

EXPO2005 GUIDELINES
FOR
OFFICIAL PARTICIPANTS

GL 4 - 6

**Environmental Conservation Guidelines on
Pavilion Planning and Construction Works by
Official Participants**

November 2003

Japan Association for the 2005 World Exposition

The Japan Association for the 2005 World Exposition will issue guidelines for use by official participants for all aspects of the exposition, from preparation of module-based buildings to the operation of pavilions.

Guidelines will be numbered sequentially as follows: GL1-1, GL1-2, GL1-3...followed by GL2-1, GL2-2, GL2-3, etc, where each serial number is based on and derived from one of the Special Regulations of Expo 2005 Aichi, Japan, e.g., all guidelines headed with GL1 are based on Special Regulation No.1, those headed with GL2 on Special Regulation No.2, and so on.

Guidelines will be issued as needed rather than in numerical order. For example, GL4-1, **Design Guidelines on Modular Buildings for Official Participants**, will be issued as a first priority as it contains information required at an early stage for official participants to plan their respective exhibition projects. Official participants are requested to follow these guidelines in their preparations, and are invited to contact the following location for any inquiries or clarifications of the guidelines.

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Environmental Conservation Guidelines on Pavilion Planning and Construction Works by Official Participants

Article 1: Objectives

These Guidelines stipulate environmental considerations required of official participants in “pavilion planning and construction works—including interior/exterior works and exhibition/decoration works” (hereinafter referred to as “pavilion planning and construction”) on the site of the 2005 World Exposition, Aichi, Japan (hereinafter referred to as the “Exhibition”).

These Guidelines are based on Article 3 “Compliance with Laws and Regulations” of the *Special Regulation No. 4 concerning Construction, Installation, Fire Prevention, Labor Safety and Protection of the Environment*—and preferable measures suggested by the Organizer, as set forth in Article 30 “Environmental Conservation” of the same Regulation.

Official Participants are required to stipulate observance of the Guidelines in pavilion planning and construction specifications and other relevant documents, so that the Guidelines may be appropriately implemented by commissioned designers, contractors, supervisors and other parties involved.

Article 2: Requirements

1. Official participants must promote the 3Rs in pavilion planning and construction: **Reducing** waste generation, **Reusing** and **Recycling** of used resources.

- (1) The Exhibition sets as the objective the reuse or recycling of 95% of the materials (concrete mass, asphalt-concrete mass, and construction-derived lumber) resulting from construction works. Each official participant shall make efforts to achieve that objective.

- (2) The Japan Association for the 2005 World Exposition (hereinafter referred to as the “Association”) has established the environment management system for the Exhibition, based on ISO 14001 methodology, to steadily promote environmental considerations.

Official participants are required to submit to the Association written plans concerning the types and quantities of construction materials (including those produced in participants’ home countries) to be used for pavilion construction works, so as to ensure that the required environmental conservation measures are implemented.

For planning the types and quantities of construction materials to be used, please be sure to use the form (Form 1) prepared by the Association.

- (3) In addition to compliance with related laws and regulations, official participants are required to promote the recycling of resources and the appropriate treatment and disposal of waste.
 - ① Recycled materials shall be used for construction materials (sand and earth, crushed rock, asphalt-mixed materials etc.), to the extent possible.
 - ② Construction-derived earth, lumber, metal debris, waste plastic and paper waste shall be recycled to the extent possible.
 - ③ Appropriate treatment shall be given to construction-derived lumber, waste paper, fiber waste, construction sludge, metal debris, glass and ceramic waste, other industrial waste materials, construction-derived mixed materials, general waste and asbestos (dispersive type). When treatment is entrusted to waste-disposal companies, the manifest system shall be used.

2. Official participants are required to make efforts to minimize greenhouse gas emissions during pavilion planning and construction.
 - (1) Efforts shall be made to reduce carbon dioxide, methane and dinitrogen monoxide emissions resulting from the use of cement, construction vehicle traffic and machine operation, as well as the volume of frames used for concrete works, by preparing an economical and efficient construction plan.
 - (2) Regarding the above efforts, official participants shall prepare written plans and reports and submit them to the Association, to ensure that the required environmental conservation measures are implemented.
Please be sure to use the form (Form 2) prepared by the Association.
 - (3) Energy- and resource-saving equipment shall be used to the extent possible: e.g. air-conditioning, lighting and kitchen equipment and other equipment using electricity, gas and water.

3. Official participants are required to make efforts to reduce environmental impact during pavilion planning and construction.
 - (1) Measures relating to the use of toxic substances
 - ① Construction methods that minimize the use of toxic substances are selected.
 - ② Usage and control manuals are prepared, and toxic equipment and products are used and stored in accordance with such manuals.
 - (2) Measures relating to atmospheric quality
 - ① Particle dispersion is prevented.
 - ② Low-emission construction machines and the latest emission-controlled construction vehicles are used.

- (3) Measures relating to noise and vibration
 - ① Low-vibration and low-noise methods are adopted.
 - ② Low-noise and low-vibration construction machines are used.
 - ③ Vehicles in conformity with the latest regulations are used.
- (4) Measures relating to water quality

Appropriate treatment of alkali-containing effluent from concrete work is carried out.
- (5) Measures regarding construction personnel activities and awareness of environmental conservation
 - ① The unnecessary passage of construction personnel outside the site is minimized.
 - ② Damage to trees near or along roads for construction vehicles is prevented and minimized.
 - ③ Construction workers are instructed to observe speed limits while driving construction vehicles.
- (6) Other measures for environmental impact minimization
 - ① Nighttime construction work and nighttime lighting are minimized, so as to prevent light reaching outside the site.
 - ② Optimal measures are devised regarding installation of lighting equipment, such as the use of appropriate shielding hoods and the like.
- (7) Measures for emergency situations
 - ① Appropriate and prompt action is taken in accidents and emergency situations.
 - ② Safety measures are taken to prevent accidents involving third parties, and take appropriate action in case of emergency.

Article 3: Preferable Measures

Official participants are required to actively promote their voluntary environmental considerations during pavilion planning and construction, as well as to comply with the requirements mentioned in the preceding article.

Such voluntary environmental considerations can include use of low-environmental impact materials, such as recycled PET bottles and biodegradable plastics; application of technological achievements of the environmental industry; and use of an environmental action checklist.