

**LISTING OF PAGER CONSTRUCTION TYPES AND
COMPARISON OF CONSTRUCTION TYPES FROM VARIOUS SOURCES**

Material	PAGER-STR	Description	HAZUS Class	WHE-EERI Class	EMS-98	Coburn & Spence 2002	Risk-EU
Wood/Timber	W	Wood			W		W
	W1	Wood stud-wall frame with plywood/gypsum board sheathing. Absence of masonry infill walls. Shear wall system consists of plywood or manufactured wood panels. Exterior is commonly cement plaster ("stucco"), wood or vinyl planks, or aluminum planks (in lower cost houses). In addition, brick masonry or stone is sometimes applied to the exterior as a non-load-bearing veneer. The roof and floor act as diaphragms to resist lateral loading. (US & Canadian single family homes).	W1	32		CT2	
	W2	Wood frame, heavy members (with area > 5000 sq. ft.) (US & Canadian commercial and industrial wood frame).	W2				
	W3	Light post and beam wood frame. The floors and roofs do not act as diaphragms. No bracing, poor seismic load resistance path with poor connections. Timber frame may have partial infill walls with or without timber cladding.		28			
	W4	Wooden panel or log construction. Walls are made of timber logs sawn horizontally in a square or circular cross section and assembled with special end joints. (Typically in central Asia, Russia).		33			
	W5	Walls with bamboo/light timber log/reed mesh and post (Wattle and Daub). (Wattle and Daub- a woven lattice/sticks of wooden strips called wattle is daubed with a sticky material usually made of some combination of wet soil, clay, sand, animal dung and straw).		30		AE2	
	W6	Unbraced heavy post and beam wood frame with mud or other infill material. Un-braced timber frame with connections meant to resist (gravity) vertical loads only. Floors or roof consists of wood purlins supporting thatched roof, wood planks or rafters supporting clay tiles.		29		CT1	
	W7	Braced wood frame with load-bearing infill wall system. Frame is diagonally braced and infill walls are generally made of brick masonry, adobe, or wooden planks or wattle & daub infill. (European style)		31			
Adobe/Mud Walls	M	Mud walls		3			
	M1	Mud walls without horizontal wood elements					
	M2	Mud walls with horizontal wood elements		4			
	A	Adobe blocks (unbaked sundried mud block) walls		5	M2	AA1	M2
	A1	Adobe block, mud mortar, wood roof and floors					
	A2	Adobe block, mud mortar, bamboo, straw, and thatch roof					

	A3	Adobe block, straw, and thatch roof cement-sand mortar					
	A4	Adobe block, mud mortar, reinforced concrete bond beam, cane and mud roof					
	A5	Adobe block, mud mortar, with bamboo or rope reinforcement					
	RE	Rammed Earth/Pneumatically impacted stabilized earth	6		AE1		
Stone/Block Masonry	RS	Rubble stone (field stone) masonry	1	M1			M1.1
	RS1	Local field stones dry stacked (no mortar) with timber floors, earth, or metal roof.	1				
	RS2	Local field stones with mud mortar.	1		AR1		
	RS3	Local field stones with lime mortar.			AR1		
	RS4	Local field stones with cement mortar, vaulted brick roof and floors					
	RS5	Local field stones with cement mortar and reinforced concrete bond beam.					
	DS	Rectangular cut-stone masonry block			M3	BD1	M1.2
	DS1	Rectangular cut stone masonry block with mud mortar, timber roof and floors					
	DS2	Rectangular cut stone masonry block with lime mortar					
	DS3	Rectangular cut stone masonry block with cement mortar					
	DS4	Rectangular cut stone masonry block with reinforced concrete floors and roof					
	MS	Massive stone masonry in lime or cement mortar	2	M4			M1.3
	UCB	Unreinforced concrete block masonry with lime or cement mortar	11	M5	BC1		
Brick Masonry	UFB	Unreinforced fired brick masonry			M5		
	UFB1	Unreinforced brick masonry in mud mortar without timber posts	7				
	UFB2	Unreinforced brick masonry in mud mortar with timber posts	8				M3.1
	UFB3	Unreinforced brick masonry in lime mortar					M3.2
	UFB4	Unreinforced fired brick masonry, cement mortar. Timber flooring, timber or steel beams and columns, tie courses (bricks aligned perpendicular to the plane of the wall)				BB1	M3.3
	UFB5	Unreinforced fired brick masonry, cement mortar, but with reinforced concrete floor and roof slabs	9	M6			M3.4
Reinforced/Confi	RM	Reinforced masonry				DB1	M4
	RM1	Reinforced masonry bearing walls with wood or metal deck diaphragms					
	RM1L	Reinforced masonry bearing walls with wood or metal deck diaphragms low-rise	RM1L				
	RM1M	Reinforced masonry bearing walls with wood or metal deck diaphragms mid-rise (4+ stories)	RM1M				

	RM2	Reinforced masonry bearing walls with concrete diaphragms				
	RM2L	Reinforced masonry bearing walls with concrete diaphragms low-rise	RM2L			
	RM2M	Reinforced masonry bearing walls with concrete diaphragms mid-rise	RM2M			
	RM2H	Reinforced masonry bearing walls with concrete diaphragms high-rise	RM2H			
	RM3	Confined masonry		10	M7	BB2 M4
Reinforced Concrete	C	Reinforced concrete				
	C1	Ductile reinforced concrete moment frame with or without infill		15	RC3	DC1 RC 1
	C1L	Ductile reinforced concrete moment frame with or without infill low-rise	C1L			
	C1M	Ductile reinforced concrete moment frame with or without infill mid-rise	C1M			
	C1H	Ductile reinforced concrete moment frame with or without infill high-rise	C1H			
	C2	Reinforced concrete shear walls		21	RC6	RC 2
	C2L	Reinforced concrete shear walls low-rise	C2L			
	C2M	Reinforced concrete shear walls mid-rise	C2M			
	C2H	Reinforced concrete shear walls high-rise	C2H			
	C3	Nonductile reinforced concrete frame with masonry infill walls		16	RC2	DC2
	C3L	Nonductile reinforced concrete frame with masonry infill walls low-rise	C3L			RC 3
	C3M	Nonductile reinforced concrete frame with masonry infill walls mid-rise	C3M			
	C3H	Nonductile reinforced concrete frame with masonry infill walls high-rise	C3H			
	C4	Nonductile reinforced concrete frame without masonry infill walls		14	RC1	CC1
	C4L	Nonductile reinforced concrete frame without masonry infill walls low-rise				
	C4M	Nonductile reinforced concrete frame without masonry infill walls mid-rise				
	C4H	Nonductile reinforced concrete frame without masonry infill walls high-rise				
	C5	Steel reinforced concrete (Steel members encased in reinforced concrete)				DH1 S5
	C5L	Steel reinforced concrete (Steel members encased in reinforced concrete) low-rise				
	C5M	Steel reinforced concrete (Steel members encased in reinforced concrete) mid-rise				
C5H	Steel reinforced concrete (Steel members encased in reinforced concrete) high-rise					
C6	Concrete moment resisting frame with shear wall - dual system		19		DC3 RC 4	
C6L	Concrete moment resisting frame with shear wall - dual system low-rise					
C6M	Concrete moment resisting frame with shear wall - dual system mid-rise					

	C6H	Concrete moment resisting frame with shear wall - dual system high-rise					
	C7	Flat slab structure		17			
Precast Concrete	PC1	Precast concrete tilt-up walls	PC1				RC 5
	PC2	Precast concrete frames with concrete shear walls		18		DP2	RC 6
	PC2L	Precast concrete frames with concrete shear walls low-rise	PC2L				
	PC2M	Precast concrete frames with concrete shear walls mid-rise	PC2M				
	PC2H	Precast concrete frames with concrete shear walls high-rise	PC2H				
	PC3	Precast reinforced concrete moment resisting frame with masonry infill walls				DP1	
	PC3L	Precast reinforced concrete moment resisting frame with masonry infill walls low-rise					
	PC3M	Precast reinforced concrete moment resisting frame with masonry infill walls mid-rise					
	PC3H	Precast reinforced concrete moment resisting frame with masonry infill walls high-rise					
	PC4	Precast panels (wall panel structure)		22		DP3	
Steel	S	Steel			S		
	S1	Steel moment frame		25		DS2	S1
	S1L	Steel moment frame low-rise	S1L				
	S1M	Steel moment frame mid-rise	S1M				
	S1H	Steel moment frame high-rise	S1H				
	S2	Steel braced frame		26		DS4	S2
	S2L	Steel braced frame low-rise	S2L				
	S2M	Steel braced frame mid-rise	S2M				
	S2H	Steel braced frame high-rise	S2H				
	S3	Steel light frame	S3			DS1	
	S4	Steel frame with cast-in-place concrete shear walls		24		DS5	S4
	S4L	Steel frame with cast-in-place concrete shear walls low-rise	S4L				
	S4M	Steel frame with cast-in-place concrete shear walls mid-rise	S4M				
	S4H	Steel frame with cast-in-place concrete shear walls high-rise	S4H				
	S5	Steel frame with unreinforced masonry infill walls		23		DS3	S3
S5L	Steel frame with unreinforced masonry infill walls low-rise	S5L					
S5M	Steel frame with unreinforced masonry infill walls mid-rise	S5M					
S5H	Steel frame with unreinforced masonry infill walls high-rise	S5H					
Other	MH	Mobile homes	MH				
	INF	Informal constructions. (Generally made of wood/plastic sheets/GI Sheets/light					

	metal or composite etc not confirming to engineering standards, commonly in slums, squatters).					
UNK	Not specified (unknown/default)					