Going for Gold/Platinum
The Tercero 3 Student Housing project is intended to achieve LEED Gold/Platinum certification. The Leadership in Energy and Environmental Design (LEED) green building certification system provides a benchmark for the design, construction and operation of high-performance green buildings.

LEED was developed by the U. S. Green Building Council to promote a whole-building approach to sustainability by recognizing performance in six areas:
- Sustainable Sites
- Water Savings
- Energy Efficiency
- Materials Selection
- Indoor Environmental Quality
- Innovation in Design
Sustainable Sites

The first of the six categories focuses on appropriate use of the building site as it relates to its immediate environment. Important features include:

- Appropriate site (no prime farmland or wetland).
- Construction erosion and sedimentation control plan.
- The post development site runoff rate and quantity does not exceed the predevelopment site runoff rate and quantity.
- High ratio of open space (153,268sf) to development footprint (71,296sf).
- Native and adapted plants in landscape.
- No new parking added.
- 1,712 bike parking spaces.
- Pedestrian access within a half mile to numerous community services.
- Located within ¼ mile to bus stop with at least six routes including a route to the Amtrak rail station.
- Minimization of urban "heat islands," which occur when development replaces vegetation, by providing trees, pervious concrete, reflective concrete and reflective roof materials (97% of roof surface has very high Solar Reflective Index value of 104).
Water Efficiency
The primary focus for this category is to reduce the use of water. Important features include:

- Real-time, weather based irrigation control, efficient watering devices and drought tolerant plant species for a water efficient landscape resulting in reduction of 64% water use from the calculated baseline.
- Highly water-efficient plumbing fixtures leading to 34% reduction in potable water use.
- Energy Star, CEE Tier 3 washing machines and a non-chemical water treatment system.
Energy and Atmosphere

This category focuses on conserving or reducing energy use through more efficient procedures and operating systems. It also emphasizes use of alternative energy systems. Special features include:

- The project has achieved an energy savings of 51%.
- A central plant heat recovery recovers condenser water and boiler flue gases to produce 100% of the heating and domestic water supply for the seven buildings. In other words the water vapor, a byproduct of the furnaces of the campus boilers that normally would go directly into the atmosphere through the boiler stacks, is now diverted into a condensing economizer where the vapor swirls around three coiled pipelines filled with water to heat it. One of these pipelines will be used to heat the buildings and provide domestic hot water for Tercero 3.
- Telkonet Energy Management Systems - smart thermostats installed in all the dorm rooms that have occupancy sensors to determine the setback temperature based on how long a room has been vacant, thus reducing energy consumption.
- Other energy efficiency measures incorporated into the building design include an improved thermal envelope, high efficiency glazing, exterior solar shades, reduced interior lighting power density, occupancy sensors, and Energy Star appliances.
- Metering of utilities with a centralized computer system to trouble shoot problems and track use.
- Thorough equipment testing to ensure proper use and efficiency; including training, available maintenance and warranty manuals, and recheck of building systems 10 months after occupancy.
- No ozone depleting CFC-based refrigerants.
Materials and Resources

This category emphasizes using recycled, regional and sustainable materials and minimizing waste. Features include:

- 95% of construction waste diverted from landfills.
- A comprehensive recycling plan for paper, cardboard, glass, metals, and plastic. Recycling collections at every floor.
- Use of recycled content materials throughout for steel, insulation, roofing material, windows, counters, carpet, ceramic tile, acoustical tile, toilet partitions, concrete, and more.
- Used materials that were extracted and manufactured within 500 miles of the project site such as concrete, insulation, glazing, metal framing and drywall throughout the project.
Indoor Environmental Quality

This category is all about creating an optimal living environment for residents and staff. Here are some of the key features:

- Care taken during construction to protect ventilation system and materials from dust and moisture.
- At end of construction, building flush-out to ensure a good clean building environment.
- Paints, sealants, adhesives and carpets all with little or no VOC (Volatile Organic Compounds) again, to better the indoor air quality.
- Walk off mats at building entrances to limit pollutants coming inside.
- Residents have control over lighting, operable windows and thermostats with an energy efficient range setting.
- All occupied spaces provide a view to the outdoors.
Innovation

The last category in the LEED rating system emphasizes exploration of creative ideas and pushing to go even further beyond the established baselines for sustainable buildings. Examples include:

- A green cleaning policy and program that provides sustainable cleaning products and use instructions for the building occupants.
- Compact fluorescent task lighting provided at each student’s desk.
- Furnishings that meet industry green standards in order to emit less odorous or harmful contaminants into the air.
- An active educational program that aims to inform occupants about green building features and how they can help with reducing energy use and other sustainable practices. The program includes facility tours, resident education and web-based educational material. Overall, four students are employed as part-time sustainability programmers and assistants.

For more information about LEED and the US Green Building Council, visit www.usgbc.org.

For more information about UC Davis Student Housing and its commitment to sustainability, visit www.housing.ucdavis.edu/sustainability.