



FACT SHEET: SUSTAINABLE DEMOLITION — FREDERICK E. TERMAN ENGINEERING CENTER



SUSTAINABILITY OPPORTUNITY

The demolition of the Frederick E. Terman Engineering Center, iconic former home to the School of Engineering, underscores Stanford’s commitment to sustainability and demonstrates responsible management at the end of a building’s life. As the School of Engineering grew in size and evolved programmatically, the Terman Building could no longer meet the school’s functional requirements. The new Science and Engineering Quad (SEQ) became the School of Engineering’s cutting-edge programmatic and operational nucleus. Through a combination of salvage opportunities and extensive material recycling, demolition of the Terman Building in 2011 balanced Stanford’s sustainability goals and budget requirements, minimizing impacts to the campus community.

A LEGACY OF SUSTAINABILITY

Completed in 1978, the Terman Building incorporated many leading-edge sustainability features, including operable windows to facilitate passive ventilation and timber structural members sourced locally. Both natural ventilation and sustainable material sourcing are now common practice in Stanford’s new high-performance buildings. Lessons learned from both the Terman Building’s construction methodology and its operational history informed subsequent projects and thereby enriched the university’s building portfolio. The Terman Building’s popular rectangular fountain will remain in place as a centerpiece of the new landscape.

SALVAGED MATERIALS

Stanford’s Project team carefully reviewed the costs and benefits of potential salvage items to compare the feasibility and likelihood of reuse against any cost and schedule impact. Input from the community, including a meeting with faculty, helped guide the process. Key salvaged items of special interest to the Stanford community included the following:

<p>Roof Tiles</p> <p>Existing Spanish clay roof tiles were carefully palletized by hand and reused on the planned West Campus Recreation Center and Arrillaga Family Sports Center Addition projects.</p>	
<p></p> <p>Concrete Pavers</p> <p>Existing concrete pavers from the plaza overlooking the fountain was hand-crated and redeployed during the scheduled landscape renovation project in the Petersen-Mitchell courtyard.</p>	
<p>Exterior Lighting</p> <p>A number of exterior light fixtures were reused onsite. Specialty pole fixtures surrounding the Terman Building’s fountain were reincorporated into the new landscaping.</p>	



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Interior Wood Features

Decorative cedar ceiling slats were sold through Stanford's Surplus Property Sales to members of the Stanford community interested in using the lumber for departmental or school projects.



Terman Auditorium Seating

Fixed auditorium seating from Terman Auditorium was removed and stored by a restoration firm that specialized in the refurbishment of auditorium seating for new projects. Stanford installed refurbished seating in an auditorium of the current SEQ buildings.

Generator Refurbishment

The generator formerly located in the small enclosure yard at the corner of Samuel Morris and Santa Teresa was sold to an independent company that specializes in refurbishing generators for resale and reuse via responsible processing methods.



Exterior Shutters

A number of louvered exterior shutters were reused during the renovation of a staff building in the Stanford Research Park. In addition, the Project team fulfilled the multitude of requests from members of the Stanford community interested in purchasing the shutters for departmental or school projects.

Site Furnishings

Exterior furnishings such as bike racks, trash receptacles, and recycling receptacles were retained for use in the new neighborhood park or redistributed to other campus projects as needed.



Wooden Seating

Large seating planks lining the edge of the plaza overlooking the fountain were made into site benches in the landscape plan for the new pocket park.

Other Items

Stanford's Surplus Property Sales reclaimed and sold office and laboratory equipment and furniture, interior office doors, and metal bathroom partitions. Items reclaimed by Stanford's Buildings & Ground Maintenance group include general equipment like compressors and pumps, as well as low voltage, line voltage, and fire alarm equipment.



RECYCLED MATERIALS

The Terman Building demolition project diverted over 99% of all building materials and components from the landfill. Material unfit for salvage was recycled, with preference given to onsite recycling where feasible. For example, concrete from the Terman Building was pulverized into compactable rock and used to infill portions of the basement to stabilize the structure during demolition and the subsequent park construction. This strategy reduced the need to truck in soil to serve the same purpose and therefore decreased the carbon footprint of the project as a whole. Where soil is required for rough grading above the pulverized concrete, it will be obtained from excavation spoils associated with concurrent campus projects.

MORE INFORMATION

SuSTAINABLE DEMOLITION

http://sustainable.stanford.edu/sustainable_demolition

<http://lbre.stanford.edu/dpm/>

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