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MINISTRY OF CONSTRUCTION

Notice from Ministry of Construction on Promulgation of the National Standard "Real Estate Appraisal Code"

To the relevant departments of the State Council, the construction committees (construction departments) of all provinces, autonomous regions, and directly administered municipalities, the planning commission, the construction committees of cities with independent planning, and the Xinjiang Production and Construction Corps:

The "Real Estate Appraisal code," formulated by the Ministry of Construction together with the relevant departments on the basis of the requirements of the "1998 Plan for the Formulation and Revision of National Standards for Engineering Construction (second draft)" (*Jian biao* [1998] No. 244) has been jointly reviewed by the relevant departments and has been approved as recommended state standards, serial no. GB/T 50291–1999, and is implemented as of June 1, 1999.

The Ministry of Construction is in charge of administering this code, the China Institute of Real Estate Appraisers is in charge of specific interpretations thereof, and the Standard Quota Research Institute of the Ministry of Construction has charged the Ministry of Construction Building Industry Press with the publication of these specifications.

1. General Provisions

1.0.1. This code is formulated in accordance with the relevant provisions of the "People's Republic of China Urban Real Estate Administration Law," the "People's

Republic of China Land Administration Law," and other laws and regulations to regulate the actions of real estate appraisals, unify appraisal procedures and methods, and ensure that appraisal results are objective, fair, and reasonable.

1.0.2. This code applies to real estate appraisal activities.

1.0.3. Real estate appraisals are to be independent, objective, and fair.

1.0.4. In addition to conforming to this code, real estate appraisals are also to be consistent with the relevant national standards and specifications currently in force.

2. Terminology

2.0.1. *Real estate, real property*. Land, buildings, and other land fixtures, including material entities and the rights and interests dependent on these material entities.

2.0.2. *Real estate appraisal, property appraisal*. Activities conducted by professional appraisers at the date of appraisals to objectively and reasonably estimate and determine the value of real estate, based on the objectives of the appraisal, in adherence with principles of appraisals, in accordance with appraisal procedures, and on the basis of comprehensively analyzing the factors that affect the prices of real estate.

2.0.3. *Subject of appraisal*. Real estate that requires an appraisal in a specific appraisal project.

2.0.4. *Appraisal purpose*. The expected use of the appraisal results.

2.0.5. *Appraisal point-in-time, date of appraisal*. The appraisal date corresponding to the results.

2.0.6. *Objectively reasonable price or value*. Normal price as derived from a specific set of appraisal factors.

2.0.7. *Open market*. The purpose of transacting parties in such a market is to maximize their economic interests, gain access to necessary market information and ample time to conduct transactions, possess the necessary professional knowledge of their business partners, and conduct transactions under terms that are open and nonexclusive.

2.0.8. *Open market value*. The price most likely to be found in the open market. When using open market value standards, the objective and reasonable value that calls for assessment is the open market value.

2.0.9. *Similar property*. Real estate that is situated in the same sphere of supply and demand as the subject of appraisal and that is the same or similar to the appraisal subject in such aspects as use, size, grade, and building structure.

2.0.10. *Comparable search area*. Within an appropriate range that may be substituted for the subject of appraisal, the prices of which can mutually influence [the subject property].

2.0.11. *Highest and best use*. Use that is legally permissible, technically feasible, economically viable, and reasonably and sufficiently demonstrated to generate the highest value for the subject of appraisal.

2.0.12. *Market comparison approach, sales comparison approach*. The approach whereby the subject of the appraisal is compared with similar real estate that has been subject to a transaction at a point near in time to the subject's appraisal, and whereby appropriate amendments are made to the known prices of such similar real estate to estimate an objective and reasonable price for the subject of appraisal.

2.0.13. *Income approach, income capitalization approach*. The method that consists of estimating the normal net income from the subject of appraisal and choosing the appropriate capitalization rate to be discounted from the accumulation after the appraisal point-in-time, thereby estimating the objective and reasonable price or value of the subject of appraisal.

2.0.14. *Cost approach*. The method of calculating the replacement price or reconstruction price of the subject of appraisal at the appraisal point-in-time and deducting depreciation, thereby estimating the objective and reasonable price or value of the subject of appraisal.

2.0.15. *Hypothetical development method, residual method*. The method of estimating the price of the subject of appraisal after development is completed and deducting normal development costs, taxes, and profits, thereby estimating the objective and reasonable price or value of the subject of appraisal.

2.0.16. *Basic land price modification.* For regions where the government has determined and announced the benchmark land prices, the method whereby the appraisal price is calculated based on adjustments to the basic land price in the appraisal subject's location.

2.0.17. *Potential gross income.* Income from hypothetical real estate under conditions of full utilization and no vacancies.

2.0.18. *Effective gross income.* Income obtained from potential gross income after deduction of income losses caused by vacancies, delinquent rentals, and other reasons.

2.0.19. *Operating expenses.* Expenses for maintaining regular production, business operations, or other necessary costs, as well as income produced by other sources of capital or operations used to pay for expenses.

2.0.20. *Net income, net operating income.* Income attributable to real estate after the deduction of reasonable operating expenses from effective gross income.

2.0.21. *Repricing ("replacement price") of building.* The normal price for rebuilding a new construction with functions and effectiveness similar to those of the subject of appraisal, adopting the construction materials and construction techniques available on the date of appraisal and according to the price standards at the time of the appraisal.

2.0.22. *Reconstruction cost of building.* The normal price of reconstructing a new building similar to the subject of appraisal, using the original construction materials and construction techniques, and in accordance with the price standards of the subject of appraisal.

2.0.23. *Physical deterioration, physical depreciation.* Loss to the value of buildings caused by wear and tear to the buildings in terms of their material entities.

2.0.24. *Functional depreciation, functional obsolescence.* Loss to the value of buildings caused by the obsolescence of buildings in terms of their functions.

2.0.25. *Economic depreciation, economic obsolescence.* Loss of the value of buildings caused by various adverse factors apart from the buildings themselves.

2.0.26. *Appraisal result.* Final conclusion with regard to the objective and reasonable price or value of the subject of appraisal.

2.0.27. *Appraisal report.* Comprehensive, fair, objective, and accurate accounts of the outcome of the appraisal process; written responses to the commissioning principal; study reports regarding the objective and reasonable price of value of the subjects of appraisal.

3. Principles of Appraisal

3.0.1. Real estate appraisals must adhere to the following principles:

1. the legality principle;
2. the highest and best use principle;
3. the substitution principle; and
4. the point-in-time appraisal principle.

3.0.2. Adhering to the legality principle means that the premise of the appraisal is to be the legal use and legal disposition of the appraisal subject.

3.0.3. Adhering to the highest and best use principle means that the premise of the appraisal is to be the highest and best use of the appraisal subject. When the appraisal subject has already been put to a certain use, one of the following judgments and choices is to be made during appraisals regarding the appraisal premise based on the highest and best use and is to be explained in the appraisal report: (1) the premise of maintaining the status quo: when it is maintained that maintaining the status quo and continued use is in the best interest, the appraisal must be conducted on the premise of maintaining the status quo and continued use; (2) conversion of use premise: when it is maintained that utilization after conversion of use is in the best interest, the appraisal must be conducted on the premise of utilizing after conversion of use; (3) the renovation premise: when it is maintained that utilization after renovation but not after conversion of use is in the best interest, the appraisal must be conducted on the premise of utilization after renovation but after not conversion of use; (4) the reuse premise: when it is maintained that reuse after demolishing the existing building(s) is in the best interest, the appraisal must be conducted on the premise of reuse after demolishing the existing building(s); or (5) some combination of the above circumstances.

3.0.4. Adhering to the principle of substitution requires that the appraisal results not deviate substantially from the normal price of similar real estate under the same conditions.

3.0.5. Adhering to the point-in-time appraisal principle requires that the appraisal results be the objective and reasonable price or value of the subject at the appraisal point-in-time.

4. Appraisal Process

4.0.1. In the period from acceptance of the appraisal commission to completion of the appraisal report, real estate appraisals are to be conducted according to the following procedures:

1. defining the basic issues of the appraisal;
2. developing of the appraisal work plan;
3. collecting information needed for the appraisal;
4. on-site inspecting of the appraisal subject;
5. selecting the appraisal method of calculation;
6. determining the appraisal results;
7. writing the appraisal report; and
8. archiving the appraisal data.

4.0.2. Definitions of the basic appraisal issues must primarily be contained in the following:

1. definition of the purpose of the appraisal;
2. definition of the subject of the appraisal; and
3. definition of the time point of the appraisal.

Notes: (1) the purpose of the appraisal is to be set forth by the commissioning party; (2) the definition of the appraisal subject is to include the definition of the appraisal subject's physical state and rights and interests situation; (3) the appraisal point-in-time is to be determined on the basis of the appraisal purpose, is to adopt the Gregorian calendar, and is to be accurate to the day; and (4) the basic issues regarding the appraisal are to be defined in consultation with the commissioning party, and final approval is to be obtained from the commissioning party.

4.0.3. A preliminary analysis of the appraisal subject must be conducted on the basis of defining the basic items of appraisal, and a preliminary appraisal work program must be formulated. The appraisal work program is to include, in the main, the following contents: (1) the intended choice of appraisal techniques and appraisal methods; (2) the intended investigation and collection of data and the sources and channels thereof; (3) the estimated time, labor, and funding required; and (4) the intended operational processes and rate of operations progress.

4.0.4. Appraisal institutions and appraisers are to continuously collect required information and are to verify, analyze, and compile such information. The information required for an appraisal includes the following: (1) information that has a universal effect on real estate prices; (2) information that affects real estate prices in the area where the appraisal subject is located; (3) information on actual instances of real estate transactions, costs, and revenues; and (4) information that reflects the state of the appraisal subject.

4.0.5. Appraisers must proceed to the site of the appraisal subject to familiarize themselves with the location of the appraisal subject, the surrounding environment, and the quality of the landscape; they must inspect the external appearance of the appraisal subject, its architectural structure, decorations, and installations and verify previously assembled information related to the location of, approaches to, surface area of, and property rights of the appraisal subject; they are to collect and supplement other information necessary for the appraisal and take photographs of the appraisal subject and its surroundings and access roads.

4.0.6. After the appraisal report has been completed and issued, all necessary information related to the appraisal project is to be organized, archived, and placed in appropriate safekeeping.

5. Appraisal Methods

5.1. Selection of Appraisal Methods

5.1.1. Appraisers must be familiar with, understand, and correctly apply the market comparison approach, income approach, cost approach, hypothetical development method, and basic land price modification method, as well as the integrated use of these methods.

5.1.2. Optimally, two or more appraisal methods must be chosen for the appraisal of the same appraisal subject.

5.1.3. If, on the basis of already defined appraisal objectives, it is appropriate to use multiple methods for the appraisal of a appraisal subject, then multiple appraisal methods are to be used simultaneously for the appraisal and may not be adopted or discarded at will. Where it is necessary to adopt or discard methods, the reasons are to be explained and stated in the appraisal report.

5.1.4. Where it is possible to use the market comparison method for an appraisal, the market comparison method is to be used as the primary method of appraisal.

5.1.5. For the appraisal of income-generating property, the income method is to be used as one of the methods of appraisal.

5.1.6. For the appraisal of real estate that has the potential for investment development or redevelopment, the hypothetical development method is to be used as one of the methods of appraisal.

5.1.7. Where use of the market comparison method, income approach, or hypothetical development method is inappropriate due to the lack or insufficiency of the market area, the cost approach may be used as the main method of appraisal.

5.2. The Market Comparison Method

5.2.1. Appraisals using the market comparison method are to proceed by the following steps: (1) collecting actual transaction examples; (2) selecting comparable examples; (3) establishing a comparable price basis; (4) modifying transaction circumstances; (5) modifying transaction dates; (6) modifying regional factors; (7) modifying individual factors; and (8) obtaining the standard price.

5.2.2. Using the market comparison approach requires accurate assembling of a large number of actual transaction examples and a solid understanding of normal market prices and quotations. The transaction examples assembled must include the following contents: (1) the circumstances of the parties to the transactions and the purpose of the transactions; (2) the real estate status of the actual transaction examples; (3) the transaction prices; (4) the transaction completion dates; and (5) the methods of payment.

5.2.3. Based on the state of the appraisal subjects and the transaction purposes, three or more comparable examples must be chosen from among the assembled actual transaction examples. The comparable examples assembled must meet the following requirements: (1) the real estate is similar to the subject of appraisal; (2) the transaction dates and appraisal point-in-time are close to each other and must not exceed one year; and (3) the transaction prices were at normal price or can be modified from normal price.

5.2.4. After actual comparable examples are selected, conversion and processing must be conducted on the transaction prices of the comparable examples to establish a comparable price basis and to unify their manners of expression and their connotations. The conversion and processing must include the following: (1) unified methods of payment; (2) uniform unit prices; (3) unified currencies and monetary units; and (4) unified area contents and area units.

Notes: (1) the unified methods of payment are to be unified as a one-time lump sum payment on the date the transactions are completed; and (2) conversions between different currencies are to be calculated according to the median price of the market rate announced by the People's Bank of China at the time the transactions are completed.

5.2.5. When modifying transaction circumstances, special factors in transaction actions that cause deviations in the transaction prices of comparable examples are to be excluded, and the transaction prices of comparable examples are to be adjusted as normal prices. Actual transaction examples are inappropriate for inclusion as comparable examples in any of the following circumstances: (1) transactions that were between persons with interest relationships; (2) transactions where the parties were in a hurry to buy or sell; (3) transactions affected by debt claim or debt liability relations; (4) transactions where one or both parties lacked understanding of market pricing circumstances; (5) transactions where one or both parties had special motivations or special preferences; (6) transactions that merged adjacent real estate; (7) transactions conducted in exceptional manners; (8) transactions with irregular taxation burdens; and (9) other extraordinary transactions.

Notes: (1) where there are relatively few examples available for selection, yet it is absolutely necessary to choose from the above examples, modifications must be made to the transaction circumstances; and (2) when making amendments to transactions with extraordinary tax burdens, the transaction price is to be adjusted as a price where both parties to the transaction undertake the taxation fees that they must undertake in accordance with the relevant government regulations.

5.2.6. When modifying transaction dates, the prices of comparable examples on the day the transactions were completed are to be adjusted as the prices at the appraisal point-in-time.

Transaction date modifications must be adjusted according to the price rate change or price index of similar real estate property. If there is no similar property price rate change or index, the local real estate price movements and price trends can be modified and used for determination.

5.2.7. When making revisions to regional factors, the prices of comparable examples based on their external environments may be adjusted as the prices of the appraisal subjects based on the state of their external environments. The main contents of revisions to regional factors are to include primarily the following: degree of prosperity, traffic convenience and accessibility, the environment, the landscape, the state of auxiliary public facilities, urban planning restrictions, and other factors that affect real estate prices. The specific contents of the regional factor revisions are to be determined on the basis of the use of the appraisal subjects. When making revisions to regional factors, the regional factors of comparable examples and appraisal subjects are to be compared one-by-one, and the price differences caused by the quality of regional factors is to be identified and revised.

5.2.8. When conducting revisions to individual factors, the prices of comparable examples based on their individual circumstances is to be adjusted as the prices of the appraisal subjects based on their individual circumstances. The main contents of revisions to individual factors related to land is to include the following: size, shape, proximity to roads, state of infrastructure, evenness of the land, topography, geological and hydrological conditions, planning regulations, term of land use, etc. The main contents of revisions to individual factors related to buildings include the following: state of depreciation, décor, facilities and equipment, layout, construction quality, building structure, number of floors, orientation, etc. The specific contents of revisions to individual factors are to be determined on the basis of the use of the appraisal subjects. When making revisions to individual factors, the individual factors of comparable examples and appraisal subjects are to be compared one-by-one, and the price differences caused by the quality of individual factors are to be identified and revised.

5.2.9. When making adjustments (revisions) to transaction circumstances, transaction dates, regional factions, and individual factors, the percentage method, the difference method, or the regression analysis method may be used, depending on the specific circumstances. The adjustments by each amendment to the transaction prices of comparable examples may not exceed 20 percent, and adjustments by comprehensive amendments may not exceed 30 percent.

5.2.10. After undergoing the above amendments and revisions, the prices of the many comparable actual examples selected are to, in accordance with the specific circumstances, be used to calculate a comprehensive result that is to serve as a market comparison value.

5.2.11. The principles and techniques of market comparison may also be used to obtain the relevant parameters of other appraisal methods.

5.3. The Income Approach

5.3.1. Appraisals using the income approach are to proceed by the following steps: (1) collection of information related to income and expenses; (2) estimation of the potential gross income; (3) estimation of the effective gross income; (4) estimation of the operating costs; (5) estimation of the net income; (6) choice of the appropriate capitalization rate; and (7) choice of the appropriate calculation formula to derive price earnings. Note: The figures for potential gross income, effective gross income, operations costs, and net income are all annual totals.

5.3.2. Net income must be based on the specific circumstances of the appraisal subject and calculated according to the following provisions: (1) For rental-type real estate, net income is to be calculated according to rental information and is to consist of rental income less the maintenance costs, management costs, insurance, and taxes. Rental income includes effective gross rental income plus interest from rental earnest money and deposits. The inclusion or other treatment of maintenance fees, management fees, insurance, and tax fees is to be interpreted from the terms of the lease contract. If the fees for guaranteeing legal, safe, and normal use of the property are all to be borne by the lessor, all the four fees must be deducted; if the maintenance and management fees are to be borne in whole or in part by the lessee, corresponding adjustments are to be made to some of the items among the four fees. (2) For commercial and business-type real estate, net income is to be calculated according to business information and is to consist of goods sales income less goods sales costs, operation costs, and goods sales taxes, as well as surcharges, management costs, finance charges, and business profits. (3) For production-type real estate, net income is to be calculated on the basis of the market price of their products and of such information as raw materials and labor costs, and is to consist of product sales income less production costs, product sales costs, product sales taxes and surcharges, management costs, finance charges, and manufacturer profits. (4) For unused or self-used real estate, net income may be calculated on the basis of relevant information of similar income-making real estate by the corresponding methods or by direct comparisons.

5.3.3. Where potential gross income, effective gross income, operating costs, or net income are used in appraisals, normal objective data are to be used, unless there are lease restrictions. Where there are lease restrictions, the rentals determined by the lease agreement must serve as the rentals during the leasing period. For rentals outside the leasing period, normal and objective rentals must be adopted. Potential gross incomes, effective gross incomes, operating costs, or net incomes calculated by directly using the appraisal subjects' own materials must be compared with the potential gross incomes, effective gross incomes, operating costs, or net incomes of similar real estate under normal circumstances and, if inconsistent with normal and objective circumstances, must be appropriately adjusted and amended to render them normal and objective.

5.3.4. When calculating net incomes, the flow of future net incomes is to be determined on the basis of past, present, and future changes in net incomes and the number of years in which incomes may be obtained, and estimates are to be made of which of the following categories the future new income flows may pertain: (1) basically fixed and unchanged every year; (2) basically increasing or decreasing every year by a fixed amount; (3) basically increasing or decreasing every year at a fixed rate; and (4) other regular changes.

5.3.5. The capitalization rate is to be analyzed and determined by the following methods: (1) The market extraction method: Collect the prices, net incomes, and other information from three or more similar real estate properties on the market, select an appropriate formula for calculating income, and derive the capitalization rate. (2) The security interest rate and risk adjustment method: Use a security interest rate coupled with a risk-adjusted value as the capitalization rate. For the security risk rate, the one-year national treasury bond interest rate for the same period, or the one-year fixed deposit interest rate published by the People's Bank of China may be chosen; the risk-adjusted value must be determined on the basis of the economic situation and future projections of the region in which the appraisal subject is situated as well as the use and physical condition of the appraisal subject. (3) The complex rate of investment return method: Use the mortgage yield of purchased real estate and the weighted average yield from personal capital income ratio as the capitalization rate, calculated as follows: $R = M \times Rm + (I - M)\ Re$ (5.3.5), where R = capitalization rate (%); M = loan to value ratio (%), ratio of mortgage to property value; Rm = the mortgage capitalization rate (%), the ratio between the first-year amount of principal and interest return and the mortgage amount; Re = the normally required capital gains rate on self-owned capital (%). (4) The rate of investment return insertion method: Identify relevant types of investments, their income rates, and degrees of risk, place them in order of the risks, compare the appraisal subject with the degrees of risk of these investments, and judge and determine the capitalization rate.

5.3.6. Capitalization Rate. Capitalization rates may be defined as comprehensive capitalization rates, land capitalization rates, and building capitalization rates, and the relationships among these is to be determined as follows: $RO - L \times RL + B \times RB$ (5.3.6), where RO = comprehensive capitalization rate (%), applicable to the appraisal of land with buildings; RL = land capitalization rate (%), applicable to land capital; RB = building capitalization rate (%), applicable to the appraisal of buildings; L = the ratio of land value in real estate value (%); B = the ratio of buildings value in real estate value (%), $L + B = 100\%$.

5.3.7. Calculation of price earnings is to be based on the type of future net income flows, and the corresponding earnings calculation formula must be used.

The basic formula for the income approach is as follows: n Ai; V = Σ (5.3.7); i; i = 1 (1 + R); where V = price earnings (RMB/square meter); Ai = net income in the first coming year (RMB/square meter); R = capitalization rate (%); n = future time in which income may be obtained (years).

5.3.8. When appraising land and buildings separately, the life of future earnings is to be determined on the basis of the life of land use rights and the life of building use, respectively, and by selecting the corresponding formulas for calculating effective life of earnings. Amortized building depreciation and land acquisition costs must not be deducted from net income. For appraisals where land and buildings are combined and where the life of building use is longer than or equal to the life of land use rights, the life of future earnings is to be determined on the basis of the duration of land use rights by choosing the income calculation formula for the corresponding number of years. Amortized building depreciation and land acquisition costs must not be deducted from net income. For the appraisal of subjects on which land and buildings are combined and where the duration of building use is shorter than the life of land use rights, one of the following methods may be used: (1) First determine the life of future obtainable earnings on the basis of the life of building use and by using the income calculation formula for the corresponding number of years. Amortized building depreciation and land acquisition costs must not be deducted from net income. Add on the discounted value of the residual land use life value where the land use life exceeds the building use life. (2) Assume the life of future obtainable earnings to be an unlimited number of years and use the calculating formula for the unlimited years of income method. Amortized building depreciation and land acquisition costs are to be deducted from net earnings.

5.3.9. When separately calculating the value of land in earnings generated in common by the use of land and buildings on the land, where net earnings remain unchanged every year and earnings may be obtained for an unlimited period of time, the following formula may be used: $\frac{VL = AO - VB \times RB}{RL}$ (5.3.9–1); *RL*. When separately calculating the value of land in earnings generated in common by the use of land and buildings on the land, where net earnings remain unchanged every year and earnings may be obtained for an unlimited period of time, the following formula may be used: $\frac{VB = AO - VL \times RL}{RB}$ (5.3.9–2); *RB*; where *AO* = net earnings generated in common by land and buildings on the land (RMB/square meter); *VL* = land value (RMB, yuan/square meter); and *VB* = buildings value (RMB/square meter).

5.4. The Cost Approach

5.4.1. For the cost approach, the following steps must be taken: (1) collect information on costs, taxes, and development profits; (2) estimate the price of replacement or reconstruction; (3) estimate depreciation; and (4) calculate the accumulated price.

5.4.2. Repricing ("Replacement Price") of buildings or reconstruction cost is to be the sum of all necessary costs as well as payable taxes and normal development profits required for the reacquisition or redevelopment and reconstruction of a completely new appraisal subject. Their components shall include the following: (1) land acquisition expenses; (2) development costs; (3) administrative costs; (4) investment interest; (5) sales taxes; and (6) development profits.

Note: Development costs must be based on the sum of land acquisition expenses and development costs and are to be calculated in accordance with the corresponding average profit margins for the development and construction of similar real estate.

5.4.3. During specific appraisals, the contents of the replacement prices or reconstruction prices of appraisal subjects are to be based on the actual circumstances of the appraisal subjects, with appropriate increases or decreases performed on the basis of the contents of the price structure set forth in Article 5.4.2. and explained in the appraisal reports.

5.4.4. When conducting separate estimates of land and buildings for the replacement prices or reconstruction prices of the same batch of real estate projects and then adding up totals, attention must be paid to the division and synchronizing of cost structures to prevent omissions or double counting.

5.4.5. When determining the replacement price of land, the replacement price is to be based directly on the state of the land at the point-in-time of its appraisal.

5.4.6. The replacement price and reconstruction price of buildings may calculated by means of the cost approach and the market comparison method, or by means of comparisons with and amendments to housing replacement prices after deduction of the price of the land as determined and announced by the government, or may be specifically calculated in accordance with the engineering cost estimate method.

The replacement price of buildings must be used for ordinary buildings and where construction materials similar to those of old buildings are lacking due to the passage of time or for the appraisals of old buildings that are difficult to restore due to changes in construction techniques. Building reconstruction prices are best used in the appraisal of buildings that are worthy of special protection.

5.4.7. Depreciations to buildings that are being appraised by means of the cost method are to consist of losses caused to the buildings for various reasons, including material, functional, and economic depreciations.

5.4.8. There are two kinds of depreciations to buildings: repairable and nonrepairable. Repairable ones are those where the cost of repairs is less than or equal to the increase in the value of the buildings after repairs, and vice versa. In the case of repairable buildings, the depreciation amount may be directly estimated as the expenses needed for repairing them.

5.4.9. The value of buildings after depreciation may be calculated with the following formula:

1. Linear formula for calculating current building value:

   $V = C - (C - S) - N$ (5.4.9–1)

2. Double declining balance (depreciation) formula for calculating current building value:

$2tV = C (1 - N)$ (5.4.9–2)

3. Discounted property rate of newness formula for calculating current building value: $V = C \times q$ (5.4.9–3), where V = the present value of the buildings (RMB/square meter); C = replacement price or reconstruction price of building (RMB/square meter); S = estimated net residual value of building (RMB/square meter); t = used life of building (years); N = usable life of building (years); q = newness rate of building (%).

Note: Regardless of which of the above methods of depreciation is used to obtain the present value of a building, the appraiser is to personally visit the sites of the appraisal subjects to inspect and evaluate the actual condition of the buildings and to determine with finality the amounts to be deducted for depreciation, or the degree or renovation, based on when the buildings were first completed; their state of repair, maintenance, and use; and the stability of their foundations.

5.4.10. The usable life of a building consists of its natural usable life and its economic usable life. The usable life used for appraisals is to be the economic usable life. The economic usable life is to be a comprehensive appraisal based on the structure of the buildings and their state of use and maintenance combined with market conditions, the environment, and the state of business earnings.

5.4.11. Where the circumstances listed below occur, determinations of the usable life and depreciation of buildings during appraisals are to be handled as follows: (1) where the construction period of a building is not included in its usable life, its usable life is counted from the date the building was completed and accepted; (2) where a building's usable life is shorter than the life of its land use rights, depreciation is to be calculated according the building's usable life; (3) where a building's usable life is longer than the life of its land use rights, depreciation is to be calculated according to the building's land use rights; (4) where a building came into existence before the supplementary procedures for transfers of land use rights and its usable life will end earlier than the life of its land use rights, depreciation is to be calculated according to the building's usable life; and (5) where a building came into existence before the supplementary procedures for transfers of land use rights and its usable life will end later than the life of its land use rights, depreciation is to be calculated according to the number of years the building has been used plus the years remaining for its land use rights.

5.4.12. Accumulated price is to consist of the building's repricing ("replacement price") or rebuilding price less the building's depreciation, or is to consist of the repriced cost of the land plus the present value of the building. If necessary, the loss of land value caused by the existence of buildings from prior time periods is to also be deducted.

5.4.13. In the case of newly developed land and newly built real estate, the cost method may be used for appraisals, and depreciation is generally not deducted. However, appropriate amendments are to be made in consideration of such factors as construction quality and the surrounding environment.

5.5. The Hypothetical Development Method

5.5.1. For appraisals using the hypothetical development method, the following steps are to be taken: (1) investigate the basic circumstances of the real estate to be developed; (2) select the best way of development and use; (3) estimate the development and construction period; (4) predict the value of the real estate after development is completed; (5) estimate development costs, management fees, investment interest, sales taxes, development profits, and the taxes to be borne by investors for purchasing the real estate that is to be developed; and (6) conduct specific calculations.

5.5.2. The hypothetical development method applies to the appraisal of real estate that has the potential for investment and development or redevelopment. When using this method, one must understand the circumstances of the real estate before and after investment and development and the mode of operation of the real estate after investment and development. Real estate pending investment and development includes uncultivated raw land, undeveloped land, cultivated land, old housing, and housing under construction. After investment and development, cultivated land and housing (land included) are included. After investment and development, the modes of operation include sales (including presale), leasing (including preleasing), and self-operation.

5.5.3. Use of the hypothetical development method to calculate the value of real estate that is to be developed is to include the value of the real estate after its development has been completed less the development costs, management fees, investment interest, sales taxes, development profits, and the taxes to be borne by investors for purchasing the real estate that is to be developed.

5.5.4. Forecasting of real estate value after development is completed is best done by the market comparison approach and by taking into account the trends of future changes in the value of similar real estate.

5.5.5. For calculating development profits, one may use the sum of the value of the real estate to be developed and the development costs or the value of the real estate after development is completed. For the rate of profits, one may use the corresponding average profit rate of similar real estate development projects in the same market.

5.5.6. Use of the hypothetical development approach for appraisals must take into consideration time value of the capital. In actual practice, the discounted value method may be used. When it is difficult to use the discounted value method, the interest calculation method may be used.

5.6. The Method for Adjusting Benchmark Land Prices

5.6.1. For appraisals using the benchmark land price adjustment method, the following steps are to be used: (1) collect information on benchmark land prices; (2) determine the benchmark land price in the region where the appraisal subject is located; (3) make revisions for the transaction dates; (4) make revisions for regional factors; (5) make revisions for individual factors; and (6) obtain the comprehensive land price for the appraisal subject.

5.6.2. For conducting transaction date revisions, the value of benchmark land prices on the date of their benchmarking is to be adjusted to the value on the appraisal point-in-time. The method for revising transaction dates is the same as the method for revising transaction dates during market comparisons.

5.6.3. The contents of, and methods for, revising regional factors and individual factors are the same as the contents of, and methods for, revising regional and individual factors during market comparisons.

5.6.4. The assessment of comprehensive land prices by using the benchmark land price adjustment method is to be conducted in accordance with the local regulations related to benchmark land prices.

6. Appraisals for Different Appraisal Purposes

6.0.1. Real estate appraisals, categorized in accordance with the purpose of the appraisals, consist mainly of the following categories: (1) appraisals for land use rights transfers; (2) appraisals for real estate transfers; (3) appraisals for real estate leases; (4) appraisals for real estate mortgages; (5) appraisals for real estate insurance; (6) appraisals for real estate taxation; (7) appraisals for compensating land requisitions and housing demolitions and relocations; (8) appraisals for real estate divisions and mergers; (9) appraisals for real estate disputes; (10) appraisals to establish the base prices for real estate auctions; (11) real estate appraisals involved in various financial activities of enterprises; and (12) real estate appraisals for other purposes.

6.1. Appraisals for Land Use Rights Transfers

6.1.1. Appraisals for land use rights transfers are to be conducted on the basis of the "People's Republic of China Real Estate Administration Law," the "People's Republic of China Land Management Law," the "People's Republic of China Provisional Regulations on the Sale and Transfer of Urban State-Owned Land Use Rights," and locally enacted implementation measures and other relevant provisions.

6.1.2. Appraisals of land use rights transfer prices must be differentiated as rights transfers by such means as agreements, bids, soliciting, and auctions. Appraisals for transfer agreements are to use open market value standards. Appraisals for bid solicitations and auctions are to be assessed for the base prices of bids and auctions and be conducted with reference to Article 6.10 on the assessment of base prices for real estate auctioning.

6.1.3. Assessment of land use rights transfer prices may employ the market comparison approach, the hypothetical development method, the cost approach, and the benchmark land price adjustment method.

6.2. Appraisals for Real Estate Transfers

6.2.1. Appraisals for real estate transfers are to be conducted based on the "People's Republic of China Urban Real Estate Administration Law," the "People's Republic of China Land Management Law," the "Regulations on the Management of Urban Real Estate Transfers," and locally enacted implementation measures and other relevant provisions.

6.2.2. Appraisals for real estate transfers are to use open market value standards.

6.2.3. Appraisals for real estate transfers must optimally use the market comparison method and income approach and may use the cost approach. The hypothetical development approach must be used for evaluating the price of transferring real estate that has yet to be developed.

6.2.4. Where land use rights are administratively allocated by the state, transfers of land rights are to be consistent with the provisions of national laws and regulations. Appraisals of the transfer prices are to separately set forth the land revenue value contained in the transfer prices, bearing in mind the State regulations for land revenue administration, and set forth accordingly in the appraisal reports.

6.3. Appraisals for Real Estate Leases

6.3.1. Appraisals for real estate leases are to be conducted based on the "People's Republic of China Urban Real Estate Administration Law," the "People's Republic of China Land Management Law," the "Regulations on the Management of Urban Real Estate Leasing," and locally enacted implementation measures and other relevant provisions.

6.3.2. Appraisals for the leasing prices of real estate that is used for conducting production and business activities are to use open market value standards. Appraisals for leasing residential housing are to implement the leasing policies enacted by the state and by the municipal People's governments of the locations in which such residences are situated.

6.3.3. For the assessment of real estate leasing prices, one may use the market comparison approach, the income approach, or the cost method.

6.3.4. Where housing is used to make profits from land, the use rights of which are leased or allocated, appraisals of the lease price are to separately set forth the land revenue value contained in the lease price. Attention is to be paid to the state regulations for handling land revenues, which are also to be clearly stated in the appraisal reports.

6.4. Appraisals for Real Estate Mortgages

6.4.1. Appraisals for real estate mortgages are to be conducted based on the "People's Republic of China Urban Real Estate Administration Law," the "People's

Republic of China Land Management Law," the "Regulations on the Management of Urban Real Estate Mortgages," and locally enacted implementation measures and other relevant provisions.

6.4.2. Appraisals for real estate mortgages are to employ open market value standards and may refer to the normal market prices of similar real estate at the time the mortgage rights are created. However, the appraisal report must clearly set forth external factors that may affect mortgage value, such as future risk of market fluctuations and short-term administrative penalties.

6.4.3. The mortgage value of the real estate must be the value of the property when it becomes a collateral debt obligation by way of mortgage. Real estate that may not be mortgaged has no collateral value. The value of real estate mortgaged for the first time is its mortgage value. The value of remortgaged real estate is its mortgage value less the preceding collateral debt.

6.4.4. When assessing the mortgage value of land use rights allocated by the state and the mortgages of buildings on such land, the valuation must deduct the monies that must be paid for the transfer of land use rights as part of the projected administrative penalties by either of the following: (1) First calculate the assumed value of real estate under the transferred land use rights, and then estimate such monies as the land use rights transfer fees that must be paid because of the change-over from the transfer of land use rights to the allocation of land use rights. The mutually deducted amount is the mortgage value. At that time, the land use right time limit is to be set as the highest statutory limit for the corresponding use, to be counted from the appraisal point-in-time. (2) Valuing by the cost approach. The price composition must not include the land rights transfer fee or any monies that must be paid for the transfer of state-allocated land use rights.

6.4.5. Where there are time limits to land use in real estate mortgages, the mortgage valuation must consider the creation of mortgage rights and the effects of the remaining time of the land use rights on the mortgage price upon expiration of the mortgage.

6.4.6. In the case of mortgages of real estate purchased under preferential state policies, the mortgage value of the real estate is the portion the mortgagor may dispose of and thereby benefit.

6.4.7. Where real estate subject to a mortgage is shared, the mortgage value is the portion of the real estate held by the mortgagor.

6.4.8. Where the real estate mortgage is commonly owned, the value of the mortgage is the value of the real estate.

6.5. Appraisals for Real Estate Insurance

6.5.1. Appraisals for real estate insurance are to be conducted based on the "People's Republic of China Insurance Law," the "People's Republic of China Urban Real Estate Administration Law," and other relevant regulations.

6.5.2. Appraisals for real estate insurance consist of appraisals of insurance values when the real estate is insured and appraisals of the value of losses or of the extent of damage after the occurrence of insured accidents.

6.5.3. Insurance value is to be the value of the insured object that serves as the basis for determining the insured amount at the time the insured and the insurer enter into an insurance contract. The insured amount is the maximum amount of compensation or insurance payment responsibility borne by the insurer and must be the actual amount of insurance paid for the insured object by the insured.

6.5.4. Appraisals of insurance value at the time real estate is insured are to assess the value of buildings that may suffer damage due to natural disasters or unforeseen accidents. The methods chosen for the assessments must optimally be the cost approach and the market comparison approach.

6.5.5. The insurance value when real estate is insured may, depending on the form of insurance procured, be determined by the actual value of the real estate when it is insured or may be determined by the actual value of the real estate when insurance accidents occur.

6.5.6. Appraisals of the value of losses or of the extent of damage after the occurrence of insured accidents are to clearly establish the state of the insured real estate before and after the accident and must estimate the costs required for restoring the parts thereof that can be restored as the value of the losses or the extent of the damage.

6.6. Appraisals for Real Estate Taxation

6.6.1. Appraisals for real estate taxation are to serve as the basis for determining the taxes to be paid in accordance with the corresponding type of taxation.

6.6.2. Appraisals of the relevant real estate taxes are to be implemented in accordance with the relevant tax laws.

6.6.3. Appraisals for real estate taxation must adopt open market value standards and are to comply with the relevant provisions of the relevant tax laws.

6.7. Appraisals for Land Requisition and Housing Demolition Compensations

6.7.1. Appraisals for land requisitions and housing compensations consist of appraisals for the compensations for requisitions of rural collectively owned land (abbreviated as "land requisition appraisals") and appraisals for the compensations for the demolition of housing and attachments on urban state-owned land (abbreviated as "demolition appraisals").

6.7.2. Land requisition appraisals are to be conducted on the basis of the "People's Republic of China Land Management Law" as well as locally enacted implementation measures and other relevant regulations.

6.7.3. Demolition appraisals are to be conducted based on the "Regulations on the Administration of Urban Housing Demolition and Relocation" as well as locally enacted implementation measures and other relevant regulations.

6.7.4. In accordance with the regulations, no compensation is to be paid for the demolition of temporary buildings that were constructed illegally or have exceeded their approved time limits; appropriate compensation is to be paid for the demolition of temporary buildings that have not exceeded their approved time limits.

6.7.5. Where price compensations are implemented, these may be negotiated on the basis of the housing replacement costs determined and announced by the local government after deducting the price of the land and in connection with assessments for the price of housing renovations.

6.7.6. When, based on the public interest, it is necessary to demolish buildings or land, the use rights of which have been legally obtained by means of compensated sales and transfers, land use rights compensation appraisals are to be included in demolition compensation appraisals if such land use rights are regarded and treated as rights recovered ahead of time. Such appraisals of compensation for land use rights are to be conducted in accordance with the normal market price corresponding to the time remaining for the use of the land rights.

6.8. Appraisals for Divisions and Mergers of Real Estate

6.8.1. During appraisals for divisions and mergers of real estate, attention is to be paid to the impacts of the divisions and mergers on real estate value. The overall value of real estate before and after the divisions and mergers may not be simplistically regarded as the sum of the values of each part of the real estate.

6.8.2. Division appraisals are to consist of separate appraisals conducted on each part after the divisions have taken place.

6.8.3. Merger appraisals are to consist of appraisals of entire entities after the mergers have taken place.

6.9. Appraisals for Real Estate Disputes

6.9.1. Appraisals for real estate disputes are to furnish scientific appraisals of value, transaction price, construction costs, rentals, amounts of compensations, amounts of indemnifications, and appraisal results of contested real estate involved in disputes; these appraisals are to provide objective, fair, and reasonable opinions and furnish references for resolving the disputes by means of agreements, mediations, or litigation.

6.9.2. Appraisals for real estate disputes are to be conducted in accordance with the appropriate type of real estate appraisal.

6.9.3. During appraisals for real estate disputes, attention is to be paid to the nature of the disputes and to different ways of resolving the disputes, such as by agreement, mediation, arbitration, or litigation, and to using these as grounds for appraisals and for coordinating the interests of the various parties.

6.10. Appraisals to Establish the Base Price for Real Estate Auctions

6.10.1. Appraisals to establish the base price for real estate auctions are to be conducted according to the "People's Republic of China Auction Law," the "People's Republic of China Urban Real Estate Administration Law," and other relevant regulations.

6.10.2. During appraisals for setting the base prices for real estate auctions, objective and reasonable prices are to be determined first and foremost by the principle of open market value and followed by consideration of short-term penalties (fast conversion to cash) and other factors.

6.11. Real Estate Appraisals Involved in the Various Financial Activities of Enterprises

6.11.1. Real estate appraisals involved in the various financial activities of enterprises include real estate appraisals in the course of joint ventures, cooperative operations, joint operations, joint stock restructuring, stock market listings, mergers, consolidations, divisions, sales, bankruptcy liquidations, and payments of debts. Such appraisals are to first clearly establish whether there have been transfers of real estate ownership, and if there have been transfers, appraisals must be conducted in accordance with the corresponding real estate transfer actions. Second, it is to be established whether changes have been made to the original use and whether such changes were legal; based on whether changes were made to the original use, appraisals are to be conducted according to the "premise of having maintained the status quo" or the "premise of conversion to other uses."

6.11.2. Where real estate ownership transfers have taken place in the course of joint ventures, cooperative operations, joint operations, joint stock restructuring, stock market listings, mergers, consolidations, divisions, sales, bankruptcy liquidations, and payments of debts, appraisals are to be conducted in accordance with the real estate transfer actions. However, attention must be paid to the similarity between bankruptcy liquidations and the disposal of mortgages in that both pertain to the special circumstances of mandatory disposal that require short-term cash conversions. Also, the purchasing party is to a certain extent similar to a corporate merger, if changes to usage are not permitted, the purchasing party's scope of use will be limited and the price value will fall below the open market value.

6.11.3. Enterprise joint operations generally do not involve transfers of real estate ownership. Real estate appraisals in enterprise joint operations primarily serve the purpose of determining the distribution ratio based on investments in the form of real estate by the investing party (parties), and for which the income approach, market comparison approach, and hypothetical development approach shall be adopted, depending on the specific circumstances; the cost approach may also be adopted.

6.12. Real Estate Appraisals for Other Purposes

6.12.1. Real estate appraisals for other purposes include real estate damage appraisals and other circumstances.

6.12.2. Real estate damage appraisals are to clearly establish the state of the damaged real estate before and after the damage occurred, and the cost required to repair the portions thereof that can be repaired must be assessed as the value of the compensation for damages.

7. Appraisal Results

7.0.1. Comparison and analysis are to be conducted on the results from different appraisal methods, and when there are significant disparities between these results, the reasons for the disparities are to be found and eliminated.

7.0.2. The results derived by different appraisal methods are to be subjected to the following checks to establish (1) whether there are errors in the calculation processes; (2) whether the basic data are accurate; (3) whether the choice of parameters was reasonable; (4) whether they comply with appraisal principles; (5) whether the formulas used are appropriate; and (6) whether the appraisal methods chosen are suited to the appraisal subject and the appraisal purpose.

7.0.3. After the results derived by the chosen appraisal methods are determined to be free of errors, a comprehensive result is to be calculated and derived in light of the specific circumstances.

7.0.4. On the basis of deriving a comprehensive result, consideration is to be given to the impact of nonquantifiable factors. The results are to be subjected to appropriate adjustments or rounded out, or the verified results are to be confirmed as the final appraisal results. When there are adjustments, the reasons are to be clearly stated in the appraisal report.

8. The Appraisal Report

8.0.1. An appraisal report must meet the following requirements: (1) Comprehensiveness: It must fully reflect the facts, reasoning processes, and conclusions involved in the appraisals, and the contents of the main text and the information in the attachments must be complete and complementary. (2) Impartiality and objectivity: It must, from a neutral standpoint, conduct objective introductions to, analyses of, and commentaries on the factors that influence the price or value of the appraisal subject, and there must be sufficient grounds for the conclusions it draws. (3) Accuracy: The language it uses must be accurate, the writing must avoid ambiguity and being prone to misunderstandings, matters that have not been verified must not be lightly included, and matters that are difficult to determine must be explained and their likely effects on the appraisal results described. (4) Ability to summarize: A highly condensed summary of the contents involved in the appraisal must be presented in condensed language, the large amounts of information obtained must be screened on the basis of scientific identification and analysis, and typical and representative information that reflects the essential characteristics of matters must be used to explain circumstances and express viewpoints.

8.0.2. An appraisal report is to include the following components: (1) a cover; (2) a table of contents; (3) a letter to the commissioning party; (4) a statement by the appraiser; (5) appraisal assumptions and constraints; (6) a report on the appraisal results; (7) a report on the appraisal techniques; and (8) annexes.

8.0.3. The appraisal report results may be presented in table form where simultaneous appraisals are conducted on large stretches of diverse real estate and the values of single pieces of real estate are low. Otherwise, appraisal result reports are to be in the form of written text.

8.0.4. An appraisal report is to record the following information: (1) the title of the appraisal project; (2) the title or the name and address of the commissioning party; (3) the name and domicile of the appraising party (the real estate appraisal institution); (4) the subject of the appraisal; (5) the purpose of the appraisal; (6) the appraisal point-in-time; (7) the definition of value; (8) the basis of the appraisal; (9) the principles of the appraisal; (10) the technical approach, method, and measurement process of the appraisal; (11) the results of the appraisal and the reasons for their determination; (12) the date(s) of the appraisal operations; (13) the term of validity for application of the appraisal report; (14) the appraisers; (15) a statement by a registered real estate appraiser with signature and seal affixed; (16) assumptions and constraints of the appraisal; and (17) attachments, which must include graphic pictures that reflect the position, surrounding environment, shape, external appearance, and internal condition of the appraisal subject; certificates of title to the appraisal subject; specialized documents and information cited in the appraisal; and credentials of the valuating personnel and appraising institution.

8.0.5. An appraisal report is to provide a full description of the circumstances of the appraisal subject, including the appraisal subject's material circumstances and rights and interests circumstances. Among these are the following: (1) descriptions of land shall include its name, location, area, configuration, boundaries, surrounding landscape, infrastructure conditions, evenness of its surface, topography, geology, hydrology, planning restrictions, current state of use, and ownership status; (2) descriptions of a building shall include its name, location, area, number of floors, building structure, decorations, facilities and equipment, layout, construction quality, date of completion, maintenance, upkeep, state of use, foundation stability, state of completion of public support facilities, current use, and ownership status.

8.0.6. The registered real estate appraiser's statement in an appraisal report must include the following contents and is to have the registered real estate appraiser's signature and seal affixed to it: (1) the facts stated by the appraisers in the appraisal report are true and accurate; (2) the analyses, opinions, and conclusions in the appraisal report are the appraisers' own fair and impartial professional analyses, opinions, and conclusions, but are restricted by the assumptions and restrictions already stated in the appraisal report; (3) the appraisers have no (or have already recorded and explained) interest relationships with the appraisal subject and do not share (or share already recorded and explained) personal interest relationships or biases with the relevant parties; (4) the appraisers have conducted analyses, formed opinions and conclusions, and written the appraisal report in accordance with the People's Republic of China National Standard "Specifications for Appraisal of Real Estate"; (5) the appraisers have (or have not) conducted on-site inspection of the appraisal subject, and are to list the names of the appraisers who have conducted on-site inspection of the appraisal subject; (6) no other person has furnished important professional assistance to the appraisal report (if there are exceptions, the name of the person who has provided important assistance is to be stated); and (7) other matters that need to be stated.

8.0.7. The appraisal report is to have legal force only if it bears the signature and seal of a registered real estate appraiser plus the official seal of the appraisal institution. The registered real estate appraiser who affixes his or her signature and seal and the appraisal institution that affixes its official seal to the appraisal report are to bear responsibility for the contents and conclusions of the appraisal report.

9. Professional Ethics

9.0.1. Appraisers and appraisal institutions may not perform any false appraisals; they are to be impartial, objective, and honest.

9.0.2. Appraisers and appraisal institutions must maintain the independent nature of the appraisal and must avoid appraisals involving [properties of] themselves, family members, or other interested parties.

9.0.3. Appraisers and appraisal institutions are not to accept a commission to conduct an appraisal when they deem it difficult for them to perform said real estate appraisal due to limitations in their professional abilities.

9.0.4. Appraisers and appraisal institutions are to take appropriate care of documents and materials that pertain to their clients and may not publicize or divulge to other persons documents and materials that pertain to their clients without obtaining written permission to do so from their clients.

9.0.5. Appraisal institutions are to implement the appraisal fee standards set by the government; they may not cite improper reasons or pretexts to impose extra fees or engage in improper competition by lowering fee standards.

9.0.6. Appraisers and appraisal institutions may not lend out their credentials for use by others or allow others to make use of their names and may not, in the capacity of appraisers, affix their signatures and seals to appraisal reports for which they have not conducted appraisals.

Appendix A. The Standard Format for Appraisal Reports (Omitted)