

Special Topic 1

Toward Recovery from the Earthquake and Revitalization of Communities

Earthquake Countermeasures

Following the Great Hanshin-Awaji Earthquake in January 1995, Sanriku earthquake in May 2003, Niigata Chuetsu earthquake in October 2004, and other disasters, JR East has continued to take steps such as emergency stop measures for trains, seismic reinforcement of viaduct columns, bridge supports, tunnels, station buildings, etc., measures to prevent trains derailing, and installation of additional seismometers. Thanks in part to these measures, no passengers traveling on board JR East trains suffered injuries during the Great East Japan Earthquake which occurred on March 11, 2011. Since FY2010, we have expanded the scope of our measures and are proceeding with the second phase of seismic reinforcement measures, such as seismic reinforcement of viaduct columns. As a further countermeasure for earthquakes, we are pushing forward with the creation of a highly disaster-resistant railway by working on the following measures, which will mainly be implemented during the five-year period that started in FY2013.

- 1) In preparation for an earthquake occurring directly below the Tokyo metropolitan area, in addition to the seismic reinforcement of viaduct columns and bridge supports undertaken to date, we are carrying out seismic reinforcement of embankments, cuttings, arched brick viaducts, power poles, etc., measures to prevent the collapse of station platform ceilings and walls, and so forth.
- 2) As a result of the Great East Japan Earthquake, we are working on seismic reinforcement of station buildings used by over 3,000 passengers per day and shinkansen track power poles, which suffered major damage during the earthquake.
- 3) We plan to reinforce our communication functions in the event of an earthquake through measures such as higher-speed transmission of seismographic data and enhanced backup power for communication networks.



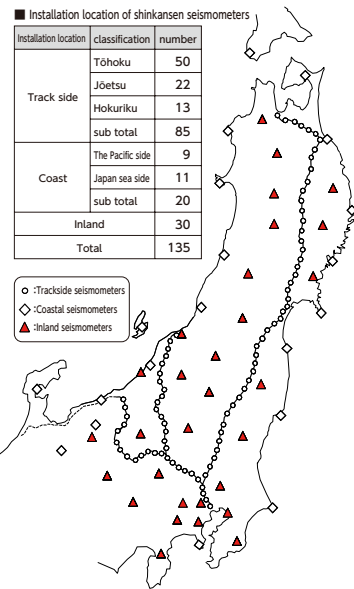
Example and Image of Reinforced Embankment



- Incorporating reinforcing material into embankment
- Installation of guard rails



Examples of Seismic Reinforcement



Installation status of seismometers (As of Mar 31, 2015)

Handling of Stranded Passengers and Provision of Training

Given that many passengers were stranded in the vicinity of stations during the Great East Japan Earthquake, in the event of another earthquake we will do our utmost to make passenger restrooms and public phones available and provide information at stations throughout the Tokyo area. We have also established a system that will make it possible to temporarily accommodate passengers in concourses and other locations at around 200 stations after confirming the safety of the facilities. These stations are stocked with supplies such as drinking water, blankets, first-aid kits, and so forth, especially for children and the elderly.

In addition, we have conducted training in handling stranded passengers in partnership with relevant local governments, etc., focusing on major terminal stations, and we are pursuing discussions with local municipalities on evacuation management methods in the event of a disaster and working together with communities to improve our disaster preparedness.



Stockpiled supplies



Training drill for handling stranded passengers

Recovery Support Measures Undertaken in FY2015

The areas affected by the Great East Japan Earthquake are still in the process of recovery, and helping to revitalize these communities via the power of tourism is an important mission for our company. In FY2015, we continued to conduct activities promoting travel to Tohoku, including the Yamagata Destination Campaign (DC) from June to September 2014 and the ongoing GO! TOHOKU campaign launched in FY2013, which was run throughout the year as a symbol of the region's recovery. In addition, with the aim of supporting restoration and revitalizing communities via tourism, a new excursion train, the SL Ginga (running between Hanamaki and Kamaishi on the Kamaishi Line), made its debut in April 2014.

The SL Ginga is powered by a restored steam locomotive (C58 239) and the train's overall concept is based on Kenji Miyazawa's novel *Night on the Galactic Railroad*. Thanks to the efforts of specialists in various fields, the train interior has been turned into a space that leads passengers on a voyage of the imagination via Tohoku's culture, nature, and scenery.



Tourism campaign



SL Ginga

Basic Restoration Policy and Current Status of Tsunami-Damaged Sections

We have been steadily proceeding with restoration work and resumption of operations in sections on the northeastern Pacific Coast that suffered extensive damage due to the tsunami, beginning with sections where safety can be ensured.

With the aim of restoration integrated with urban planning, we have been proceeding with construction work between Soma and Hamayoshida on the Joban Line, Takagimachi and Rikuzenono on the Senseki Line, and Urashuku and Onagawa on the Ishinomaki Line. Operation was resumed on the entire Ishinomaki Line in March 2015 and on the entire Senseki Line in May of the same year; in addition, service was begun on the Senseki-Tohoku Line, a new link between the Senseki Line and the Tohoku Main Line. We are aiming to resume full service on the Joban Line in the spring of 2017. In June 2014, we resumed service on the section of the Joban Line between Hirono and Tatsuta. The section between Tatsuta and Haranomachi passes within 20 km of the Fukushima Daiichi Power Station, and in January 2015, we began running a shuttle bus covering the section between Tatsuta and Haranomachi. In terms of our future policy, in areas that are preparing to lift evacuation orders, with the support and collaboration of national and local governments, we are continuing to make preparations to resume operations through the necessary environmental improvements, such as decontaminating trackside areas and starting preparations for the return of residents, and we are aiming to open services passing through difficult-to-return zones after restoring damaged facilities as well as completing the required decontamination and measures to ensure users' safety in the event of an emergency, again with the support and collaboration of national and local governments.

With regard to the Kesennuma Line and Ofunato Line, with the aim of rapidly providing safe, highly convenient transportation services, we are offering an interim BRT service and have enhanced its convenience by extending the route and introducing Odeca IC card tickets. In June 2015, in order to further improve convenience and efficiency in the direction of Ishinomaki and Sendai, many Kesennuma Line BRT trips were extended from Yanaizu to Maeyachi.*

With regard to the Yamada Line, with a view to promoting use through community-based operation and providing a compact, highly sustainable means of local transport, we proposed joint operation with the north and south Riasu Lines run by Sanriku Railway to the local government and other parties. A broad agreement was reached in December 2014, a letter of intent and memorandum were signed in February 2015, and a groundbreaking ceremony was held in March to mark the start of railway reconstruction work.

As of September 1, 2015, sections where operation has been suspended had been reduced from approximately 400 km immediately after the earthquake to approximately 220 km. Going forward, we will continue to collaborate with national and local governments in order to restore damaged lines in tandem with restoration of the overall community and urban development, while ensuring the safety of our customers.



Resume operation of Senseki Line



Resume operation of Ishinomaki Line

*Also, in July, with urban development activities aimed at restoring earthquake-hit areas gathering momentum, we proposed BRT as a sustainable means of transportation that will contribute to recovery, with the purpose of further developing the area.