



sustainability initiatives tour

self-guided tour of the tempe campus

“Sustainability is larger than one person, one company, or one country. Its scope, scale, and importance demand unprecedented and swift solutions to environmental protection and other complex problems.”

*—Julie Ann Wrigley,
co-founder, Global Institute of Sustainability and School of Sustainability*

Welcome to Arizona State University

We invite you to discover and explore some of the exciting sustainability initiatives and projects here at ASU. By following this 1.2-mile walking tour you will see LEED*-certified buildings, solar installations, and a variety of examples that comprise our integrated, university-wide approach to sustainability at ASU – a combination of small steps and bold moves!

Learn more at: asu.edu/tour/sustainability



***Leadership in Energy & Environmental Design (LEED)** is an internationally recognized green building certification system, providing third-party verification that a building or community was designed and built using strategies intended to improve performance in metrics such as energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

1 Memorial Union

The second floor of the Memorial Union was renovated in 2008; sustainability features include 30 percent regionally extracted or manufactured materials and "EcoSystem" lighting that reduces energy costs by 70 percent. Over half of the construction waste was recycled.

Sustainable Design Standards: Since 2005, all new university-owned buildings are required to be certified LEED Silver or higher. ASU currently has more than 30 buildings certified LEED Silver or better, including the first Platinum-certified building in Arizona.

2 Underground Thermal Storage Tank

Under the Student Recreation Complex athletic field there is a thermal storage tank containing 5.5 million gallons of chilled water. Water chills at night during non-peak rates; ASU then uses the water during the day for cooling.

Greywater Capture: Water from the Biodesign Institute's air conditioning system is harvested in a 5,000-gallon cistern for landscape irrigation. This provides enough captured water to eliminate the use of potable water for irrigation.

3 USG Bike Co-Op

Along the south side of the Student Recreation Center is the Undergraduate Student Government's (USG) Bike Co-Op. ASU students, faculty, and staff can check out bicycles. Repairs and air are also available.



Purchasing Policy: ASU established a comprehensive Green Purchasing Policy that promotes sustainability across all departments. Among the many provisions of the policy are minimally packaged items, reusable or recyclable materials, and energy-saving products.

4 Apache Boulevard Solar Parking Structure

This solar installation contains a single-axis tracking system to maximize sun exposure. It generated 1,685 megawatt-hours of clean electricity in its first year of operation, which is equivalent to the annual electricity consumption of 123 average Arizona homes. One of six campus parking structures that utilize LED lighting.



Go Green: Parking and Transit Services is taking strides to reduce energy consumption and waste. One of the newest efforts can be spotted in Lot 19 (East of ASUPD), where visitor parking pay machines now run on solar power.

5 Lattie Coor Hall Rooftop Solar

This rooftop solar installation produces enough electricity to supply 16 average Arizona homes. The energy produced will offset more than 270,000 pounds of CO₂ per year.

GREEN EVENT

Farmers Market: During the fall and spring semesters the Tempe Campus Farmers Market features 20+ vendors with fresh produce grown by local Arizona farmers and other local products. The Farmers Market promotes healthy eating and sustainability among students, faculty, and staff.

6 Solar Recycling Compactor

Solar compactors are integral to ASU's waste management. Compactors accept trash or commingled recycling such as paper, plastic, metal, and aerosol cans. Use of compactors has reduced waste-handling costs as well as pick-ups resulting in fewer fossil fuel emissions.

Composting: Facilities Ground Services composts all leaves, grass clippings, and small landscape debris. The composting program diverts an average of 14 tons of material per month.

7 Wrigley Hall

This repurposed building is home to the university-wide Global Institute of Sustainability, its directorate and administrative functions, and the School of Sustainability. Features include solar panels, wind turbines, recycled and recyclable materials and furnishings, low-emitting finishes, low-flow water fixtures, and sensor-controlled lighting.

Campus Solarization: As of December 2011, the university-wide installed solar capacity is 14.5 MW. We have secured approval for an additional 1.9 MW with the goal of installing 20 MW of solar power capacity by 2014.

8 Campus Metabolism™ cm.asu.edu

Displayed in the window of the School of Sustainability's Academic Advising Center is the Campus Metabolism™ kiosk that displays real-time energy consumption data for several campus buildings. Campus Metabolism is an interactive web-based tool created to highlight the connection between actions in our daily lives, resource use, and the resulting environmental consequences.



"Blue Mall" Recycling Program: Blue bins paired with trash receptacles provide identifiable and easy access points for recycling throughout the Tempe campus walkways/malls. Blue bins can be sponsored by businesses and organizations that want to participate in ASU's effort to increase recycling via the bright blue bins.

9 Hayden Library Rooftop Solar

This rooftop solar installation is expected to produce more than 460,533 kilowatt-hours annually, which is equivalent to the annual electricity consumption of 32 average Arizona homes. The energy produced will offset over 574,000 pounds of CO₂ per year.

Energy Conservation: Arizona State University is upgrading its utilities infrastructure on the Tempe campus, reducing electrical and natural gas consumption and use of chilled water for cooling.

10 Engrained Café (2nd floor of the Memorial Union)

Engrained is an opportunity for students, faculty, staff, and the larger community to engage in sustainable dining through a living-learning restaurant that is committed to locally grown food and environmentally friendly practices.



@ ASU

Low-Flow Water Fixtures: ASU has reduced water consumption in many buildings through the installation of low-flow water fixtures. On average, these efficient appliances use approximately 30 percent less water than their conventional counterparts.

Interpretive Gardens

G1 The Computer Garden - Formerly a flat, barren patch of gravel used for parking ASU service vehicles. Student and staff volunteers constructed a garden resembling a computer's motherboard using repurposed sprinkler pipe and donated cactus.

G2 The Herb Garden - The Arboretum herb garden contains herbs such as basil and mint, as well as tomato plants, bell peppers, and eggplant. Students work with ASU Facilities Development and Management to manage the garden. The garden is part of the ASU Local Foods Initiative to harvest and use edible food grown on campus.

G3 Sonoran Desert Garden - This garden uses reclaimed cactus and creative rock piles to rehabilitate an area previously trampled by vehicles. Designed as a practical way to create beauty out of what was an eyesore.

G4 Zen Garden - The garden was constructed over buried utility lines that stunted the root growth of most things planted there. The moving spout of the deer-chaser fountain appears to be bamboo at first glance, but it's really a section of plastic pipe that has been painted to resemble bamboo. The granite boulders were rescued from Mariposa Hall when it was torn down, and the compost is from wood chippings from the Tempe campus.

G5 Community Garden - ASU students and Arboretum volunteers grow organic vegetables within the garden's plots. The Sonoran Desert growing seasons are very different from cooler climates. Participants learn what varieties do best during the appropriate season throughout the year. Some of the produce is used in campus kitchens and at Engrained Café in exchange for a donation to the Friends of the Arboretum at ASU.

GREEN EVENT

Ditch the Dumpster Program: Ditch the Dumpster is a year-round program where volunteers accept clothing, furniture, household goods, and many other reusable items, which are donated to Swift Charities for Children. During the 2011 fiscal year, the Ditch the Dumpster donation and recycling drive diverted more than 60,000 pounds of usable goods from the landfill.

A Decision Theater

Decision Theater is a lab for exploring and understanding decision-making in uncertain systems using state-of-the-art visualization, simulation, and collaboration tools to address sustainability challenges.

B PowerParasol™

The 5.25 acre, 24-foot-high design covers 800 blacktop parking spaces in lot 59. This groundbreaking solar installation is the first partnership between ASU and NRG Solar, a subsidiary of NRG Energy, Inc. The PowerParasol™ has a solar capacity of 2,124 kWdc with 7,616 panels.



@ ASU

Public Transportation Discounts: The ASU U-Pass provides unlimited access at a discounted rate to all four campuses and greater Phoenix on Valley Metro bus routes and the METRO light rail. For those who occasionally need a personal vehicle, Zipcar car sharing service offers fuel-efficient vehicles at ASU and is open to drivers 18 and older.

C Biodesign Institute

Pursues research to improve human health and the health of our planet. Biodesign B was the first building in Arizona to earn Platinum-level LEED certification from the U.S. Green Building Council. Building A received Gold-level certification. These buildings include a 151-kilowatt solar photovoltaic roof system that generates electricity equal to about 10 percent of the building's consumption.



D Sustainability House at Barrett, the Honors College

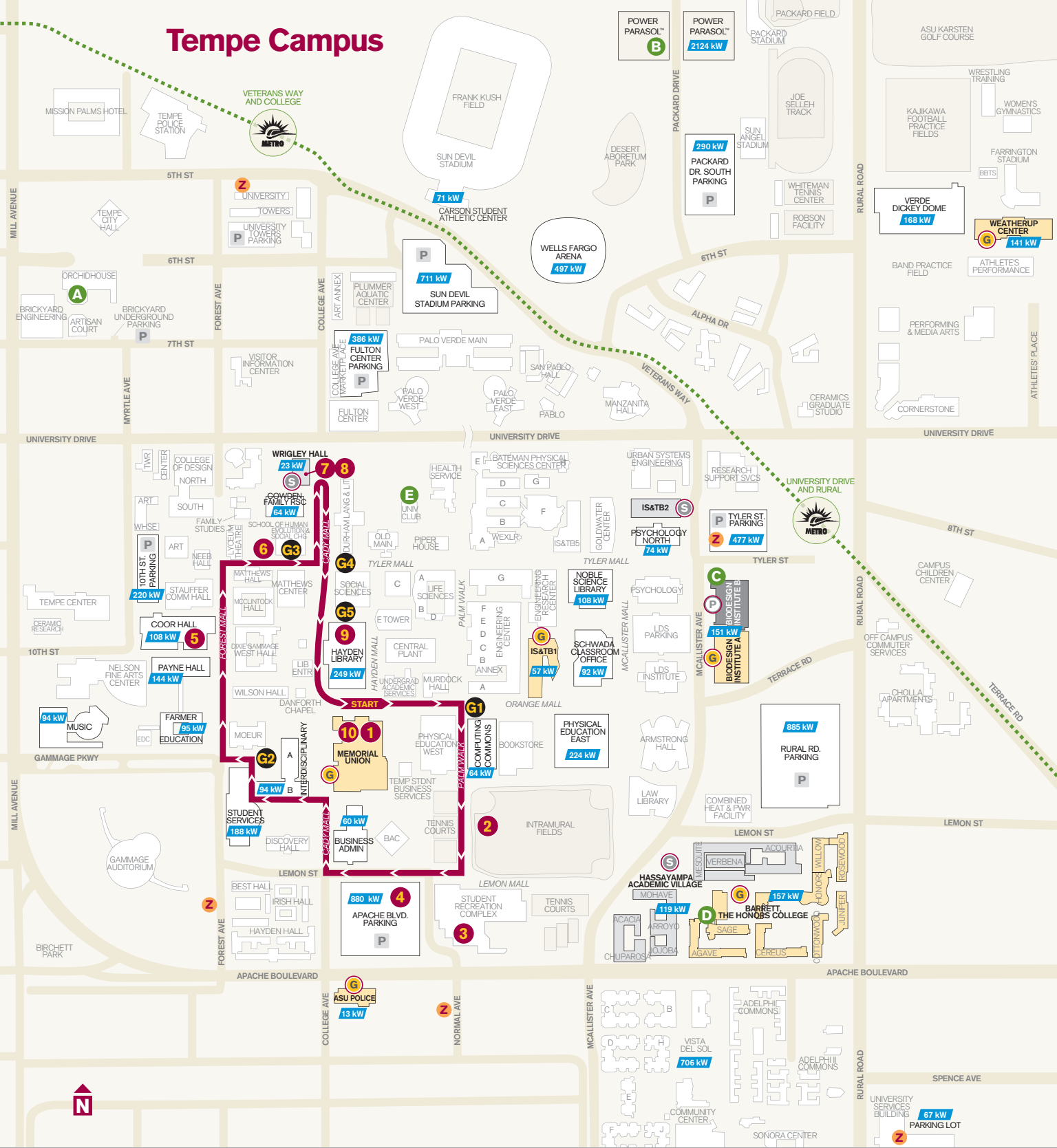
Sustainability House launched in August 2009 and provides students with a green living and learning residence. Features include ultra low-flow plumbing fixtures, greywater reuse, a roof garden, solar panels, reflective roof coatings, local building materials, efficient irrigation fixtures, and energy monitoring. A dining hall promotes healthier eating options by featuring vegetarian, organic, and local menu items. More than 90 percent of the construction waste was recycled.















E University Club

Focuses on creating a sustainable environment through its food selections, waste reduction, and energy conservation. Atlasta Catering and Event Concepts is the official caterer of the University Club.

Tempe Campus



-  SUSTAINABILITY TOUR ROUTE
-  SUSTAINABILITY TOUR POINTS OF INTEREST
-  SUSTAINABILITY TOUR GARDEN
-  LEED CERTIFIED — SILVER (3)
-  LEED CERTIFIED — GOLD (6)
-  LEED CERTIFIED — PLATINUM (1)
-  # kW SOLAR INSTALLATION/POWER PRODUCED
-  OTHER SUSTAINABILITY POINTS OF INTEREST
-  ZIP CAR LOCATIONS (5)
-  VALLEY METRO LIGHT RAIL LINE
-  VALLEY METRO LIGHT RAIL STOP
-  PARKING STRUCTURES





ASU GLOBAL INSTITUTE
of SUSTAINABILITY
ARIZONA STATE UNIVERSITY

Global Institute of Sustainability
Arizona State University
PO Box 875402
Tempe, AZ 85287-5402
480-965-2975 Phone
480-965-8087 Fax
sustainability.asu.edu

Check it out:
asusolar.asu.edu
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