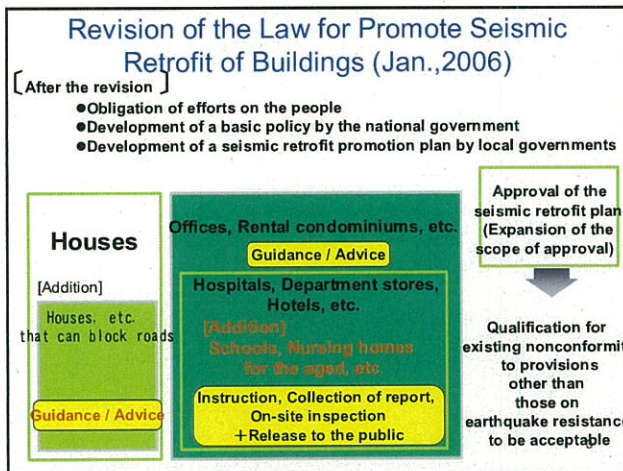
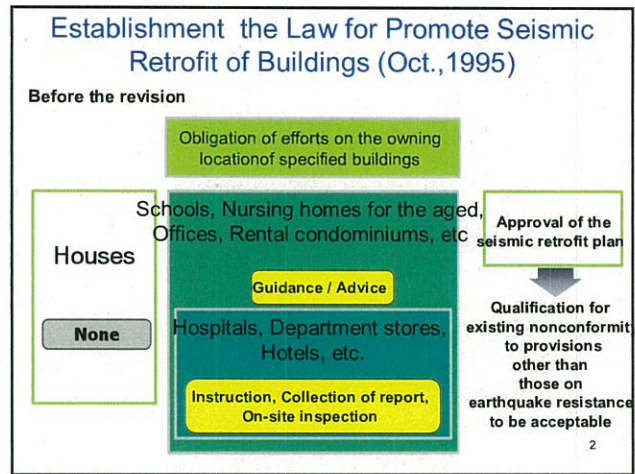


## TMG Seismic Retrofit Promotion Plan & Approach for seismic retrofit of Condominiums

Building planning Section  
Urban Building Division  
Urban Development Bureau  
TMG

## TMG Seismic Retrofit Promotion Plan (Formulated in March, 2007) (Revised in March 2008)

### Purpose and Mission

- Halve the expected casualties from an earthquake by promoting seismic retrofit of houses and buildings
- Provides guidelines for municipalities in developing their seismic retrofit promotion plans.

### Predicted Scale of Earthquakes and Casualties

Predicted Earthquake	number of deaths	Principal cause of death
Erathquake in Nothern Tokyo Bay Magnitude 7.3 18:00 in winter Wind Velocity 6m/sec	About 5,600 people	building collapse 30.8% Concrete brick fence collapse, etc 9.9%
Epicentral Erathquake in Tama Area Magnitude 7.3 18:00 in winter Wind Velocity 6m/sec	About 3,300 people	building collapse 18.0% Concrete brick fence collapse, etc 18.2%

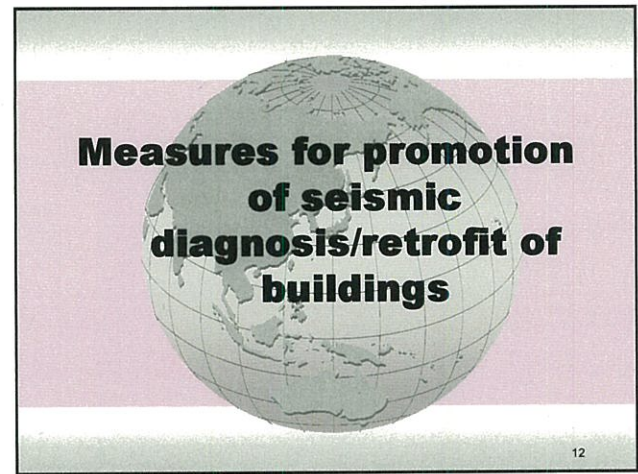
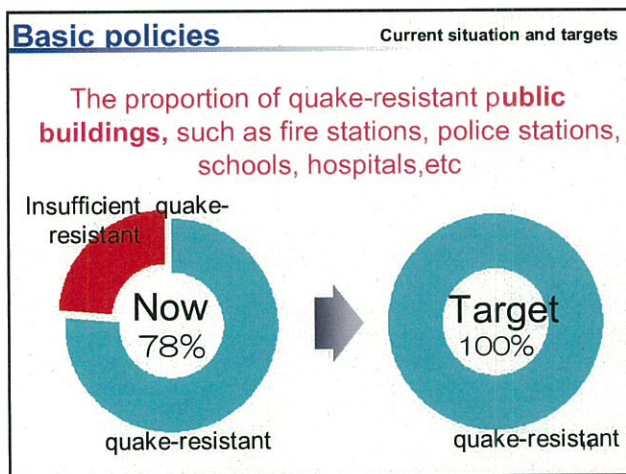
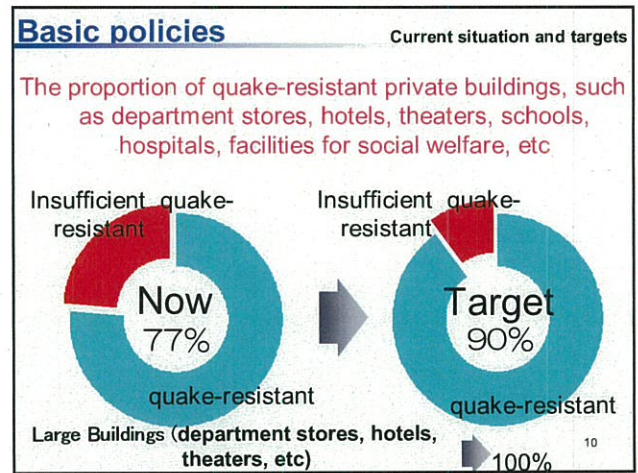
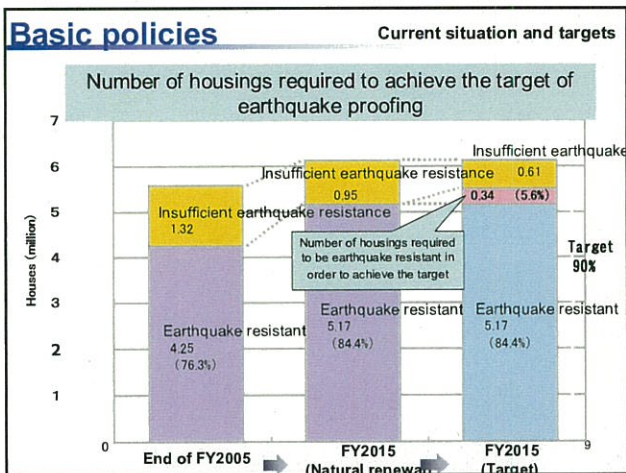
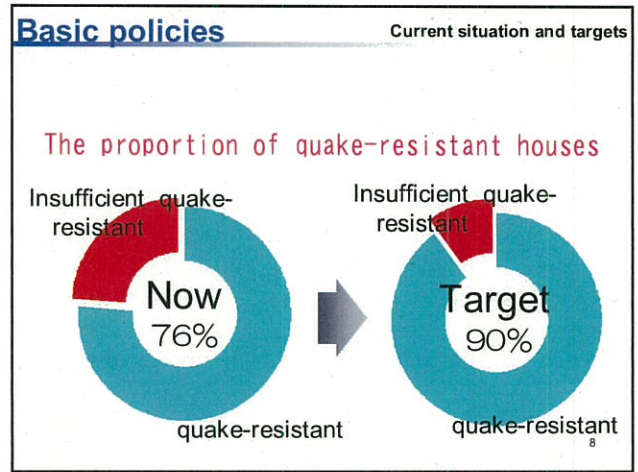
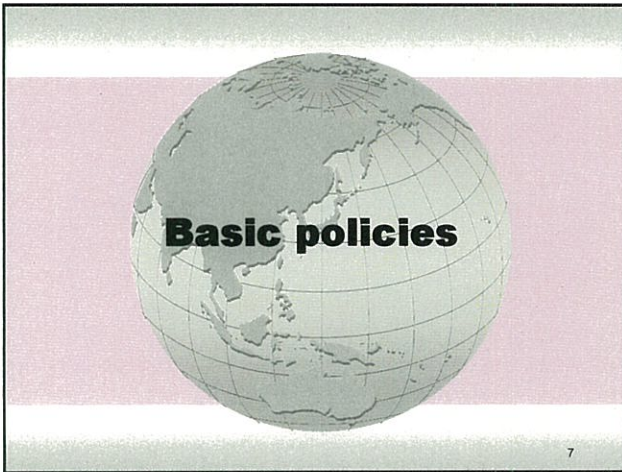
Tokyo Disaster Reduction Conference in May 2006 5

### Buildings covered by the Plan

- Houses and buildings build before the new quake-resistance standards (come into force on June 1, 1980)

### Period

- 10 years from FY2006 to FY2015 (reviewed and revised as appropriate on a regular basis)



Measures for promotion of seismic diagnosis/retrofit of buildings Basic Strategies

- Principle of self help, mutual help and public help
- From the viewpoint of public help, if necessary
- Strengthen cooperation with the municipalities and other related organizations

provide technical assistance to building owners

provide financial assistance to building owners

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Measures for promotion of seismic diagnosis/retrofit of buildings Key Strategies

**High priority buildings to be seismically retrofitted**

- Public buildings that perform critical functions in case of a disaster
  - ▶ Immediately perform seismic diagnosis
  - ▶ Create detailed action programs
- Department stores, hotels, etc.
  - ▶ Strongly request to the owners for seismically retrofitting these buildings.
- Condominium
  - ▶ Promote the use of the Seismic Diagnosis Aid Program (Consensus building is difficult among owners)

Measures for promotion of seismic analysis/retrofit of buildings Key Strategies

**Approach for seismic retrofit of Condominiums**

- Financial aid (interest subsidy) for Seismic diagnosis/construction
- To disseminate seismic retrofit among condominium management associations by "The TMG's Guideline for Management of Condominiums" (Oct.,2005)
- To dispatch the adviser on rebuilt & renovation of condominiums (privately-owned units)
- To dispatch the adviser on management of condominiums (privately-owned units)
- To introduce seismic diagnosis services providers by close cooperation with related organizations
- To disseminate seismic diagnosis by close cooperation with condominium management providers, etc

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Measures for promotion of seismic diagnosis/retrofit of buildings Key Strategies

**Seismic retrofit of Condominiums**

**Financial aid for Seismic Diagnosis**  
Financial aid for municipalities which implement subsidies for seismic diagnosis of condominiums

**Financial aid for renovation work (interest subsidy)**  
The TMG provides interest subsidy (1%) for 7 years on condition that it gets "Reform Loan for Common Space of Condominiums" by the Japan Housing Finance Agency  
(To get debt guarantee by the Condominiums Management Center is necessary)


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Measures for promotion of seismic diagnosis/retrofit of buildings Key Strategies

**Seismic retrofit of Condominiums**

**The TMG's Guideline for Management of Condominiums(Oct.,2005)**

- Advisable matters that condominium management associations should do, etc
- As appendix, introduction of seismic diagnosis/retrofit methods
  - procedure of seismic diagnosis
  - methods and examples of seismic retrofit, etc



マンション管理  
ガイドライン

Sold at the Information Room on the 3rd floor in the TMG #1 Building

Measures for promotion of seismic diagnosis/retrofit of buildings Key Strategies

**Seismic retrofit of Condominiums**

**Adviser on rebuilt & renovation of condominiums (privately-owned units)**  
To inform technical matters and explain the review paper to the condominium management associations on the site in the early stage of the study about rebuilt & renovation

**Adviser on management of condominiums (privately-owned units)**  
To inform technical matters and advise the maintenance and management of condominiums on the site

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**Measures for promotion of seismic diagnosis/retrofit of buildings** Key Strategies

### Seismic retrofit of buildings along major roads

Designate roads that must be prevented from being blocked by an earthquake.

As of now, a total of 1,970 kilometers of roads are the designated emergency transportation roads

Carry out intensive actions to promote the seismic retrofiting of buildings of a certain height

- Provide guidance and advice based on the Law
- Provide public funds for the owners of important buildings.

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**Measures for promotion of seismic diagnosis/retrofit of buildings** Key Strategies

### Seismic retrofit of buildings along major roads

**Targeted Buildings**

Buildings involving the dot marking part are targets.

Height

45°

Road Center

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**Measures for promotion of seismic diagnosis/retrofit of buildings**  
**Seismic retrofit of buildings along major roads**

A Major Road Blocked by a Collapsed Building  
 (at the Great Hanshin-Awaji Earthquake)

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**Measures for promotion of seismic diagnosis/retrofit of buildings** Key Strategies

### Seismic retrofit of buildings along major roads

TMG Network Plan of emergency transportation roads

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**Measures for promotion of seismic diagnosis/retrofit of buildings** Related measures/enlightenment activities

To improve capabilities of designers and constructors offering seismic diagnosis/retrofit services, and to provide citizens with information about reliable providers of such services.

To expand & improve consultation services, etc

**Related measures**

- To build up a closer connection with the Periodic Investigation and Reporting System
- Prevention of falling window glass, tiles, etc
- Regulation of outdoor advertising (above a certain size→ to post administrator of outdoor advertisement)
- Prevention of elevator trappings
- Prevention of falling furniture
- To induce building owners to do seismic retrofit when they plan to reform their buildings
- To keep "Post-Earthquake Temporary Risk Evaluation of Damaged Buildings System" in a good condition
  - To train specialists who evaluates the risk of damaged buildings, and to keep them in active
- To perform building confirmation and interim & final inspections thoroughly
- To disseminate "Housing Performance Indication System" further

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**Toward promotion of the TMG's Plan**

### Toward promotion of the TMG's Plan

- Work together with municipalities
  - / Support to development of municipalities' seismic retrofit promotion plans
  - / Raise awareness through door-to-door visits to building owners.
- Work together with private sector groups
- PR activities
  - / Campaign to promote seismic diagnosis/retrofit buildings
  - / Organize the workshop
- Others
  - / Register the design office with competence for seismic diagnosis of wooden houses in Tokyo
  - / Restrict unprincipled door-to-door selling

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**Toward promotion of the TMG's Plan**

Conference of the Citizens of Tokyo for Promoting Seismic Retrofit

Exhibition of "Reasonable & Reliable" Seismic Retrofit Methods for Wooden Houses (at the city hall of Nerima City)

**Toward promotion of the TMG's Plan**

Forum for Promoting Seismic Retrofit of Schools (In Sep. 2008, at the TMG's hall )

Exhibition of Seismic Retrofit Methods for Buildings (In Sep. 2008, at the TMG's hall )

Thanks for your kind cooperation

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