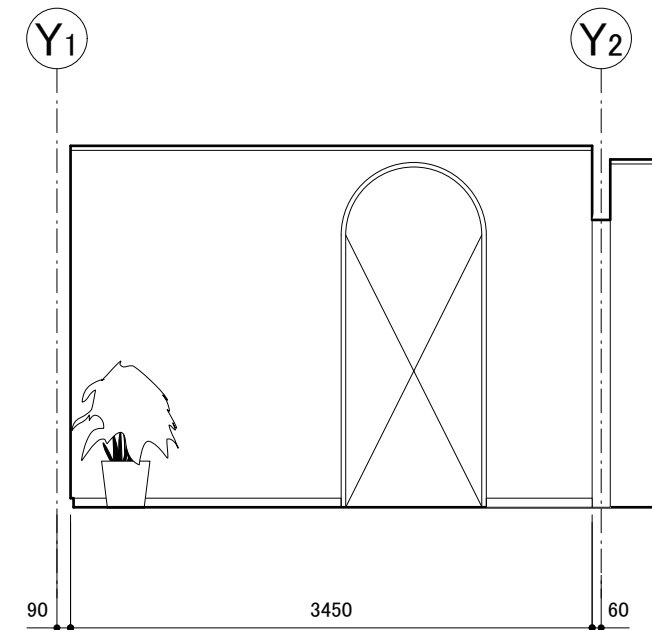
Interior elevation A



Interior elevation B

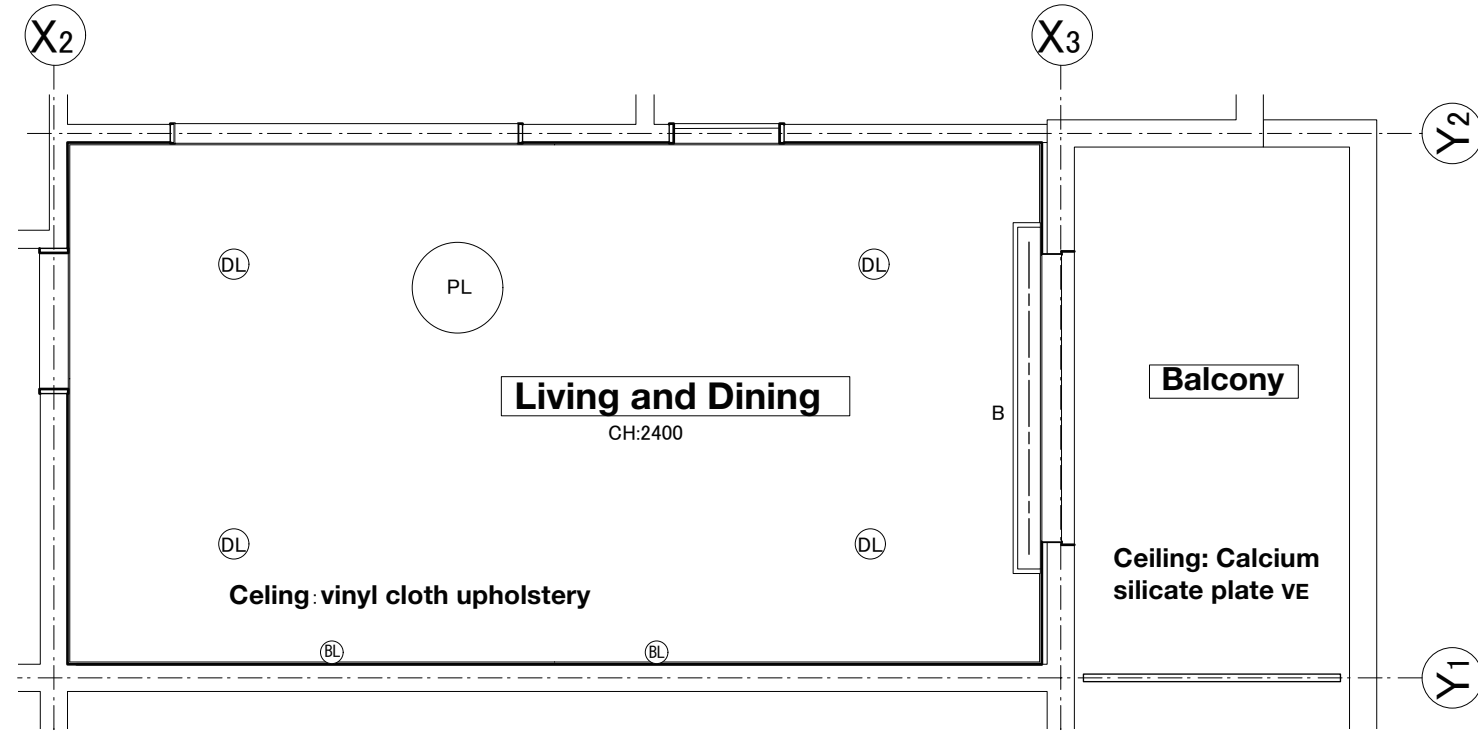


Interior elevation C



Interior elevation D

Interior Elevation
S:1/50



Celing Plan S:1/50

Explanatory Notes: Character Symbols Used

Lighting fixture	Symbol	Window treatment	Symbol
Ceiling-mounted light(Downlight)	DL	Curtain in general	CU
Ceiling light	CL	Venetian blind	VB
Ceiling pendant light	PL	Curtain box	-B
Chandelier	CH		
Wall mounted light (bracket)	BL	Painting	Symbol
Table stand	TS	Ready mixed paints (Synthetic resin type)	SOP
Floor stand	FS	Vinyl chloride resin enamel	VE

* CH:ceiling height

Interior Elevation and Ceiling Plan
of Living and Dining