Comprehensive Risk Classification Table of Housing Construction Projects in Beijing

Risk Level	Building Classification	Engineering Function	Engineering Scale	Technical Requirements for Construction	Surrounding Environment	Intended Use and Density of Pers onnel	Number of Large Dangerous Divisional and Partial Projects that Exceed a Certain Size	Inspection Frequency and Inspection Procedure of the Construction Administrative Department
		Plant	Construction works with building height of less than 24 meters, with above-ground	Excavation depth of the foundation pit shall be less than 5 meters; Span of the steel structure	Not in the capital function core zone or Beijing's sub-center, not within 30 meters of the cultural relic protection and construction control zone, underground cultural relics buried	Plant shall not be used for producing flammable, explosive, toxic or hazardous materials, nor shall it have great impact on ecological environment; floor area of production and processing workshops of labor-intensive enterprises shall be no more than 2,500 square meters.		Inspection shall be carried out once during construction, with the inspection time of at most one day. Inspection procedure is after the ceiling of main structure and before the decoration construction. If the project participants fail to carry out technical inspection, the project quality and safety accidents occur, or there are illegal behaviors such as non-fulfillment of promises, frequency of random inspection shall be increased. (1) In case of work safety accident in the project, safety supervision
Low risk	Industrial buildings	Warehouse	floor area of less than 10,000 square maters (with underground floor area of no more than 2,000 square meters)	installation works shall be less than 36 meters; 3. Cantilever scaffold engineering (the section erection height shall be	areas, confidential authorities or ancient and rare trees; there are no chemical plants, petrol stations, storage tanks for liquids of Class A, B and C and combustible gas or other buildings and structures within the surrounding area 2,000 meters away;	Warehouse shall not be used for storing flammable, explosive, toxic or hazardous materials, nor shall have great impact on ecological environment; it shall not be in the personnel-intensive place.	1	

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		less than 20m);		Excluding contiguous development	and inspection shall be
				projects; floor area of employee	carried out according to the
Residenti	al ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4. Single-span		dormitories of labor-intensive	major risk level of the
buildings a	and Housing and	span shall be		enterprises or school dormitories	project. (2) During the
residentia	al anciliary	less than 27m:		shall be no more than 1,000m ² ;	period of project
service	Services	1.000 ta 2,		floor area of interior activity space	construction, if one general
building	hilldinge			for children and the elderly care	work safety accident
		5. Single point		facilities of residential supporting	occurs in other projects
		concentrated		service buildings shall be no more	participated by the project
		load of system		than 1,000m ² .	owner, general contractor
		used for steel		Commercial buildings shall not be	and supervising entity in
		structure		used for selling flammable,	Beijing, safety supervision
		installation such		explosive, toxic or hazardous	and inspection shall be
		as full-hall	Not within 30m of the	materials; floor area of interior	carried out according to the
		formwork	cultural relic protection	activity space for children shall be	general risk level of the
	Commercial	support system	and construction	no more than 1,000m ² ; dance	project. (3) During the
	buildings	shall be less	control zone,	halls, screening halls, KTVs,	period of project
		than 7kN;	underground cultural	nightclubs, game rooms, sauna	construction, if two general
			relics buried areas,	bathrooms, Internet cafes, bars, as	work safety accidents or
		6. New	confidential authorities	well as the restaurants, teahouses,	one major work safety
		technology,	or ancient and rare	cafes with entertainment functions	accident occur in other
		process,	trees; there are no	shall be no more than 500m ² .	projects participated by the
		materials and	chemical plants, petrol	Office buildings without chemical	project owner, general
		equipment for	stations, storage tanks	or biological laboratories; office	contractor and supervising
		which there are	for liquids of Class A, B	buildings which are not belong to	entity in Beijing, safety
D. I. II.		no current	and C and combustible	office buildings and power	supervision and inspection
Public	_	national,	gas or other buildings	dispatching buildings of state	shall be carried out
building	S Office building	industrial and	and structures within	organs, telecommunication	according to the high risk
		local technical	the surrounding area	buildings, post office buildings,	level of the project. (4)
		standards are	2,000m away.	disaster prevention commanding	During the period of project
		not adopted.		and dispatching buildings, radio	construction, if three or
		not adopted.		and television buildings and	more than three general
				archives buildings; floor area of	work safety accidents or
				restaurants, teahouses, cafes with	two or more than two major
				entertainment functions shall be no	work safety accidents or
]		more than 500m ² .	one serious or more severe
				Floor area of supporting	work safety accident occur
				conference, fitness and other	in other projects
				recreational facilities shall be no	participated by the project
	Hotel			more than 2,500m ² ; floor area of	owner, general contractor
	buildings			restaurants, teahouses, cafes with	and supervising entity in
				entertainment functions shall be no	Beijing, safety supervision
				more than 500m ² .	and inspection shall be

		Floor area of cultural buildings of	carried out according to the
		interior activity space for children	major risk of the project. (5)
		shall be no more than 1,000m ² ,	During the period of project
		excluding temples and churches;	construction, if the
		exhibitions halls other than public	participating entities are
Cultural		exhibition venues and museums;	subject to construction
buildings		floor area of dance halls, screening	safety administrative
		halls, game rooms, etc. shall be no	punishments, are criticized
		more than 500m ² ; floor area of	in a circulated notice or
		theatres and reading rooms of	have other illegal
		public libraries shall be no more	behaviors, or fail to strictly
		than 2,500m ² .	abide by the safety
		Floor area of nurseries and	management regulations of
		children rooms of the	the construction site, the
			frequency of supervision
		kindergartens, interior activity	
		space for children such as	and inspection shall be
		children's amusement arcade,	appropriately increased.
Educationa	I	teaching buildings, libraries and	
buildings		canteens of the primary and	
		secondary schools shall be no	
		more than 1,000m ² ; floor area of	
		teaching buildings, libraries and	
		canteens of the universities, etc.	
		shall be no more than 2,500m ² .	
0		Floor area of commercial indoor	
Sports		fitness and leisure venues shall be	
buildings		no more than 2,500m ² .	
		110 more than 2,000m.	
		Buildings for public health	
		purposes shall not be used for	
		storing corrosive and radioactive	
		medical drugs and devices or toxic	
Buildings fo	r	and hazardous medical waste, and	
public healt		such buildings shall have single	
purposes		functions; floor area of inpatient	
purposes		buildings of the hospitals and	
		nursing homes shall be no more	
		than 1,000m ² ; floor area of hospital	
		outpatient buildings shall be no	
		more than 2,500m ²	
Radio film ar	nd	, ,	
television		Not belong to radio and television	
buildings		buildings.	
Dulluligs			

		Transportation buildings Other buildings				Not belong to factories, warehouses, special stations and wharfs, etc. producing, storing, loading and unloading inflammable and explosive dangerous goods. Not belong to filling and loading stations, supply stations and pressure regulating stations of inflammable and explosive gases and liquids; not belong to large power generation, transformation and distribution projects, etc.		
		Plant		Span of the steel structure installation works shall be less than 36m.	Not within 30m of the cultural relic protection and construction control zone, underground cultural	Floor area of production and processing workshops of labor-intensive enterprises shall be no more than 2,500m ² .		At least three spot checks shall be implemented in principle (more than once for decoration works), and at least one spot check
General risk	Industrial buildings	Warehouse	Construction work with a height between 24m-54m; public buildings with a single-building area between 10,000m² and 40,000m² or group-building area of less than 100,000m²; residential areas with a floor area between	and the span of space truss and cable-membrane structure installation	relics buried areas, confidential authorities or ancient and rare trees; there are assembly occupancies within the surrounding area 200m to 2,000m away (large bus hubs, activity space for children, elderly care facilities, schools), large forests, chemical plants, petrol stations, storage tanks for liquids of Class A, B and C and combustible gas, and other buildings and structures.	/	2	every three months, with a focus on the parts such as engineering foundation and main structure as well as the final inspection. If the project participants fail to carry out technical inspection, the project quality and safety accidents occur, or there are illegal behaviors such as non-fulfillment of promises, frequency of random inspection shall be increased. (1) In case of work safety accident in the project, safety supervision and inspection shall be carried out according to the
	Residential buildings and residential service buildings	Housing and ancillary services buildings	10,000m ² and 50,000m ²	used for steel structure installation such as full-hall formwork	Not within 30m of the cultural relic protection and construction control zone, underground cultural	Floor area of interior activity space for children and elderly care facilities of residential areas shall be no more than 1,000m ² .		major risk level of the project. (2) During the period of project construction, if one general work safety accident
	Public buildings	Commercial buildings		support system shall be less than 7kN; 5. New technology and process for	relics buried areas, confidential authorities or ancient and rare trees; there are assembly occupancies	Floor area of the shopping mall and market shall be no more than 10,000m ² ; floor area of interior activity space for children within the commercial buildings shall be		occurs in other projects participated by the project owner, general contractor and supervising entity in Beijing, safety supervision

	which there are	within the surrounding	no more than 1,000m ² .	and inspection shall be
	no current	area 200m to 2,000m	·	carried out according to the
	national,	away (large bus hubs,		high risk level of the
	industrial and	activity space for		project. (3) During the
	local technical	children, elderly care		period of project
Office building	standards are	facilities, schools) ,	1	construction, if two general
	not adopted.	hospitals, residential		work safety accidents or
		areas, large forests,		one major work safety
l listel		chemical plants, petrol	Floor area of hotels and	accident occur in other
Hotel		stations, storage tanks	restaurants shall be no more than	projects participated by the
buildings		for liquids of Class A, B	10,000m ² .	project owner, general
		and C and combustible		contractor and supervising
		gas, and other	Floor area of auditoriums, public	entity in Beijing, safety
		buildings and	exhibition venues and exhibitions	supervision and inspection
Cultural		structures.	halls of the museums shall be no	shall be carried out
buildings			more than 20,000m ² ; floor area of	according to the major risk
			interior activity space for children	level of the project. (4)
			within the cultural buildings shall be no more than 1.000m ² .	During the period of project construction. if the
			, , , , , , , , , , , , , , , , , , , ,	
			Floor area of nurseries and children rooms of the	participating entities are subject to construction
			kindergartens, interior activity	safety administrative
			space for children such as the	punishments, are criticized
Educational			children's amusement arcade shall	in a circulated notice or
buildings			be no more than 1,000m ² ; floor	have other illegal
			area of libraries and canteens of	behaviors, or fail to strictly
			the universities shall be no more	abide by the safety
			than 2,500m ² .	management regulations of
			,	the construction site, the
Sports			Floor area of stadiums shall be no	frequency of supervision
buildings			more than 20,000m ² .	and inspection shall be
Politicas for			Floor consent the dispersion of the St. C.	appropriately increased.
Buildings for			Floor area of the inpatient buildings	
public health			of the hospitals and nursing homes	
purposes			shall be no more than 1,000m ² .	
Radio film and				
television			1	
buildings				
			Floor area of terminals of the civil	
Transportation			airports, waiting rooms of the	
buildings			passenger stations, and waiting	
bullulings			rooms of the passenger docks	
			shall be no more than 15,000m ² .	

		Other buildings				Not belong to large power generation, transformation and distribution projects, etc		
	Industrial buildings	Plant		1. Span of the			3	Spot checks shall be increased according to the Provisions of Quality Supervision on the
		Warehouse		steel structure installation works shall be more than 36m.				Housing Construction and Municipal Infrastructure Engineering in Beijing, the frequency of onsite spot
	Residential buildings and residential service buildings	Housing and ancillary services buildings	Construction work with a height between 54m-100m; public buildings with a single-building area between 40,000m² and 100,000m² and 100,000m² and 300,000m²; residential areas with a floor area of more than 50,000m² with a floor area of more than 50,000m² fresidential areas with a floor area of more than soncent load of used f structure installati as formwor support shall	and the span of space truss and cable-membrane structure installation project shall be more than 60m; 2. Cantilever scaffold engineering (the section erection height shall be more than 20m); 3. Single-span span shall be more than 27m; 4. Single point concentrated	There are assembly occupancies within the surrounding area	/		checks shall be appropriately increased, with a focus on the check of the control and treatment of risks. At least four spot checks shall be
		Commercial buildings			200m away (large bus hubs, activity space for children, elderly care facilities, schools);			implemented in principle (no less than twice for decoration works), and at least one spot check every
High risk		Office building			there are no buildings and structures such as chemical plants, petrol			three months. If the project participants fail to carry out technical inspection, the
		Hotel buildings			stations, storage tanks for liquids of Class A, B and C and combustible gas within the			project quality and safety accidents occur, or there are illegal behaviors such as non-fulfillment of
	Public buildings	Cultural buildings			surrounding area 200m away.			promises, frequency of random inspection shall be increased. (1) In case of work safety accident in the project, safety supervision
		Educational buildings		as full-hall formwork support system shall be more than 7kN;				and inspection shall be carried out according to the major risk level of the project. (2) During the period of project
		Sports buildings		,				construction, if one general work safety accident occurs in other projects

		Buildings for public health purposes Radio film and television buildings Transportation buildings						participated by the project owner, general contractor and supervising entity in Beijing, safety supervision and inspection shall be carried out according to the major risk level of the project. (3) During the period of project construction, if the participating entities are
		Other buildings						subject to construction safety administrative punishments, are criticized in a circulated notice or have other illegal behaviors, or fail to strictly abide by the safety management regulations of the construction site, the frequency of supervision and inspection shall be appropriately increased.
	Industrial buildings	ı	Projects exceeding the height and roof limit as well as certain					For construction projects with major risks, spot checks shall be implemented according to
Major	Residential buildings and residential service buildings	,	regulations; construction work with a height of more than 100m;	1		,	4 or more	the Provisions of Quality Supervision on the Housing Construction and Municipal Infrastructure Engineering in Beijing, the
risk	Public buildings	1	public buildings with a single-building area of more than 100,000m² or group-building area of more than 300,000m²	,	,	,	40111016	frequency of onsite spot checks shall be increased based on quality and safety control requirements of the construction site, and at least one spot check on each project shall be organized in principle on a monthly basis.

Note: 1. In the level of low risk, general risk and high risk, if the project simultaneously meets all risk factor requirements for the level, such level shall be the corresponding risk level of the project; 2. In the level of

major risk, if the project meets any of the risk factor requirements (except for those with "/" indicating that the risk factors are not restricted), it shall be the major risk; 3. In the level of low risk, general risk and high risk, if the project does not meet all the risk factor requirements simultaneously, the lowest risk level corresponding to each risk factor of the project shall be determined first, and then the highest risk level shall be the corresponding risk level of the project.

Comprehensive Risk Classification Table of Municipal Infrastructure Construction Projects in Beijing

Risk Level	Building Classification	Construction Scale		Complexity of Construction Technology	Application of Technology	Region	Surrounding Environment	Inspection Frequency of Construction Administrative Department
	Road engineering	Municipal works with an investment of less	Urban branch road	than 10 meters, or the	Not exceeding the relevant contents of	Reconstruction, new or expansion project is not within the capital function core area or Beijing's sub-center; not located in specific areas such as rail transit protection area.		
	Drainage works (rain, sewage)		Diameter of drainpipe≤1meter				There are no buildings, residential areas, public places, etc. in the surrounding area or there are no party and government organs, military management areas, culture relic protection sites, schools, hospitals, assembly occupancies, residential areas, large bus hubs, large forests, chemical plants, petrol stations or otherwise within the surrounding area 2,000 meters away	
	Water supply plant		Daily treatment capacity< 30,000 tons					Spot check shall be carried out once during construction, with the inspection time of at most one day. If the project participants fail to carry out technical inspection, the project quality and safety accidents occur, or there are illegal behaviors such as non-fulfillment of promises, frequency of random inspection shall be increased.
	Water supply pipeline		Pipe diameter<0.8 meters		national standards, trade			
Low risk	Gas source		Daily gas production < 100,000 cubic meters		standards and local standards; new technology, process, materials or equipment is not adopted.			
	Gas pipeline	than RMB 30 million	Piping below medium pressure					
	Gas reserve plant (station)		Design pressure <2.0MPa or total storage volume <500 cubic meters of liquefied petroleum gas or <200 cubic meters of liquefied natural gas storage tank plant (station) or gas supply scale <50,000 cubic meters /day					

	Heat source engineering Heat supply pipeline Landfills Incineration plant Other municipal works		Heat production <80 tons/hour or heating area <100,000 square meters Pipe diameter < 200 milimeters Daily treatment capacity < 400 tons Daily treatment capacity < 100 tons	the concentrated line load is less than 15kN/m. 3. Lifting weight of a single piece is 10kN and below. 4. Manual hole-digging pile engineering is not used. 5. Shield method, incremental launching method or mining method is not used.				
	Road engineering	Municipal works with an	Urban secondary road	Generally involving some types of large dangerous projects that exceed a certain size (two types) 1. The excavation depth of the foundation pit does not exceed 5m, the civil, protection and sedimentation works have no influence on the neighboring	Not exceeding the relevant contents of national standards, trade standards and	Reconstruction, new or expansion project is not within the capital function core area	There are party and government organs, military management areas, culture relic protection sites, schools, hospitals, assembly	At least three spot checks shall be implemented in principle, and at least one spot check every three months, with a focus on the parts such as key procedures and key parts as well as the final inspection. If the project
General risk	Bridge engineering	between RMB 30 million and RMB 100 million	Total porous span of bridge L (8 meters≤L<100 meters) or single-hole span L0 (5 meters≤L0<40 meters)	building. 2. The erection height of the concrete formwork support	local standards; new technology, process, materials or	or Beijing's sub-center; not located in specific areas such as rail transit protection area.	occupancies, residential areas, large bus hubs, large forests, chemical plants, petrol stations and so on within the	participants fail to carry out technical inspection, the project quality and safety accidents occur, or there are illegal behaviors such as non-fulfillment of promises,
	Drainage works (rain, sewage)	sewage) er supply	1meter <diameter drainpipe<1.5meters<="" of="" td=""><td rowspan="2">8m, or the erection</td><td>equipment is not adopted.</td><td></td><td>surrounding area 500m to 2,000m away.</td><td>frequency of random inspection shall be increased.</td></diameter>	8m, or the erection	equipment is not adopted.		surrounding area 500m to 2,000m away.	frequency of random inspection shall be increased.
	Water supply plant		Daily treatment capacity 30,000-50,000 tons					
	Water supply pipeline		Pipe diameter 0.8-1.5 meters	is less than 20kN/m.				

	Gas source		Daily gas production 100,000-300,000m ³	3. Lifting weight of a single piece is 100kN and below.				
	Gas pipeline		Sub-high pressure pipeline	Manual hole-digging pile engineering is not used.				
	Gas reserve plant (station)		Design pressure 2.0-2.5MPa or total storage volume 500-1,000 cubic meters of liquefied petroleum gas or 200-400 cubic meters of liquefied natural gas storage tank plant (station) or gas supply scale 50,000-150,000 cubic meters /day	5. Shield method, incremental launching method or mining method is not used.				
	Heat source engineering		Heat production 80-250 tons/hour or heating area 100,000-300,000 square meters					
	Heat supply pipeline		Pipe diameter 200-500 milimeters					
	Landfills		Daily treatment capacity 400-800 tons					
	Incineration plant		Daily treatment capacity 100-300 tons					
	Other municipal works		1					
High risk	Road engineering	Municipal works with an	Urban trunk road	Involving several types of large dangerous projects that exceed a	Not exceeding the relevant contents of	Reconstruction, new or expansion project is within	There are party and government organs, military management	Spot checks shall be increased according to the <i>Provisions of Quality</i>

Bridge engineering	investment between RMB 100 million and RMB 200 million	Total porous span of bridge L(100m≤L≤1000m) or single-hole span L0 (40 meters ≤L0≤150 meters)	certain size (three types): 1. The excavation depth of the foundation pit is more than 5 meters, and the	national standards, trade standards and local standards; new	the capital function core area or Beijing's sub-center; located in specific areas such as rail transit protection	areas, culture relic protection sites, schools, hospitals, assembly occupancies, residential areas, large bus hubs, large	Supervision on the Housing Construction and Municipal Infrastructure Engineering in Beijing, the frequency of onsite spot checks shall be appropriately increased, with a focus on the check of the
Drainage works (rain, sewage)		Diameter of drainpipe≥1.5 meters	earthwork, slope protection and precipitation engineering have impact on the adjacent	technology, process, materials and equipment are adopted; high	area.	forests, chemical plants, petrol stations and so on within the surrounding area 200 meters to 500 meters	control and treatment of risks. If the project participants fail to carry out technical inspection, the project quality and safety
Water supply plant		Daily treatment capacity≥50,000 tons	buildings.	fill subgrade is involved.		away.	accidents occur, or there are illegal behaviors such as non-fulfillment of promises, frequency of random
Water supply pipeline		Pipe diameter≥1.5 meters	2.The erection height of the concrete formwork support engineering is more than 8 meters, or				inspection shall be increased.
Gas source		Daily gas production≥300,000 cubic meters	the erection span is more than 18 meters, or the total construction				
Gas pipeline		Pipeline above high pressure	load is more than 15kN/m², or the concentrated line load				
Gas reserve plant (station)		Design pressure > 2.5MPa or total storage volume > 1,000 cubic meters of liquefied petroleum gas or > 400 cubic meters of liquefied natural gas storage tank plant (station) or gas supply scale > 150,000 cubic meters/day	is more than 20kN/m.3. Lifting weight of a single piece is 100kN and above.4. Manual hole-digging pile engineering is				
Heat source engineering		Heat production≥250 tons/hour or heating area > 300,000 square meters	used. 5. Shield method,				
Heat supply pipeline		Pipe diameter≥500 milimeters	incremental launching method and mining method are used.				
Landfills		Daily treatment capacity≥800 tons	moniou are useu.				

	Incineration plant Other municipal works		Daily treatment capacity≥300 tons					
	Road engineering		Urban expressway				There are buildings (structures), underground pipelines (water, electricity, gas, heat, etc.) and	Spot checks shall be implemented according to
	Bridge engineering		Total porous span of bridge L (L > 1,000 meters) or single-hole span L0 (L0 > 150 meters)		Exceeding the relevant contents of national standards,	Reconstruction, new or expansion	important public facilities within a safe distance; within 200m from both sides of Chang'an Avenue and its extension (extending from the	the Provisions of Quality Supervision on the Housing Construction and Municipal Infrastructure Engineering in Beijing, the frequency of onsite spot checks shall be increased based on quality
	Drainage works (rain, sewage)	Municipal works with an	Diameter of drainpipe≥1.5 meters	Involving many types of large dangerous	trade standards and local	project is within the capital function core area or	east to west with Tiananmen Square as the center. The	and safety control requirements of the construction site, and at least
Major risk	Comprehensive pipeline works	investment of more than RMB	1	projects that exceed a certain size (four types and above).	standards; new technology,	Beijing's sub-center; located in specific	distance from Fuxingmen to	one spot check on each project shall be organized in principle on a monthly basis.
	Water supply plant	200 million	Daily treatment capacity≥50,000 tons		process, materials and equipment are	areas such as rail transit protection area.	Jianguomen is about 7km, extending westward to	If the project participants fail to carry out technical
	Water supply pipeline		Pipe diameter≥1.5 meters		adopted; high fill subgrade is involved.		Shougang Park, Yongding River's water system and	inspection, the project quality and safety accidents occur, or there are illegal behaviors such as non-fulfillment of
	Gas source		Daily gas production≥300,000 cubic meters				Xishan Mountain, and eastward to Beijing's sub-center as well as the water system of	promises, frequency of random inspection shall be increased.
	Gas pipeline		Pipeline above high pressure				North Canal and Chaobai River); There are party and	

Incineration Daily treatment capacity≥300 tons	area (reconstruction and expansion works that are operated normally in part or in whole); Within the
Other municipal works	whole); within the scope where the guarantee for major activities is provided by Beijing

Note: 1. Risk factors refer to "construction scale, complexity of construction technology, application of technology, region, surrounding environment"; 2. When judging the risk levels, the principle of choosing whichever is higher shall be adopted if different risk factors meet different risk levels, and the principle of choosing whichever is lower shall be adopted if the same risk factor meets different risk levels; 3. If the same project contains works of different engineering functions, the project shall be defined based on the highest risk level.