



Japanese Red Cross Society
End Report of the 1st Donation for
Tainan Earthquake Recovery Program

Taiwan Red Cross

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Japanese Red Cross Society 0206 Tainan Earthquake Recovery Project
Donation Accountability Report
2016.02.06-2017.06.30

I. Project Background

On February 6, 2016, a magnitude 6.4 earthquake shook southern Taiwan at 3:57 AM, with an epicenter 16.7 km deep, located in Kaohsiung's Meinong District. Regions affected included Tainan City, Kaohsiung City, Pingtung County, Chiayi County, and Chiayi City. In Tainan City alone, 117 were killed, over 550 were injured, and over 200 residences and 186 schools were reported damaged.

The earthquake occurred during the Chinese New Year, and teachers, students, and parents were concerned about the repair, reconstruction, and safety of school campus facilities after the quake, especially considering school would resume in 10 days' time. Immediately after



Affected areas are colored yellow



The Weiguan Jinlong building in Tainan City collapsed due to the earthquake; TRC volunteers were one of the first search and rescue teams on site

the earthquake, your society publicly expressed your concern, sending staff members to the disaster site to assess the situation and agreeing to fund school reconstruction items within the TRC's Recovery Project. After consulting with educational divisions in affected local areas, the TRC collaborated with these local units to provide elementary, junior high, and senior high schools in isolated areas with the resources to repair and reconstruct damaged school buildings (including earthquake reinforcement modifications).

Your society offered another donation of JPY 290,000,000 on April 7, 2017, in support of two of the TRC's new items within the project: "Subsidies for Housing and Disadvantaged Families" and "Donation of Mobile Hospital Equipment."

II. Application of Contributions

On March 23, 2016, your society contributed your first donation of JPY 150,000,000 (the exchange rate for that date was 1:0.2877, which converts to NTD 43,155,500; accumulated interest was NTD 57,677, which totals NTD 43,212,677). The second donation of JPY 290,000,000 was received on April 7, 2017 (the exchange rate for that date was 1:0.2766, equaling TWD 80,214,000). Your total contribution amounts to TWD 123,426,677. The first donation, including interest, has already been fully implemented in the repair and reconstruction of 10 schools in the Tainan and Chiayi areas, as well as towards the fixing of damaged equipment in 3 Tainan City elementary schools. As for your second contribution, your society has agreed towards its use for the "Subsidies for Housing and Disadvantaged Families" and "Donation of Mobile Hospital Equipment," which are currently being carried out and will not be covered within this report. Details on the execution of your first donation are as follows:

School Renovation and Reconstruction Costs

Unit: NTD

No.	Project Item	Implemented Funds	Comments
1	Construction Costs	39,561,614	Total expense is NTD 50,709,669, within which, NTD 39,564,614 was from your contribution, with the remaining costs supplemented by other donations
1.1	Jiali Elementary School Tainan City	5,337,900	Completed
1.2	Beimen Elementary School, Yuhu Campus, Tainan City	8,037,711	Completed
1.3	Beimen Elementary School Tainan City	9,135,133	Completed
1.4	Beimen Junior High School Tainan City	5,221,033	Completed
1.5	Syuejia Junior High School Tainan City	9,207,505	Completed
1.6	Equipment updates at Beishih, Shuangchun, & Kunshen Elementary Schools, Tainan City	99,192	Completed
1.7	Jhuci High School, Chiayi County	4,437,652	Completed
1.8	Sikou Elementary School Chiayi County	3,846,113	Completed
1.9	Jiabei Elementary School Chiayi City	821,330	Completed
1.10	Xing'an Elementary School Chiayi City	1,006,973	Completed
1.11	Pei shin Junior High School Chiayi City	3,559,127	Completed
2	Personnel Expenses	3,448,200	Completed
3	Administration Fees	202,863	Completed
TOTAL		43,212,677	

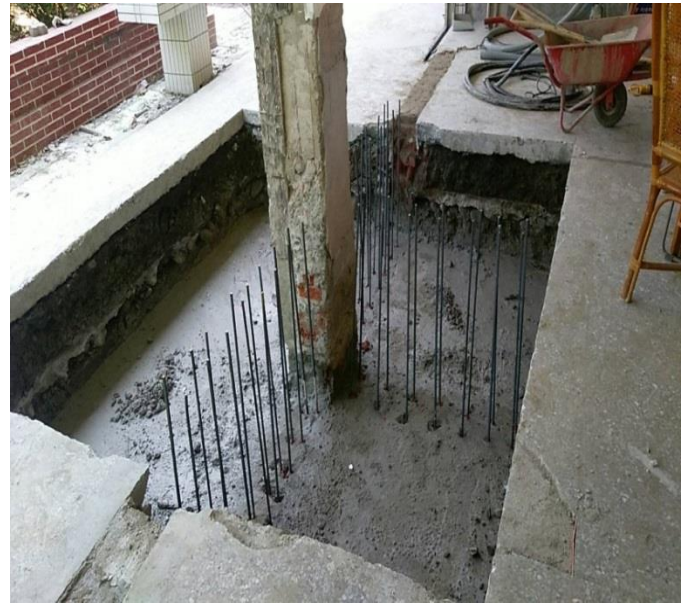
III. Project Results

Your society's first donation was utilized for the efforts for repairs, reconstruction, and renovating damaged equipment in schools within the Chiayi and Tainan regions, in addition to personnel and administration fees, amounted to NTD 43,212,677, with an implementation rate of 100%.

Maintaining Campus Safety

During the Great Hanshin earthquake in Japan, school facilities were the best locations for locals to seek shelter because they were more sturdily built and their electricity and water supplies were relatively stable. In contrast, Taiwan's schools are simpler in their spatial design and have stricter requirements concerning ventilation and lighting, so generally schools are built as rectangles, U-shaped, L-shaped, or H-shaped. However, due to the lack of earthquake-resistant design in beam-column construction—such as overly large spacing between beams and columns, incorrect hook angles, or an insufficient amount of main reinforcement bars—beams and columns are commonly damaged when earthquakes occur. Vertical windows installed in classrooms, stairwells, and restrooms often result in the short column effect. In addition, when construction on school buildings is completed at different time periods, earthquakes often result in crumbling concrete or even damaged beams, columns, and floors at the points at which they combine.

The Taiwan Construction Research Institute, commissioned by the TRC, along with architects and structural technicians, utilized column jacketing, wing walls, damping, and carbon fiber reinforcements to boost the earthquake resistance of Tainan City's Jiali Elementary and Beimen Junior High School, so that students may return to school without teachers and parents worrying for their safety.



Shorter walls and windows within classrooms are the most prone to damage from the short column effect. Pictured on the left are wing walls, on the right is column jacketing, which are two methods of making classroom structures more earthquake-resistant and safe.

The TRC also assisted three schools in Tainan City (Shuangchun, Beishih, and Kunshen Elementary Schools) in procuring projectors, projection screens, computers, and teaching audio equipment.



New wireless audio equipment, freeing teachers and students from microphone wire length limitations



New multi-functional projectors make teaching more lively

Results of School Repairs and Reconstruction

Jhuci Senior High School in Chiayi County held the “Joined by Love, Chiayi Sets Sail: Taiwan Red Cross Donation of Athletic Field PU Track and Ball Court Inauguration Ceremony” on December 1, 2016. The PU track donated with your society’s contribution is resilient, shock-absorbent, dries quickly after rain for immediate use, and is effective in reducing sports injuries. It is not just an improvement to overall school facilities but also provides a quality exercising ground for the local community.



Chiayi County Magistrate Chang Hua-Kuan hands a certificate of appreciation to President Wang (R)



Jhuci Senior High School’s new athletic field, to be used by Jhuci students, teachers, and locals

Located near Yunlin County, Chiayi County's Sikou Elementary School boasts a hundred year history but their gymnasium had not been renovated in years, with the showers and locker room even worse for wear. The TRC expressly renovated the school's indoor tennis court, re-laid the floor, as well as rebuilt the locker room and showers, so that students and teachers could enjoy a safe space to exercise in.

Tainan's Beimen is known for its fish farms and salt fields. Classrooms at Beimen Elementary and its Yuhu Campus were damaged in the 0206 Tainan earthquake. The TRC reconstructed new, sturdy, and picturesque classrooms at the original site; during the construction process, the teachers and students at Yuhu Campus had to conduct classes in a nearby temple, which was a taxing experience. After construction was completed, the school provided designs related to local industries, and the TRC constructed two different colored, whale-shaped sinks, which won over teachers and students' favor.

The arts & crafts classroom at Syuejia Junior High School was also damaged in the earthquake. The TRC demolished it and reconstructed an industrial arts classroom and a culinary classroom, so that students could acquire new, professional skills in a safe classroom environment.



Completed floor renovation of the indoor tennis court at Sikou Elementary School, Chiayi County



The Lion Dance Team at Beimen Elementary School's Yuhu Campus, Tainan City, practices in front of their new classrooms



Whale-shaped sinks in front of the classrooms at Beimen Elementary School, Tainan City



The new bright and spacious culinary classroom at Syuejia Junior High School, Tainan City

Jiali Elementary School, Tainan City



Classroom building suffered structural damage due to the short column effect



Reinforced through the wing wall method



The classroom structure is more shock-resistant after repairs

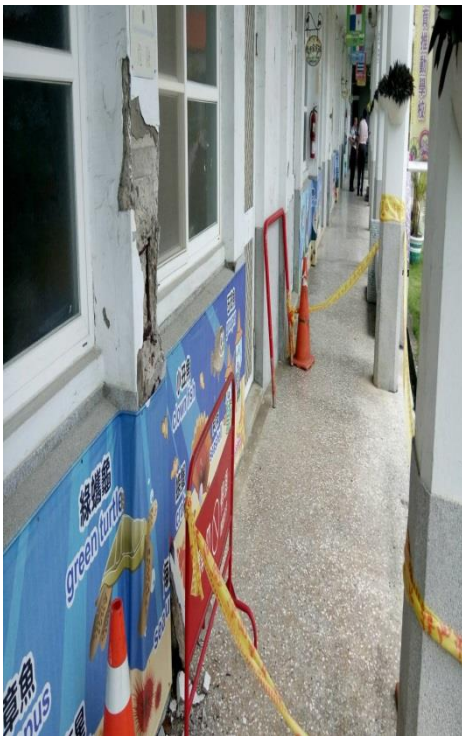


Accountability plaque recognizing your society's contribution

Beimen Elementary School, Tainan City



Damaged recreational center column. Reinforced by covering with steel structures and light partitions.
Accountability plaque placed after restoration



West wing classrooms severely damaged. After demolition, the structure was reconstructed using steel structures and light partition walls to be safe and shock-resistant

Beimen Elementary School, Yuhu Campus, Tainan City



North wing classroom pillars awaiting demolition, as the original steel reinforcements have cracked



After demolition and importing German light partitions, this building is now shock and fire-resistant

Beimen Junior High School, Tainan City



Pillars in the back of the classrooms were reinforced by column jacking. The original wooden window frames were replaced with PVC frames

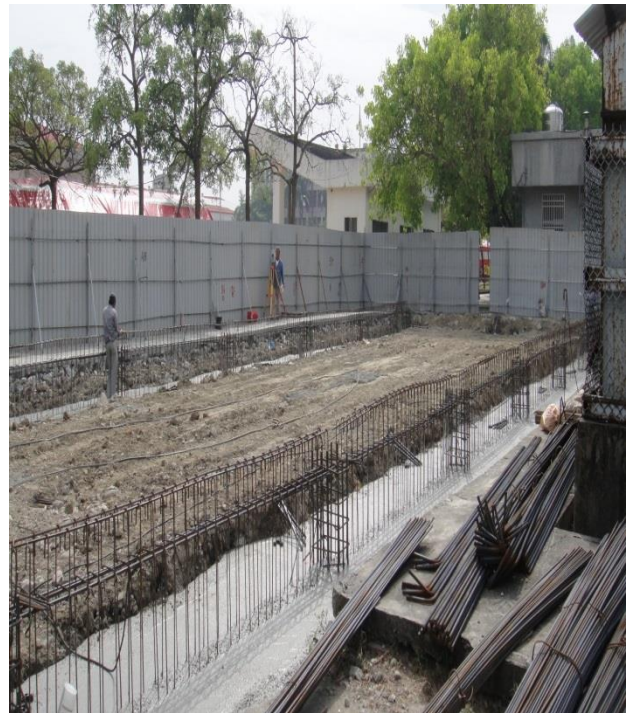


Pillars in the front of the classrooms had cracked and were reinforced by column jacking. Accountability plaque recognizing your society's contribution

Syuejia Junior High School, Tainan City



The beams and columns in the industrial arts classroom were severely damaged. Demolition and reconstruction were deemed necessary after structural safety assessment



After demolition and importing German light partitions, students and staff can enjoy learning in a shock and fire-resistant arts & crafts classroom

Jhuci Senior High School, Chiayi County



The PU runway had collapsed after the quake, collecting water



Relevelled basketball court and track runway



The school's marching band and flag team can finally display their talents on the new athletic field



Sikou Elementary School, Chiayi County



The ceilings, columns, and beams in the attached buildings of the tennis court were severely damaged and were reconstructed with reinforced concrete after demolition



Providing students and staff with a brand new indoor tennis court and a convenient, comfortable area to wash up and store equipment at the beginning of the new school year

Pei shin Junior High School, Chiayi City



Polycarbonate ceiling sheets in the recreational center continually fell after the quake, affecting students' safety. After removing the sheets and supports, the original steel supports were repainted with anti-rust paint



The original ramp connected to the Educational Administration Building became detached after the earthquake. A new steel-reinforced ramp was constructed for the safe passage of students and staff

Xing'an Elementary School, Chiayi City



Several cracks had formed in the classrooms and were leaking. After filling the cracks with epoxy and repairing the surface, the classrooms no longer leak and are safe



As the teachers and students pass by the accountability plaque recognizing your society's contribution, in addition to evoking gratitude, we also hope to inspire students to enroll in volunteer work in the future to contribute to society

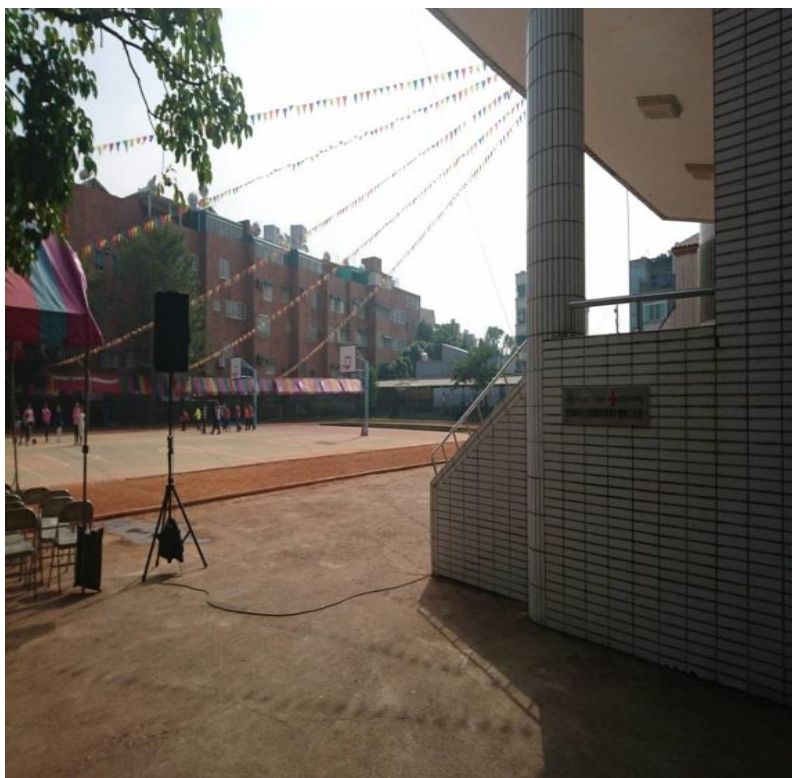
Jiabei Elementary School, Chiayi City



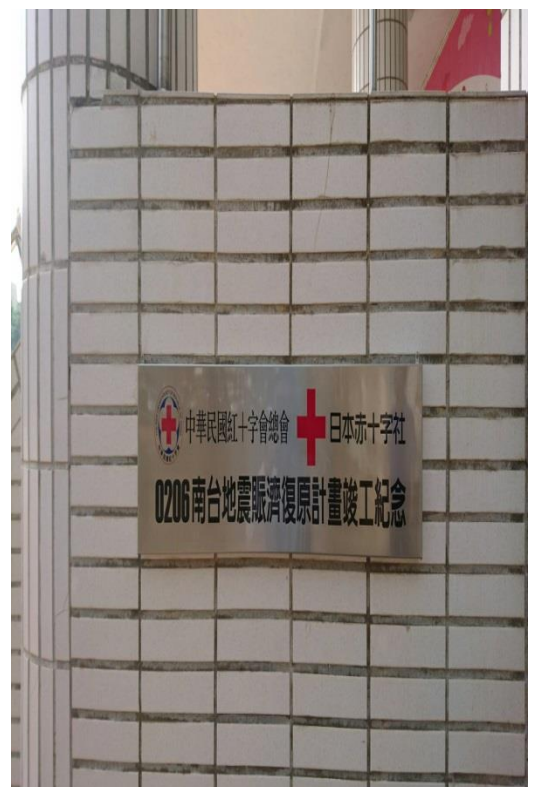
The athletic field had cracked open due to the quake



Inspecting the newly repaired athletic field



The new basketball court is combined with the original athletic field, providing teachers, students, and locals with an excellent exercising ground



Accountability plaque on the side of the outdoor podium stage recognizing your society's compassion