



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Evaluation standard for green construction of building and
municipal engineering**

建筑与市政工程绿色施工评价标准

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1 General provisions

1.0.1 The standard was drawn up in order to promote green construction and to regulate the method of evaluating green construction in building and municipal engineering works.

1.0.2 It applies to the evaluation of green construction in building works that are newly built, extended, altered or demolished, and in municipal works such as roads, bridges and tunnels.

1.0.3 Besides complying with this standard, the evaluation of green construction in building and municipal engineering works shall also comply with the provisions of the relevant current national standards.

2 Terms

2.0.1 green construction: construction activity that, on the premise that the basic requirements of quality and safety are met, puts people first, suits the measures to the place, and through scientific management and technical progress saves resources to the greatest extent and reduces the negative impact on the environment.

2.0.2 prerequisite items: clauses that must be met during the green construction process.

2.0.3 general items: clauses whose difficulty of implementation and whose requirements are moderate during the green construction process.

2.0.4 extra items: clauses whose difficulty of implementation is greater and whose requirements are higher during the green construction process.

2.0.5 construction trash: waste material produced during the construction of building works and of municipal works such as roads, bridges and tunnels.

2.0.6 building waste: the part of construction trash that, once sorted, has lost its value for recovery and use on the construction site.

2.0.7 percentage of recovery and reuse: the share of the construction trash recovered and used on site in the total construction trash of the site.

2.0.8 obdurate ground water lowering: a method of lowering the water table in which cut-off measures are taken at the base and at the side walls of the excavation, so that the groundwater level outside the excavation is not affected.

2.0.9 informative construction: construction activity in which information technology is used to collect, transmit, process, use and store the information of the process of carrying out the project.

2.0.10 green construction evaluation: the activity of judging the level and the effect of green construction of a construction project.

3.1 Implementation organization

3.1.1 The main contractor shall bear overall responsibility for the green construction of the project.

3.1.2 A subcontractor shall be responsible for the green construction of the project within the scope of its subcontract.

3.1.3 The project department shall set up a green construction management system in which the project manager is the person with first responsibility.

3.2 Green construction planning

3.2.1 Before the project starts, the project department shall analyse the factors that influence green construction and shall state the green construction objectives.

3.2.2 The project department shall plan green construction on the basis of the results of that analysis and shall decide which of the evaluation clauses among the green construction evaluation factors are to be kept and which left out.

3.2.3 Green construction planning shall be realised through the preparation of documents such as the green construction organisation design, the green construction scheme and the green construction technical disclosure.

3.2.4 The green construction organisation design and its schemes shall include the content of technical and managerial innovation and the corresponding measures.

3.3 Management requirements

3.3.1 The construction unit shall inspect the green construction of the project.

3.3.2 Green construction of a project shall satisfy the following: a sound green construction management system and set of rules is established; the green construction planning documents are complete; clear and conspicuous green construction publicity signs are set up; a green construction training system combining specialist training and post training is established and records of it are kept; the records of the batch and phase evaluations of green construction are complete and the material on continuous improvement is fully preserved; typical photographs or video material of the green construction process are collected and kept; the four new technologies are promoted and applied; and the subcontract or the labour contract contains green construction requirements.

3.3.3 A project shall not be rated as a project qualified in green construction when any one of the following occurs: a fatal accident of work safety responsibility; a quality accident of the works, or an adverse social effect caused by a quality problem; a responsibility accident such as a group infectious disease or food poisoning; a penalty imposed by a government administration during construction for a problem of environmental protection and resource

saving; a violation of the national laws and regulations on environmental protection and resource saving that causes a social effect; disturbance of residents by the construction work that causes a social effect; or the burning of waste on the construction site.

3.3.4 The joint review of the drawings shall include green construction content.

3.3.5 The construction unit shall optimise the construction drawings, the green construction organisation design and the green construction scheme.

3.4 Evaluation framework system

3.4.1 The green construction evaluation of a project shall be made on the basis of the analysis of the factors that influence green construction and, according to the green construction planning documents, shall evaluate the process by which the works are carried out.

3.4.2 The green construction evaluation framework is made up of the evaluation of the basic requirements, the index evaluation, the factor evaluation, the batch evaluation, the phase evaluation, the unit project evaluation and the division into evaluation grades, and the evaluation is carried out in that order.

3.4.3 The evaluation of the basic requirements shall evaluate the clauses on green construction planning and on management requirements.

3.4.4 The index evaluation shall evaluate the clauses of the prerequisite items, the general items and the extra items.

3.4.5 The factor evaluation shall, on the basis of the index evaluation, evaluate separately the three factors of environmental protection, resource saving, and human resource saving and protection.

3.4.6 The batch evaluation shall, on the basis of the factor evaluation, be carried out batch by batch as the work proceeds.

3.4.7 The phase evaluation shall be carried out on the basis of the batch evaluation. For building works the phases are foundation and substructure works, main structure works, and finishing works together with mechanical and electrical installation. For municipal works: road and bridge works are divided into foundation and substructure works, structural works, and bridge or road surface and ancillary facility works; tunnel works built by the mining method are divided into excavation, lining and support, and ancillary facilities; tunnel works built by the shield method are divided into launching and reception, driving and lining, and ancillary facilities; pipeline works are divided into setting out, installation, and testing and connection to the network.

3.4.8 The unit project evaluation shall be carried out on the basis of the phase evaluation, and the evaluation grades are the three grades unqualified, qualified and excellent.