

School of Planning, Design and Construction Faculty and Students Help in Adopting LEED Standards in Italy

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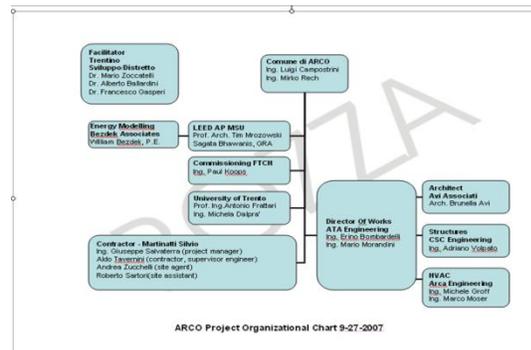
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The Plesso scolastico Loc. Romarzollo, Arco school project is a new elementary school recently constructed and occupied in the City of Arco located in the Trentino Province in Northern Italy. On August 29, 2012, the project was awarded LEED® Platinum under the LEED for Schools Standards 2.0 by the U.S. Green Building Council. LEED Platinum is the highest level of achievement in the LEED Rating System, and the Arco School is the first school project to achieve this rating in Italy and outside of the US.

Faculty and students from the [MSU School of Planning, Design and Construction \(SPDC\)](#), worked since 2007 under an MSU consulting contract with the Commune Di Arco to provide LEED AP coordination and technical services to the project. The SPDC was directly responsible for LEED AP services, LEED compliance, coordination, management and oversight of all aspects of LEED and LEED documentation for the project. The overall project team included more than 20 Italian contractors, architects, engineers, agencies and university faculty along with seven MSU graduate and undergraduate students who worked on the project.

The Plesso scolastico Loc. Romarzollo is an elementary school for 250 students owned by the Commune di Arco, and is a three-story reinforced concrete building, which features photovoltaic systems, high performance glass and shading systems, integral weather station climate controlled systems, green roof, green parking, rain water collection, green materials, site and water features and many indoor environmental quality systems. The project achieved 61 LEED credits plus prerequisites under the LEED 2.0 system of standards qualifying it for LEED Platinum. The MSU SPDC employed a U.S. based sub-consultant, William Bezdek Associates, to provide energy modeling services for the project and FTCH Inc., of Grand Rapids, MI, was employed by Commune di Arco to provide commissioning services.





Concurrent with the Arco School project, under a second consulting contract with the Agenzia per lo Sviluppo, a Trentino business and development agency and business incubator, SPDC faculty and students worked to promote LEED in Italy, consulted in forming the Green Building Council of Italy (GBC Italia), conducted educational sessions and acted as a liaison with USGBC and GBC Italia. As a result of efforts by many Italian professionals aided by SPDC, there is now an active GBC Italia with substantial membership, a separate set of Italian LEED standards which are approved and being piloted on projects by USGBC and GBC Italia, scientific committees and educational programs.



Some evidence of recent growth of LEED in Italy is that in 2007 there were only two existing LEED certified projects in Italy, (both owned by the U.S. Navy) and fewer than five registered projects, all developed by non-Italian professionals. There were no LEED APs in Italy in 2007. Today, there are 94 registered projects, 17 LEED certified projects (four schools are certified with Arco being the first

Platinum), and 172 Italian LEED APs or LEED Green Associates now credentialed in Italy. The GBC Italia is viewed as a model for other countries adopting LEED.

The projects grew out of a study abroad program first developed by faculty of the MSU Interior Design program and of the MSU Construction Management Program, both part of SPDC, who teamed to form a study abroad program in Northern Italy for their respective students. The program was hosted and supported by engineering faculty from the University of Trento (UTN) in Northern Italy. The study abroad program ran in Italy from 2003 through 2010. Contacts for the proposals to Comune di Arco and Agenzia per lo Sviluppo grew out field visits conducted during the Study Abroad program.

Concurrent with conducting the study abroad program, MSU Construction Management faculty were funded for two MSU Internal projects, one of which was funded by MSU Engineering and Architectural Services (EAS) and the Office of the Vice President for Finance and Operations, to evaluate the MSU Construction Standards against the LEED standards. That project led to more than 70 new and changed construction standards developed and adopted for MSU projects by EAS and was completed in 2006. The second project was a study of the application of LEED site standards for northern climates, which was funded by the MSU Land Policy Institute (LPI), and also completed in 2006. Both of these projects laid a foundation and provided a track record for the funded proposals in Italy.

In total, the projects funded travel for 14 trips to Italy for project coordination meetings from 2007-2012, as well as graduate assistantships and student hourly wages and support for seven students. The project was used as a case study by 22 Construction Management and Interior Design students during the 2010 CM/IDES study abroad program and led to the creation of a new course in SPDC, PDC 491: Integrated, Sustainable, Built-Environment Projects, taught once in Italy and which is now in its fourth offering at the MSU campus. Other impacts are that one Italian engineering student came to MSU and earned his Master's degree in Construction Management, three visiting scholars spent one semester each in SPDC, and numerous Italian construction industry professionals have visited MSU to observe construction methods, or travel to LEED projects or USGBC's annual Greenbuild International Conference and Expo.



The following students and faculty worked on the project and all now hold their LEED AP or LEED GA credential:

- Tim Mrozowski, A.I.A. LEED AP BD&C, Professor, Construction Management, 2007-2012;

- Robert Tucker Wilkinson, Masters Student, Construction Management, 2011-2012;
- Federico Steinvorth, Masters Student, Construction Management, 2011-2012;
- Jonathon Lopatin, Masters Student, Construction Management, 2010-2011;
- Paola Moschini, Visiting Scholar from Italy, 2011;
- Alexandra Johnson, Undergraduate Research Assistant, Interior Design, 2011;
- Alessandro Orsi, Masters Student, Construction Management, 2009-2010; and
- Annie Matouka, Undergraduate Research Assistant, 2007-2008.

For more information on these Italy projects, contact Tim Mrozowski at mrozowsk@egr.msu.edu or call 517.353.0781.