

Supplementary Materials: Exploring Socio-Technical Features of Green Interior Design of Residential Buildings: Indicators, Interdependence and Embeddedness

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Annex 1. Code and regulations of relevance to green interior design for residential building at the national and industrial level (1).

Aspect	Time	Rules, Codes, and Regulations	Enacting Organizations
Space performance	2009/06/01	Function and dimension series of bathroom in housing (GB/T11977-2008)	AQSIQ
IEQ	Acoustic	2008/10/01 Environmental quality standard for noise (GB 3096-2008)	MEP & AQSIQ
		2011/06/01 Code for design of sound insulation of civil building (GB50118-2010)	MOHURD & AQSIQ
	Thermal	2012/10/01 Evaluation standard for indoor thermal environment in civil building (GB/T 50785-2012)	MOHURD & AQSIQ
	IAQ	1998/12/01 Hygienic standard for carbon dioxide in indoor air (GB/T 17094-1997)	MOH
		1998/12/02 Hygienic Standard for Inhalable Particulate Matter in Indoor Air (GB/T 17095-1997)	CSBTS & MOH
		2003/03/01 Indoor air quality standard (GB/T 18883-2002)	AQSIQ & MOH & MEP
Energy efficiency	2010/07/01	Standard for energy efficiency test of residential buildings (JGJ/T 132-2009)	MOHURD
	2010/08/01	Design standard for energy efficiency of residential buildings in severe cold and cold zone (JGJ26-2010)	MOHURD
	2010/08/01	Design standard for energy efficiency of residential building in hot summer and cold winter zone (JGJ134-2010)	MOHURD
	2013/03/01	Technical specification for energy efficiency retrofitting of existing residential buildings (JGJ/T129-2012)	MOHURD
	2013/04/01	Design standard for energy efficiency of residential buildings in hot summer warm winter zone (JGJ75-2012)	MOHURD
	2013/05/01	Design standard for energy efficiency of rural residential buildings (GB/T 50824-2013)	MOHURD
	2003/03/01	Code of design for building reclaimed water system (GB 50336-2002)	MOC & AQSIQ
Water conservation	2003/09/01	Code for design of building water supply and drainage (GB 50015-2003 (2009 edition))	MOC & AQSIQ
	2007/04/01	Engineering technical code for rain utilization in building and sub-district (GB 50400-2006)	MOC & AQSIQ
	2010/12/01	Standard for water saving design in civil building (GB 50555-2010)	MOHURD
	2014/08/01	Domestic water saving devices (CJ164-2014)	MOHURD

Annex 1. Cont.

Aspect	Time	Rules, Codes, and Regulations	Enacting Organizations
Material saving	2009/03/01	Steel members of assembled residential buildings with light-weight steel framing (JG/T 182-2008)	MOHURD
	2009/04/01	Bathroom unit (GB/T 13095-2008)	AQSIQ
	2012/01/01	Bathroom unit for housing (JG/T 183-2011)	MOHURD
	2012/01/01	Kitchen for housing (JG/T 184-2011)	MOHURD
	2016/01/01	Standard for assessment of industrialized building (GB/T 51129-2015)	MOHURD & AQSIQ
Materials and finishes	2002/01/01	Indoor decorating and refurbishing materials—Limit of formaldehyde emission of wood-based panels and finishing products (GB 18580-2001)	AQSIQ
	2002/01/01	Indoor decorating and refurbishing materials—Limit of harmful substances of wood based furniture (GB 18584-2001)	AQSIQ
	2002/01/01	Indoor decorating and refurbishing materials—Limit of harmful substances of wallpapers (GB 18585-2001)	AQSIQ
	2002/01/01	Indoor decorating and refurbishing materials—Limit of harmful substances of polyvinyl chloride floor coverings (GB 18586-2001)	AQSIQ
	2002/01/01	Indoor decorating and refurbishing materials—Limitations of harmful substances emitted from carpets, carpet cushions and adhesives (GB 18587-2001)	AQSIQ
	2002/01/01	Limit of ammonia emitted from the concrete admixtures (GB 18588-2001)	AQSIQ
	2006/06/01	Gaskets for doors and windows of buildings (JG/T 187-2006)	MOC
	2006/06/01	The technical requirement for environmental labeling products—Water based coatings (HJ/T 201-2005)	MEP
	2006/06/01	Technical requirement for environmental labeling products—Asbestos free building materials (HJ/T206-2005)	MEP
	2006/06/01	Technical Requirement for Environmental Labeling Products—Adhesives (HJ/T 220-2005)	MEP
	2007/02/01	The Technical Requirement for Environmental Labeling Products—Furniture (HJ/T 303-2006)	MEP
	2010/06/01	Indoor decorating and refurbishing materials—Limit of harmful substances of solvent coatings for woodenware (GB 18581-2009)	AQSIQ
	2008/04/01	Technical requirement for environmental labeling products—Solvent-based wood coatings for indoor decoration and refurbishing (HJ/T 414-2007)	MEP
	2008/10/01	Indoor decorating and refurbishing materials—Limit of harmful substances of interior architectural coatings (GB 18582-2008)	AQSIQ
	2009/05/01	General Requirements for Manufacture, Application and Label of Adhesives for Decorating and Refurbishing (GB/T 22377-2008)	AQSIQ
	2009/09/01	Indoor decorating and refurbishing materials—Limit of harmful substances of adhesives (GB 18583-2008)	AQSIQ

Annex 1. Cont.

Aspect	Time	Rules, Codes, and Regulations	Enacting Organizations
Materials and finishes	2010/01/01	Metal and metal-composite ceilings (GB/T 23444-2009)	AQSIQ
	2010/02/01	Indoor decorating and refurbishing solvent-based alkyd coatings for woodenware (GB/T 23995-2009)	AQSIQ
	2010/02/01	Solvent Metal Panel Coatings for Indoor Decorating and Refurbishing (GB/T 23996-2009)	AQSIQ
	2010/02/01	Solvent-thinned polyurethane wood coatings for indoor decorating and refurbishing (GB/T 23997-2009)	AQSIQ
	2010/02/01	Indoor decorating and refurbishing solvent-based nitrocellulose coatings for woodenware (GB/T 23998-2009)	AQSIQ
	2010/02/01	Water based coatings for woodenware for indoor decorating and refurbishing (GB/T 23999-2009)	AQSIQ
	2010/06/01	Indoor decorating and refurbishing materials—Limit of harmful substances of water based woodenware coatings (GB 24410-2009)	AQSIQ
	2010/07/01	Technical requirement for environmental labeling products—Wood based panels and finishing products (HJ571-2010)	MEP
	2011/07/01	Limits of radionuclides in building materials (GB 6566-2010)	AQSIQ
	2012/06/01	Natural resin coatings for woodenware for indoor decorating and refurbishing (GB/T 27811-2011)	MOHURD
New technologies	2006/01/01	Technical code for ground-source heat pump system (GB 50366-2005)	MOC & AQSIQ
	2012/05/01	Technical code for passive solar buildings (JGJ/T 267-2012)	MOHURD
	2015/11/01	Standard for design of intelligent building (GB/T 50314-2015)	MOHURD & AQSIQ

Note: AQSIQ: General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; MEP: Ministry of Environmental Protection of the People's Republic of China; MOHURD: Ministry of Housing and Urban-Rural Development of the people's Republic of China; MOH: The ministry of health of the People's Republic of China; MOC: Ministry of Construction of the people's Republic of China; CSBTS: China State Bureau of Technical Supervision.

Annex 2. Code and regulations of relevance to green interior design for residential building at the national and industrial level (2).

	SP	IEQ				EE	WC	MS	MF	NT
		Acoustic	Lighting	Thermal	IAQ					
Code for designs of civil buildings (GB50352-2005)	✓	✓	✓	✓	✓					
Residential building code (GB50368-2005)	✓	✓	✓	✓	✓					
Code for design of residential building (GB50096-2011)	✓	✓	✓	✓	✓					
Code for design of the residential interior decoration (JGJ 367-2015)	✓	✓	✓	✓	✓					✓
Standard for daylighting design of buildings (GB 50033-2013)			✓			✓				

Annex 2. Cont.

	SP	IEQ				EE	WC	MS	MF	NT
		Acoustic	Lighting	Thermal	IAQ					
Standard for lighting design of buildings (GB 50034-2013)			✓			✓				
Design code for heating ventilation and air conditioning of civil buildings (GB50736-2012)		✓		✓	✓					
Code for design of heating ventilation and air conditioning (GB 50019-2015)		✓		✓	✓					
Code for indoor environmental pollution control of civil building engineering (GB50325-2010 (2013))					✓				✓	
Standard for modular coordination of residential buildings (GB/T 50100-2001)	✓							✓		
Technical requirement for environmental labeling products Building decoration engineering (HJ 440-2008)	✓	✓	✓	✓	✓	✓		✓	✓	
Technical guideline for assessment for green building (199-2005)		✓	✓	✓	✓	✓	✓	✓	✓	✓
Technical requirement for environmental labeling products Eco-housing (HJ/T351-2007)		✓	✓	✓	✓	✓	✓		✓	
Complementary illustration for technical guideline for assessment for green building (Planning and design section) (113-2008)				✓		✓	✓			
Assessment standard for green building (Hong Kong Version) (CSUS/GBC 1-2010)		✓	✓	✓	✓	✓	✓	✓		
Code for green design of civil buildings (JGJ/T229-2010)	✓	✓	✓	✓	✓		✓	✓	✓	✓
Technical guideline for green affordable houses (195-2013)		✓	✓	✓	✓	✓	✓	✓		
Technical guideline for assessment of green super tall building (76-2012)		✓	✓	✓	✓	✓	✓	✓	✓	
Assessment standard for green building (GB/T 50378-2014)		✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: SP: space performance; IEQ: indoor environmental quality; IAQ: indoor air quality; EE: Energy efficiency; WC: water conservation; MS: material saving; MF: material and finishes; NT: new technologies.

Annex 3. Code and regulations of relevance to green interior design for residential building in Jiangsu province (1).

Aspect	Time	Rules, Codes, and Regulations	Enacting Organizations
Space performance	2000/03/01	Quality standard for residential decoration in Jiangsu (DB32/381-2000)	BQTS
	2006/06/01	Standard for drawings of residential building decoration in Jiangsu (DGJ32/J20-2006)	BOHURD
	2007/07/01	Regulations on compiling design documents for residential building decoration in Jiangsu (138-2007)	BOHURD
IEQ	Thermal	Nil	
	IAQ	2012/09/01 Code for indoor environmental quality acceptance of civil building decoration (DGJ32/J140-2012)	BOHURD
Energy efficiency		2008/04/01 Notice on strengthening building energy saving (17-2008)	Office of PGJP
		2009/01/01 Regulation on building energy saving in Jiangsu (210-2008)	BOHURD
		2009/12/01 Regulations on building energy saving in Jiangsu (59)	PGJP
		2010/12/01 Control specification for the quality of energy-efficiency-project of civil building (DGJ32/TJ106-2010)	BOHURD
		2011/02/18 Notice on promoting energy performance contracting in construction sector (15-2011)	BOHURD
		2011/12/21 Guideline for implementing building energy efficiency labelling in Jiangsu province (816-2011)	BOHURD
		2012/04/01 Standard for energy efficiency evaluation and labeling of civil building (DGJ32/TJ135-2012)	BOHURD
		2013/09/01 Standard for civil buildings energy consumption statistics (DJG32/TJ153-2013)	BOHURD
		2013/09/01 Technical specification of data monitoring systems for application of renewable energy in buildings (DJG32/TJ152-2013)	BOHURD
Water conservation	2011/04/01	Technical code for engineering of rain utilization (DGJ32/TJ113-2011)	BOHURD
Material saving	2008/05/01	Plastic doors and windows (30-2008)	BOHURD
	2009/07/01	Configuration of indoor lighting and decoration (34-2009)	BOHURD
	2009/12/01	Energy saving aluminum alloy doors and windows (35-2009)	BOHURD
	2012/01/01	Technical standards for wood decoration products (DJG32/TJ128-2011)	BOHURD
	2014/02/01	Technical specification for external thermal insulation systems based on insulated decorative panel (DGJ32/TJ86-2013)	BOHURD
New technologies	2009/01/01	Code for design, installation and acceptance of construction solar water heating system (DGJ/J08-2008)	BOHURD

Note: BOHURD: Bureau of Housing and Urban-Rural Development Jiangsu; PGJP: People' Government of Jiangsu Province; Office of PGJP: Office of People' Government of Jiangsu Province; BQTS: Bureau of Quality and Technical Supervision Jiangsu.

Annex 4. Code and regulations of relevance to green interior design for residential building in Jiangsu province (2).

	SP	IEQ				EE	WC	MS	MF	NT
		Acoustic	Lighting	Thermal	IAQ					
Design standard for residential building of JiangSu (DGJ32/J 26-2006)	✓	✓	✓		✓	✓				
Design Standard of Thermo-Environment & Energy Conservation for Residential Buildings in Jiangsu Province (DGJ32/J71-2014)				✓		✓				
Management regulation on developing new wall materials and promoting energy saving buildings						✓			✓	
Notice on strengthening the application of energy saving windows and exterior shading devices (269-2008)						✓			✓	
Evaluation standard for green building in Jiangsu Province (DGJ32/TJ76-2009)		✓	✓	✓	✓	✓	✓	✓	✓	
Technical guideline for assessment for green building in Jiangsu province (53-2011)		✓	✓	✓	✓	✓	✓	✓	✓	
Jiangsu design standard for green building (DGJ32/J173-2014)		✓	✓	✓	✓	✓	✓	✓	✓	
Regulations on compiling green design documents for civil building construction in Jiangsu (171-2015)		✓	✓	✓	✓	✓	✓	✓	✓	
Checklist for green design for civil building construction in Jiangsu (171-2015)		✓	✓	✓	✓	✓	✓	✓	✓	
Regulations on developing green building in Jiangsu (23)						✓	✓	✓		✓

Note: SP: space performance; IEQ: indoor environmental quality; IAQ: indoor air quality; EE: Energy efficiency; WC: water conservation; MS: material saving; MF: material and finishes; NT: new technologies.