Sustainability

Providing for present needs without compromising the ability of future generations to provide for theirs.
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MISSION

UCLA Transportation supports the campus community by providing for safe, efficient access and mobility in an environmentally responsible manner.

VISION

To be a premier transportation and parking organization, providing an innovative, sustainable program which supports excellence in education, research, and public service.

BUSINESS

UCLA Transportation is a self-supporting Auxiliary Enterprise of the University of California, Los Angeles. All capital improvements and transportation operations are funded via parking revenue.
When the University of California, Los Angeles moved to its Westwood campus in 1929, the automobile age was on the horizon, and getting people to and from campus became an exercise in parking management. Over the decades, as transit options have grown, and UCLA commuter programs were created to provide other means of access to campus, the department expanded to provide a full range of mobility options. Today, UCLA Transportation offers a range of services, alternative mode programs, and support programs for UCLA commuters and visitors.
PROVIDING ACCESS and MOBILITY... RESPONSIBLY

The University of California, Los Angeles (UCLA) is a premier learning and research institution located in the most traffic congested city in the United States. Los Angeles also experiences the worst air pollution in the country; its infamous car culture has long-dominated mobility in the city and region, and emissions from internal combustion engines poison the air in the L.A. Basin and beyond. UCLA, however, has for several decades expended efforts to reduce vehicle traffic to and from its Westwood campus, and is a leader in transportation demand management and alternative fuel vehicle use.

This plan describes the goals and objectives of the University’s efforts to maintain sustainable transportation programs and reduce greenhouse gas emissions from mobile sources, provides performance measures to track progress towards these goals, and delves into the strategies and initiatives intended to aid in the achievement of the elucidated goals.
“UCLA practiced sustainable transportation before the term was coined. The 1984 Olympic Summer Games, held in Los Angeles, helped launch the vanpool program, which today is one of the largest such programs in the country.”
After the 1984 Olympic Summer Games, the vanpool program continued to flourish and a carpool program and campus shuttle program were launched later in the decade to further alleviate traffic congestion in Westwood, the Los Angeles neighborhood where UCLA’s campus resides. In 1987, UCLA’s employee drive-alone rate was 74%, similar to that of the surrounding Los Angeles community. A Transportation Demand Management Plan was created to comprehensively address how to mitigate daily UCLA commuter traffic, and targets were set regarding how many vehicle trips could be reduced by providing demand management, aka alternative mode, programs for UCLA commuters.

**Commitment to the Community**

The 1990 UCLA Long Range Development Plan (LRDP)—the master plan for campus development—included aspirations to construct a number of new labs and buildings on campus. Community concern about potential traffic volumes led to an agreement between the University and City of Los Angeles whereby campus leadership voluntarily agreed to count daily vehicle traffic volumes into and out of campus, and maintain such volumes or vehicle trips under a “trip cap”, which was set at 139,500 vehicles per day. Then Chancellor Charles E. Young also agreed to a parking space cap, which was set at 25,169 spaces. This agreement set the framework for deep commitment to supporting alternative modes of transportation, limiting single occupant vehicle trips, and encouraging a move away from a commuter student campus to one with a large and thriving residential community.

Parallel to the programs that focused on reducing traffic were efforts to “green” the UCLA vehicle fleet. UCLA has more than 1,000 vehicles in its fleet, and in 1998, the Alternative Fueled Vehicle Program began; in 2013, the fleet was comprised of 41% alternative fuel vehicles, mostly electric and compressed natural gas (CNG), with a smattering of fuel cells.

**Public Transit Pass Subsidies**

By 2002, when the LRDP was amended, traffic levels had been reduced twenty-five percent below levels that would have otherwise occurred. By that time, UCLA Transportation’s demand management program had grown to include BruinGO, its first partially-subsidized transit pass program, with Big Blue
Bus, the City of Santa Monica’s transit agency. This program was expanded the following year to include Culver CityBus.

In 2005, the GoMetro program was created and several additional public transit agencies were added to the partially-subsidized program mix—notably Metro, the L.A. County transit provider whose routes extend across the county—and several long-distance commuter routes by transit agencies that serve areas as distant as Agoura Hills and Antelope Valley, some 60 miles or more distance from campus. These programs have had a significant impact in reducing drive-alone commuting.

Parking Policy as TDM

While much of the Sustainable Transportation Plan focuses on non-parking aspects of UCLA Transportation, providing parking is still the most common service rendered to campus commuters and visitors. Parking policy is a critical piece of demand management practice at UCLA because the pricing of parking, including the time portions customers can purchase (e.g., daily parking, multi-hour parking, short-term parking), the policies that impact where people can park, and whether customers can move their vehicle between parking areas, are crucial decision points that impact commuter behavior. Blending the provision of TDM (Transportation Demand Management) programs with parking policy—the means—leads more directly towards the desired end, which is to balance the provision of parking and the number of parking customers with the use, and increasing use, of alternative modes by commuters. In essence, while customer demand is difficult to predict, it can be swayed by using both ends of the service and program offerings under direct control of the Department, namely parking policy and TDM program provision. Several important policy choices that UCLA has made are noted below, and these have had a significant effect on demand.

One example is the pricing flexibility for visitor parking available at parking pay stations, the automated parking dispenser machines that allow customers to purchase parking in discrete, short time periods, such as for two hours. By dynamically pricing the cost of parking based on location and time of day, the occupancy of parking spaces managed by the pay station is maintained at a targeted 85% rate, which was first identified by Donald Shoup, a Distinguished Professor of Urban Planning at UCLA.

To help manage parking permit demand from students, a need-based permit allocation process was created in 2001 to limit the amount of parking permits provided to resident students. Today, in order for an undergraduate resident student to obtain a parking permit, they must prove need—examples being an off-campus job, internship, or family care duties.

While general assignment (yellow) parking permits have been restricted in mobility for several decades, recent policy evolution, circa 2003, has shifted towards further restricting mobility for both general assignment parking permits as well as for “mobility permits.” Mobility restrictions serve to both limit midday vehicle trips and maximize efficiency of parking space management, which thereby limits the amount of parking that needs to be constructed.

Climate Action Commitments

In 2003, The Board of Regents of the University of California (The Regents) issued sustainability policy principles, and in 2004, the UC President issued the Presidential Policy on Green Building Design and Clean Energy Standards. These evolved into the Sustainable Practices Policy, which establishes goals in eight areas of sustainable practices, including transportation, and its scope covers all UC campuses, medical centers, and the Lawrence Berkeley National Laboratory.

In 2005, then California Governor Arnold Schwarzenegger issued an Executive Order that established greenhouse gas emission reduction targets. These targets used historical benchmark years as the targets for the milestone years: specifically, by 2020, reduce California greenhouse gas (GHG) emissions to 1990 levels and by 2050, reduce GHG emissions to 80% below 1990 levels.

Then, in 2006, the California Legislature passed and Governor Schwarzenegger signed the Global Warming Solutions Act, or Assembly Bill 32 (AB 32). This set the 2020 greenhouse gas emissions reduction goal into law—by 2020, reduce California GHG emissions to
1990 levels.

In 2007, then UC President Dynes signed the American College and University Presidents’ Climate Commitment (ACUPCC). This commitment required each campus to complete several actions:

- Inventory greenhouse gas emissions
- Create a Climate Action Plan to detail efforts to reduce greenhouse gas emissions
- Measure annual greenhouse gas emissions
- Identify “low-hanging fruit” (i.e., emission reduction initiatives that could be undertaken quickly)
- Submit periodic progress reports

Because of its Los Angeles location, UCLA has long had experience, and success, in addressing traffic congestion and reducing traffic on campus.

- UCLA vehicle fleet
- UCLA-related business airline travel

For commutes, there are several ways to attain reductions in fuel use. These include reducing the amount of carbon-based fuel used to get commuters from home to campus; shifting commute trips from drive-alone trips to other modes that use less fuel per commuter, such as public transit or vanpools; and lastly, having employees commute fewer times to campus, generally either via telecommuting or using an alternative work schedule to reduce the number of days they commute to campus.

Each year, UCLA must adhere to the regulatory requirements of the South Coast Air Quality Management District’s (SCAQMD) Employee Commute Reduction Program. This program intends to reduce traditional air pollutants like volatile organic compounds (VOCs) and nitrogen oxides (NOx) via reductions in drive-alone commutes, which reduce fuel use and combustion, thus reducing air pollution. The SCAQMD’s Employee Commute Reduction Program requires an annual plan to reduce drive-alone commuting at large employers who employ more than 500 people in one location. Along with this plan, the employer must conduct an annual survey of its employees to measure “average vehicle ridership” (AVR), which is the regulatory metric used to distinguish well performing, large employers from those that have a significant, outsized number of drive-alone commuters.

As part of the survey process, employee commute mode splits are captured each year. Therefore, for the UCLA Climate Action Plan, the measurable, primary goal selected for commute mobile source reduction initiatives was for campus employees to reach a mode split of 50% drive-alone commuting and 50% alternative mode commuting. In 2008, when the CAP was written, the employee drive-alone rate was approximately 57%. Since that time, significant progress has been made and the drive-alone rate for employees stood at 51.2% in 2013. This has been accomplished by the partial subsidization of public transit passes, vanpool fees, etc. and the provision of support programs and incentives that make using alternative modes viable and enticing. Significant resources are committed to make alternative mode programs available to employees, and their participation in the demand management programs ensures University compliance with the SCAQMD AVR requirement.

In addition, traffic congestion around the UCLA campus, in both Westwood and West Los Angeles in general, is significant and extensive (spatially and temporally). This “pain of congestion” improves the viability of alternative modes, as the stress of driving to campus is a strain for commuters, and there is often a travel time savings related to the use of high-occupancy vehicle lanes on the regional freeway network.

Fleet & Transit Commitments
The CAP initiatives that focus upon the UCLA fleet and its fuel usage also leverage progress, as UCLA Transportation’s Fleet & Transit unit is a leader in using alternative fuel and alternative fuel vehicles. In order to reduce GHG emissions from fleet vehicles, the primary reduction initiative is to achieve a 40% zero
emission alternative fuel vehicle rate for the UCLA fleet by 2014, with a secondary goal of attaining a 50% alternative fuel vehicle rate when counting all alternative fuels (including carbon-based fuels, as the 40% zero emission category only includes electric and fuel cell vehicles, whereas this one includes CNG vehicles). Another initiative is to right-size the fleet, shedding very lightly used vehicles and encouraging participation in departmental car sharing to reduce unnecessary vehicle ownership and reduce costs.

**Commitments for Business Air Travel**
Lastly, UCLA-related business air travel is another form of mobile source GHG emissions, and the CAP initiatives include increasing the availability and viability of video-conferencing and telepresence, the reduction of air travel, and the creation of an air-travel carbon offset fund. The last initiative, in particular, is important because of the need to balance the established mission of the University with sustainability. Air travel is a natural component of modern university operations, and curtailing it heavily would reduce the capability of the University to fulfill its primary mission. This highlights the main aspect to sustainability: balance. Human existence, by its very nature, consumes resources and creates waste and emissions. A university, by simply existing, has an impact on emissions; and while the concept of net zero emissions is the ultimate aim, it is only viable at some future date. In the meantime, the key is to be as sustainable, green, and equitable as possible, while continuing to provide world class education and research that benefits California and beyond.

Since the Climate Action Plan was completed, in 2008, UCLA Transportation has been working to achieve the mobile source GHG emissions goals, including considerable emphasis on reaching the 50% alternative mode split for campus employees.

**Bicycle Master Plan**
In 2006, the first UCLA Bicycle Master Plan was published. This Plan aimed to increase bicycling to and on campus, and today, active transportation (biking and walking) is a significant focal point for sustainable transportation efforts at UCLA. The Bicycle Master Plan includes three main goals, which are to:

- Increase bicycle use at UCLA
- Improve bicycle safety

- Increase bicycle awareness

Bicycle Master Plan implementation included:

- Creation of the Bruin Bike Library to provide students access to bicycles and increase bicycle ridership. Approximately 100 bicycles for rental use, for the period of one academic quarter, are available at an economical rate.
- Development of the UCLA Bike Shop to provide maintenance, storage of the bicycle in between quarters, and—at the end of the rental term—disposal of the bicycle.
- Designation of a campus bike route network
- Increased bicycle storage facilities
- A bicycle safety program

In the eight years since the Plan was created, much progress has been made, and the campus has achieved a designation as a Bicycle Friendly Campus (Bronze level) by the League of American Bicyclists, a noteworthy achievement in autocentric Los Angeles.

**Healthy Campus Initiative**
In 2012, UCLA launched its effort to promote healthy lifestyle choices and develop best practices that may help other communities seeking to do the same. Focused on wellness, the Healthy Campus Initiative (HCI) has several components, and efforts include:

- Breathe Well (tobacco-free campus)
- Mind Well (mental health)
- Be Well (built environment)
- Move Well (physical health)

The transportation infrastructure-related component, Be Well, has upped the ante for on-campus transportation planning and infrastructure investment. The UCLA campus was designed and built in the heyday of the automobile, when suburban development, cul de sacs, and completely separated land uses were de rigueur. Because of this, the campus is being retrofitted with enhanced bicycle and pedestrian facilities and accoutrements, with the intended purpose of making the campus a safer, more appealing place to walk and bicycle. This fits well with the aims of sustainability, and folding the HCI effort into sustainable transportation efforts has been seamless.
<table>
<thead>
<tr>
<th><strong>Transportation Timeline</strong></th>
<th><strong>Policy Guidance Timeline</strong></th>
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<tbody>
<tr>
<td>1984 - Vanpool program started</td>
<td>1990 - Vehicle Trip Cap and Parking Cap set</td>
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<tr>
<td>1987 - Transportation Demand Management Plan created, long range traffic reduction targets set</td>
<td>1995 - Air Quality Management District Rule 2202 Employee Commute Reduction Program begins</td>
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<tr>
<td>1990 - Campus Long Range Development Plan published, Vehicle Trip Cap and Parking Space Cap created</td>
<td>1997 - Kyoto Protocol, signed by 192 parties, was not ratified by the United States; yet, it still became a keystone policy by catalyzing interest in GHG reductions within the U.S.</td>
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<td>2000 - BruinGO partially subsidized transit pass program begins with Big Blue Bus of the City of Santa Monica</td>
<td>2004 - UC President issued the Presidential Policy on Green Building Design and Clean Energy Standards</td>
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<tr>
<td>2002 - Long Range Development Plan amended, Culver CityBus added to BruinGO program</td>
<td>2005 - Executive Order signed by Governor Schwarzenegger commits to reducing GHG levels to 80% below 1990 levels in California by 2050</td>
</tr>
<tr>
<td>2005 - GoMetro partially subsidized transit pass program begins with Metro, the L.A. County regional transit provider, and LADOT commuter long-distance bus routes</td>
<td>2007 - UC President Dynes signs American College and University Presidents’ Climate Commitment</td>
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<tr>
<td>2006 - Bicycle Master Plan published, efforts begin to recast campus as bicycle friendly</td>
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“UCLA is in the business of improving the world through education, research, and civic engagement. Transportation is just another facet of that effort.”

Traffic congestion, greenhouse gas emissions, and traditional air pollutants from vehicles such as volatile organic compounds (VOCs) and nitrogen oxides (NOX) are all combated by a combination of reductions in drive-alone commuting and by the use of alternative fuel vehicles.
Status

Population & Commuting Mode Splits

2013

2013 UCLA Employee Mode Split

- Drive Alone, 51.2%
- Transit, 14.6%
- Carpool, 9.5%
- Motorcycle, 0.7%
- Vanpool, 5.7%
- Walk, 13.1%
- Bike, 3.2%
- Telecommute, 1.5%
- CWW, 0.5%
- Other, 1.1%

28,730

Total employees, including academics, administrative staff, and medical center personnel

2013 UCLA Employee Commuting Student Mode Split

- Drive Alone, 25.4%
- Walk, 27.5%
- Bicycle, 5.5%
- Skateboard / Non-Motorized Scooter, 0.7%
- Drop Off / Pick Up, 0.7%
- Other, 1.1%
- Carpool, 4.9%
- Motorcycle / Motorized Scooter, 1.9%

42,163

Total student population

29,260

Commuting students (i.e., live off-campus)

12,903

Resident students, including undergraduates on “the hill” and almost 2,000 graduate students in Weyburn Terrace.
Support the University by balancing the provision of access and mobility between the social needs of the campus community, the fiscal constraints of the department, and the imperatives of environmental sustainability.

Balance is key to the effort to provide sustainable transportation programs. UCLA’s mission of research, education, and civic engagement means that resources will be consumed, energy used, and waste produced. This is part of the human experience. However, the pursuit of the University’s mission is done with an eye towards balance; with some forethought as to how to intelligently mix the pursuit of this mission with the tenets of sustainability. UCLA Transportation’s efforts involve making the travel options that employees, students, and visitors choose be the best ones—the ones that impact the climate less and the ones that look to protect our future, yet benefit and provide convenience to commuters today. Below, a Venn diagram illustrates the typical balanced view of sustainability, with UCLA Transportation specific verbiage embedded within it.
GOAL AREA: 

COMMUTES & TRIPS

How people travel to, from, and around campus

Goal: Decrease the carbon footprint resulting from mobile source emissions

- **Objective:** Achieve a 50% mode split for alternative transportation modes for UCLA employees no later than 2014 and maintain that split through 2020

  - **Strategy:** Provide a comprehensive and effective transportation demand management (TDM) program that utilizes a variety of modes, serves diverse populations, and covers many geographic areas

  - **Strategy:** Educate new hires about the value and convenience of TDM to encourage them to commute to campus via an alternative mode

  - **Strategy:** Maintain strong customer service within the TDM programs in order to retain alternative mode commuters

  - **Strategy:** Identify, incentivize, and promote the most effective TDM measures for particular demographic groups and geographic areas

  - **Strategy:** Represent the University as a Participating Agency for all transportation projects that impact the University

  - **Strategy:** Work with transit agencies on honing and increasing service to campus

  - **Strategy:** Work with local municipalities to improve bicycle and pedestrian infrastructure proximate to campus

The epitome of Los Angeles mobility, the spaghetti of concrete travel lanes forms an almost artistic glimpse into the primary travel paths of most Angelenos: freeways. This interchange of the I-110 and I-105 freeways includes several modes of travel, including a light-rail line, an elevated busway, HOV flyover lanes, and general purpose freeway lanes. When constructed, it was the most complex freeway interchange ever built.
• **Objective:** Reduce or offset greenhouse gas emissions associated with UCLA-sponsored travel
  
  • **Strategy:** Educate University departments and employees on the environmental impacts of potential travel modes

• **Strategy:** Promote rideshare, video, and teleconferencing, as well as other alternatives to air travel

• **Strategy:** Promote the bus connections to the LAX airport and Amtrak train station

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**Goal: Minimize vehicle trips to and around campus for quality of life purposes**

• **Objective:** Maintain the campus’ vehicle trip count below the trip caps established in 1990 of 139,500 vehicles per day, 24,320 for the AM peak period, and 37,122 for the PM peak period

• **Strategy:** Provide discounted, occasional parking to TDM program participants so that they do not feel compelled to obtain a parking permit for when they must drive to campus

• **Strategy:** Annually monitor vehicle traffic at all campus entrances and exits and produce a formal cordon count report

• **Strategy:** Encourage carpooling via policy, price setting, and matching services

• **Strategy:** Maintain market-priced permit parking on campus to aid control of parking demand

• **Strategy:** Encourage compressed work week schedules, telecommuting, and scheduling policies that promote commute trips outside of peak travel hours

• **Strategy:** Work with campus departments in their efforts regarding remote work sites, including residential distribution analysis of their employees

• **Objective:** Reduce midday vehicle trips below 0.2 trips/person/day

• **Strategy:** Create a park-once environment that limits midday trips and intracampus vehicle miles traveled

• **Strategy:** Maximize the potential of BruinBus to capture midday trips

• **Strategy:** Encourage bicycle usage for intra-campus and commute trips through the Bruin Bikes Program, by improving bicycle infrastructure and establishing a bike share system on and near campus

• **Strategy:** Promote walking, particularly related to personal health, as the primary means to travel on-campus by ensuring pedestrian safety and convenient access to campus destinations

• **Strategy:** Improve parking wayfinding on campus in order to reduce vehicle miles traveled (VMT)

• **Strategy:** Optimize shuttle deployment across campus routes and encourage people to use the shuttle via the provision of real-time bus location information

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**The Healthy Campus Initiative perfectly dovetails with efforts to reduce vehicle trips on campus, and connects seamlessly to the Bicycle Master Plan and Active Transportation Plan**
**GOAL AREA:**

**OPERATIONS**

Direct, internal Transportation activities and practices

Goal: Reduce, right-size, and conserve the resources associated with University business activity

- **Objective:** Right-size the fleet and reduce vehicle miles traveled associated with fleet activities
  - **Strategy:** Provide current vehicle lessees with alternatives to dedicated vehicles leases
  - **Strategy:** Provide UCLA community members with viable alternatives to vehicle use
  - **Strategy:** Reduce vanpool mileage by limiting non-commute use of the vans

- **Objective:** Conserve land and financial resources by limiting the construction of new parking structures
  - **Strategy:** Limit mobility between parking areas/structures to maximize structure occupancy, thereby reducing the need to construct additional parking
  - **Strategy:** Complete a business case analysis for any proposed parking structure construction, including a fiscal comparison of providing access via TDM programs versus the provision of additional parking spaces on campus
  - **Strategy:** Limit resident student parking to those that demonstrate need

- **Objective:** Deploy alternative mode resources to match commuter needs
  - **Strategy:** Effectively collect and manage data concerning travel by all modes
  - **Strategy:** Develop a centralized TDM program management system
  - **Strategy:** Seek funding from external sources for alternative transportation projects in order to reduce impact on university resources
  - **Strategy:** Determine and maintain the most cost-effective TDM mix to serve commuter needs

**Goal: Provide, promote, and support green options for vehicles**

- **Objective:** Increase the use of alternative fuel vehicles
  - **Strategy:** Educate customers on the environmental benefits of green vehicles
  - **Strategy:** Incentivize alternative fuel vehicle use
  - **Strategy:** Maintain a “carbon tax” for non-
**Goal Areas**

alternative fuel fleet vehicles and their environmental impact

- *Strategy:* Expand the Fleet Alternative Fuel-Eled Vehicle Program

**Objective:** Provide the necessary infrastructure for the fueling of alternative fuel vehicles, including fleet, permit holder, and visitor vehicles

- *Strategy:* Deploy campus electric vehicle charging infrastructure for both fleet vehicles and parking customers/visitors
- *Strategy:* Provide access to the Fleet Yard’s compressed natural gas station for both Fleet and the general public
- *Strategy:* Work with the College of Engineering regarding installing a hydrogen fueling station at UCLA

**Goal: Practice green techniques and implement sustainable policies for all operational activities**

- **Objective:** Green daily departmental operations by conserving resources, implementing environmentally preferable practices, and increasing conservation and recycling efforts

  - *Strategy:* Maintain a Green Shop for Fleet Maintenance
  - *Strategy:* Limit water usage in cleaning practices and control runoff when used
  - *Strategy:* Improve the sustainability of office operations by reducing waste and promoting the use of green office equipment and supplies
  - *Strategy:* Specify the use of green building materials in rehab of structures
  - *Strategy:* Provide energy efficient lighting within parking structures

- *Strategy:* Evaluate and implement effective clean energy generation such as solar trees, carport solar panels where feasible, and solar power for parking pay stations
GOAL AREA:
CIVIC ENGAGEMENT

Moving sustainable transportation from ideas to practice

Goal: Incorporate sustainable transportation into the fabric of the UCLA campus

- **Objective:** Create a culture of sustainable travel on campus and a community of lifelong sustainable commuters and travelers
  
  - **Strategy:** Elevate awareness of transportation issues, stimulate discussion, and disseminate information throughout the UCLA community
  
  - **Strategy:** Engage the campus community in transportation discussions via the web, blogs, and social media
  
  - **Strategy:** Promote green travel options via traditional advertising and tabling at campus events
  
  - **Strategy:** Imbue students with an understanding of sustainable transportation that remains with them throughout their lifetime and sets precedent for their personal travel behavior

- **Objective:** Provide engagement opportunities for students on sustainable transportation projects that both benefit the University and enrich the student’s learning experience
  
  - **Strategy:** Sponsor appropriate graduate student Client Projects

- **Objective:** Ensure that campus land use and design are coordinated with transportation
  
  - **Strategy:** Work with the Education for Sustainable Living Program and engage student Action Research Teams to complete sustainable transportation projects

- **Objective:** Engage with various other student groups on campus in all things that are transportation-related and encourage advocacy efforts
  
  - **Strategy:** Provide consultation to maximize alternative transportation LEED points for both new construction and existing building LEED certification efforts

- **Objective:** Maintain a leadership role in community and regional transportation issues
  
  - **Strategy:** Leverage the University’s position as a center of knowledge to further sustainable transportation best practices
Goal Areas

- **Strategy:** Codify and promulgate these best practices at both the local and national level, including conference attendance, disseminating press releases, and article publication

- **Strategy:** Seek grant or partnership opportunities for Fleet alternative fuel vehicle acquisitions

**Goal: Leverage the funding opportunities and research capabilities at UCLA and elsewhere to further sustainable transportation initiatives**

- **Objective:** Work with the UC Office of the President and other University of California campuses to create a green fund for carbon reduction and mitigation
  - **Strategy:** Determine an accurate system for cataloging the travel-related emissions of University departments
  - **Strategy:** Establish a process for assessing and collecting carbon fees
  - **Strategy:** Identify requirements and procedures for administering a green fund

- **Objective:** Identify opportunities for partnerships with University departments and external entities
  - **Strategy:** Utilize the talents of UCLA faculty and staff to further the sustainable transportation initiatives and goals of the Department
  - **Strategy:** Work with student groups and student funding sources to match their resources with sustainable transportation initiatives
  - **Strategy:** Seek public-private partnerships that further environmental and transportation objectives
  - **Strategy:** Explore non-traditional transportation funding opportunities such as public health grants for bicycle and pedestrian efforts
The Sustainable Transportation Plan (STP) sits among other Plans regarding the development of and transportation-related aspects of the UCLA campus. The Plans listed below the STP are more macro in scope and extend beyond the purview of UCLA Transportation, yet play an important part in informing the STP. Those Plans that sit above the STP are each specific to one facet of transportation, and they provide a more granular perspective on the future direction of each aspect. The Climate Action Plan is denoted in green to signify its close tie to the STP, as the mobile source reduction initiatives in the Climate Action Plan are operationalized in the STP. Of note is that the STP is above the CAP, thereby suggesting that it is more granular and specific in nature.
KEY INITIATIVES

The Key Initiatives listed below are examples of major program areas where UCLA is focusing resources to advance towards the goals within this Plan. While not all-inclusive, these effort synopses highlight the topics that are at the top of the list for the University’s transportation efforts.

Sustainable Transport: Alternative Fuels & Smart Management

In the future, while alternative modes will convey many Bruin commuters, many will still drive to campus. Therefore, alternative fuel vehicles (AFVs) are an area of focus; providing EV chargers, two compressed natural gas stations, and one hydrogen station on campus is key to this initiative. This effort crosses into both the commuter realm and into UCLA’s own vehicle fleet, which has long had a focus on AFVs. Further, besides deploying as many AFVs in lieu of traditional vehicles as possible, this program aims to do so intelligently by right-sizing the vehicle fleet. An example is a new program that seeks to blend car-share technology with AFVs in a pool of fleet vehicles, rather than individual departments each owning their own, traditional internal combustion engine vehicle(s).

COST: LOW (WITH GRANT DEPENDENCY)
ROI: MEDIUM
TYPE: PROGRAM, INFRASTRUCTURE, SERVICES
“Annual, incremental improvements to the campus are the primary means to make it a safer, more accessible place.”

Flexible Parking: Meeting Multimodal Customer Needs

The parking industry is leveraging new technologies to improve customer service and experience. UCLA is working to identify which new technologies and parking pricing models give customers greater flexibility in using multiple commute modes, thereby encouraging customers to use sustainable transportation more often while allowing them to drive and park conveniently when needed. Advancements in parking technology have resulted in an opportunity to design and implement a parking system that better meets the individual demands of our customers, streamlines the parking experience, and reduces greenhouse gas emissions. The existing Bruin Commuter Park program provides half-price daily parking rates to alternative mode commuters, which helps incentivize alternative mode program use, but additional, flexible parking options will further improve this customer group’s service level.

COST: MODERATE
ROI: HIGH
TYPE: PROGRAM, INFRASTRUCTURE, ADMINISTRATIVE EFFICIENCIES
KEY INITIATIVE:
Advocacy Support

- Rail Transit System Expansion
- Bus Transit Route and Service Expansion
- Transportation Network Enhancements

Name: Rail Transit System Expansion

Description:

Los Angeles has long been burdened by its overreliance on the automobile for mobility. The past two decades have seen expansion of the rail transit system in Los Angeles, but there had been no rail service to the Westside of Los Angeles until the first phase of the Exposition Rail Line reached Culver City in 2012. Given that the Westside experiences the worst traffic congestion in L.A., the dearth of rail service is especially problematic.

UCLA, as both a large research and educational institution and as part of the Westwood area of Los Angeles—the city’s densest employment area outside of downtown L.A.—is a destination center for a large number of alternative mode trips. These include public transit bus trips, vanpool trips, carpool trips, bicycle trips, walking trips, and multimodal trips. The University is a significant stakeholder in area transportation projects, and via this initiative, will provide input and feedback to Metro, Caltrans, the City of Los Angeles, etc. regarding transportation improvements planned or underway. In particular, it will ensure that the campus and its Westwood Village properties interface with and accommodate both the approved east-west Westside Subway Extension of the Purple Line to the campus.
Key Initiatives

Name: Bus Transit Route and Service Expansion

Description:

While the aforementioned rail transit system in Los Angeles is undergoing expansion, with several rail lines coming to West L.A., the bus transit system has itself expanded over the past two decades. Local bus agency routes that ply to and through the UCLA campus are many, and each weekday more than 400 public transit buses travel to and from the campus. A relative newcomer to bus service are long-distance commuter express routes that utilize coach-style buses (tall seats and a rear restroom). UCLA has partnered with several agencies to provide this service to campus—namely, LADOT, Santa Clarita Transit, and the Antelope Valley Transit Authority—but portions of the L.A. region are yet to be served by these buses. Therefore, efforts will be undertaken to partner with local transit agencies and the planned Sepulveda Pass mass transit project, which is proposed to have a stop at or in the vicinity of the campus.

The Westside Subway Extension extends the Metro Purple Line subway that runs under Wilshire Blvd. from Western Avenue westward to the Veterans Administration property, just west of the I-405 (and beyond Westwood Village). UCLA is a formal Participating Agency in Metro’s planning process, and as such has opportunity for considerable input into the line’s final design and details for the Westwood Village station, including a portal in UCLA’s Parking Lot 36.
which serve areas that do not yet have transit connections to the UCLA campus and/or Westwood. Of particular interest is the South Bay area, where many UCLA employees reside and where no express bus transit routes yet exist to West L.A.

In addition to efforts to set up additional commuter express service, the coming Exposition Rail Line presents an opportunity to synchronize rapid bus service from local rail stations to UCLA, particularly at the Westwood Blvd. and Sepulveda Blvd. rail stations, both of which are several miles south of the campus.

Name: **Transportation Network Enhancement**

Description:

The transportation network in Los Angeles is or will be undergoing significant change over the next decade. The passage of Measure R—a half-cent sales tax whose proceeds are dedicated to transportation projects—in Los Angeles County in 2008 provided guaranteed funding for numerous transportation projects countywide, and local municipalities also receive a portion of funding for transportation projects.

UCLA Transportation will engage in all local transportation agency public meetings; it will provide input and commentary regarding transportation projects that are perceived to be useful to the UCLA community for their commuting needs; and when possible, will be a formal, federally-designated Participating Agency in all transportation projects local to or impacting West L.A.

Further, when opportunities are present for synergistic efforts between UCLA and a local jurisdiction(s), such as for the establishment of something like a bike share system, or enhancement of the area bicycle facilities network—which logically cross jurisdictional boundaries—UCLA will engage with municipal partners to leverage the opportunity and provide mobility and/or access benefits to the campus community.
KEY INITIATIVE:

Air Travel Carbon Offset

- UCLA-related Business Air Travel Carbon Offsets

Name: Carbon Offset Program for Business Air Travel

Description:

The campus community collectively is responsible for a significant amount of greenhouse gas (GHG) emissions from air travel, and that amount has increased steadily over the past few years as travel restrictions due to budgetary constraints have eased.

This initiative focuses upon setting up a campus air travel offset program. The aim is to ultimately do it on a systemwide basis; however, its initial pilot will begin at UCLA. The offset program would provide standard offset fees that would be collected at the time of ticket purchase for both domestic and international flights, and direct the offset funding to carbon exchanges that offer verified carbon offsets. There are a number of program parameters to set up; for example, not all funds could be charged such a fee (i.e., federal grant funds are excluded), but it would be worthwhile to institute as most trips would not be paid for from such funding.
KEY INITIATIVE:

ACTIVE TRANSPORTATION

• WATCH FOR BRUINS
• CAMPUS “BIKE-IFICATION”
• PEDESTRIAN PRIORITIZATION

Encouragement of active transportation supports both UCLA’s Climate Action Plan and the Healthy Campus Initiative. The existing automobile-centric environment needs modifications to accommodate a vibrant pedestrian and cycling community. Ensuring the safety of 70,000 people as they move about campus sidewalks, plazas, and streets each day is a focal point for this initiative. As a concerted effort with campus partners, this initiative will include traffic calming efforts, upgraded crosswalks, intersection configurations, additional bike lanes and bike racks, a network of bike lockers, bike channels on several campus staircases, a bike sharing system, increased cycling incentives, re-educating the campus community to enhance safety and change the campus culture, and efforts to tackle the ‘safe routes to campus’ issue for cyclists.

Name: Watch For Bruins: Traffic Calming

Description:

The UCLA campus is being improved by slowing down vehicle traffic. Most of the campus roadways are narrow, local access roads, but they are heavily trafficked for a college campus. Further, most of the roadway designs focus exclusively on mov-
Key Initiatives

ing vehicles efficiently, and thus do not offer the friendliness that traffic calmed roadways do. Physical infrastructure treatments are being strategically placed around campus in higher speed locations, and vehicle traffic is therefore slowed and calmed to improve walkability and bikeability on campus.

Name: **Campus “Bike-ification”**

**Description:**

With the increase in bicycling on campus comes the recognition that the campus infrastructure is in need of modification to provide a safer, more bike-friendly environment in support of a vibrant cycling community. Planned improvements include bike lanes, a network of bike lockers, bike channels on stairs, and other accoutrements. To address the safe routes to campus issue, a study will be undertaken to facilitate intercity connections to improve the route between the main campus and the Santa Monica Hospital campus.

A new campus bike hub system will promote increased bicycling on campus and further decrease midday vehicle trips. A program aimed specifically at Weyburn Terrace Graduate Student Housing residents, via a partnership between UCLA Housing & Hospitality Services and UCLA Transportation, Weyburn Wheels, provides bicycles to residents at a significant discount.

Name: **Pedestrian Prioritization**

**Description:**

Pedestrians are the predominant modal group on campus, yet the campus road and pathway network retains a significant orientation favoring automobile traffic. Prioritizing pedestrian safety and access while maintaining appropriate traffic flow, this initiative will improve crosswalks, separate modes where feasible, and educate the campus community regarding pedestrian safety.
### PERFORMANCE METRICS

<table>
<thead>
<tr>
<th>Goal</th>
<th>Top-level Metrics</th>
<th>Facilitating Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce Carbon Footprint from Commutes &amp; Trips</td>
<td>Commute Greenhouse Gas Emissions</td>
<td></td>
</tr>
<tr>
<td>Minimize Vehicle Trips</td>
<td>Count of Vehicle Trips from/to Campus</td>
<td></td>
</tr>
<tr>
<td>Offset Carbon Emissions from Air Travel</td>
<td>Air Travel Greenhouse Gas Emissions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employee Drive-alone Rate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commuting Student Drive-alone Rate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Daily Vehicle Trips</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AM Peak Period Vehicle Trips</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Midday Vehicle Trips per Person</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PM Peak Period Vehicle Trips</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trips Per Year via BruinBus in lieu of SOV trips</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual Number of Flights</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air Miles Flown</td>
<td></td>
</tr>
</tbody>
</table>
## Performance Measures

### Commutes & Trips

<table>
<thead>
<tr>
<th>Metrics</th>
<th>Target</th>
<th>Status</th>
<th>Submetrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Drive-alone Rate</td>
<td>50%</td>
<td>51.2%</td>
<td>TDM Program Participation Numbers</td>
</tr>
<tr>
<td>Commuting Student Drive-alone Rate</td>
<td>20%</td>
<td>25.4%</td>
<td>Commuter Club Membership</td>
</tr>
<tr>
<td>Daily Vehicle Trips</td>
<td>100,163</td>
<td></td>
<td>Ratio of Resident Students Parked</td>
</tr>
<tr>
<td>AM Peak Period Vehicle Trips</td>
<td>139,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midday Vehicle Trips per Person</td>
<td>24,320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM Peak Period Vehicle Trips</td>
<td>16,575</td>
<td></td>
<td>Midday Walking &amp; Biking Counts</td>
</tr>
<tr>
<td>Trips Per Year via BruinBus in lieu of SOV trips</td>
<td>37,122</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Number of Flights</td>
<td>10,000</td>
<td>~14,000</td>
<td></td>
</tr>
<tr>
<td>Air Miles Flown</td>
<td>~14,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offset</td>
<td>100%</td>
<td>~0%</td>
<td>(excludes Federal grant-funded travel)</td>
</tr>
</tbody>
</table>
## PERFORMANCE METRICS

### Goal: Reduce, Right-size & Conserve Resources
- Fleet Greenhouse Gas Emissions
- Cost / MT GHG Not Emitted
- Cost / Vehicle Trip Saved
- % Occupancy of Parking Facilities
- % of Fleet that is Alternative Fuel Vehicles
- % of Commute Vehicles that are Alternative Fueled Vehicles
- Annual Lighting Cost for Parking
- EPA Green Shop Designation

### Goal: Provide, Promote & Support Green Options for Vehicles
- Fleet Vehicle Inventory
- Fleet Fuel Use
- % of Fleet that is Alternative Fuel Vehicles
- % of Commute Vehicles that are Alternative Fueled Vehicles
- Percent AT-PZEV, PZEV, ZEV, and Carbon-based
- # of EVSE Chargers

### Goal: Green Techniques & Sustainable Policies for Operations
- % Occupancy of Parking Facilities
- Annual Lighting Cost for Parking
- EPA Green Shop Designation

* ZEV = zero emission vehicle; PZEV = partial zero emission vehicle; AT-PZEV = advanced technology partial zero emission vehicle
<table>
<thead>
<tr>
<th>Metrics</th>
<th>Target</th>
<th>Status</th>
<th>Submetrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleet Vehicle Inventory</td>
<td>1,000</td>
<td>1,049</td>
<td>Fleet Vehicle Miles Traveled</td>
</tr>
<tr>
<td>Fleet Fuel Use</td>
<td>600,000</td>
<td>608,791</td>
<td>Varies by program</td>
</tr>
<tr>
<td>$xx</td>
<td>$xx</td>
<td>$xx</td>
<td>% of University Vehicles for which a Carbon Tax is Paid</td>
</tr>
<tr>
<td>}</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZEV, PZEV, and Carbon-based</td>
<td>40%</td>
<td>26%</td>
<td>Ratio of Resident Students Parked</td>
</tr>
<tr>
<td>ZEV, PZEV, and Carbon-based</td>
<td>50%</td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td>on Campus</td>
<td></td>
<td>&lt; 1%</td>
<td></td>
</tr>
<tr>
<td>Accommodate Up To 5%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* ZEV = zero emission vehicle; PZEV = partial zero emission vehicle; AT-PZEV = advanced technology partial zero emission vehicle
PERFORMANCE METRICS

Civic Engagement

Goal

- Incorporate Sustainable Transportation into the Fabric of the Campus
- Leverage Funding Opportunities & Research Capabilities

Top-level Metrics

- Awareness of Sustainable Transportation (via survey)
- Percent of Possible Transportation-Related LEED Points Earned
- Number of Ongoing Grants & Partnerships

Facilitating Metrics

- Number of Regional Projects
- Number of Alternative Transportation Outreach
- # of Regional Projects on Which Serving as a Formal Participating Agency
- # of Conferences Presenting at
<table>
<thead>
<tr>
<th>Metrics</th>
<th>Target</th>
<th>Status</th>
<th>Submetrics</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Student Projects per Year</td>
<td>1/quarter</td>
<td>1 per quarter in FY 2012-13</td>
<td></td>
</tr>
<tr>
<td>Alternative Transportation Events per Year</td>
<td>25</td>
<td>31 in FY 2012-13</td>
<td></td>
</tr>
<tr>
<td>&gt; 50%</td>
<td>36% (since 2008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of Regional Projects on Which Serving as a Formal Participating Agency</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td># of Conferences Presenting at</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PERFORMANCE trends

Vehicle Traffic: Slightly Declining
100,163 v-trips
Description: Average vehicle trips into and out of campus per day. This includes both main and southwest campus, plus Wilshire Center.

Alternative Mode Split: Improving
48.8 percent
Description: From the employee mode split to campus, acquired by travel survey each spring.

Fleet Fuel Usage: Upticking Slightly
608,791 gallons
Description: This includes all fuel sources; those not in gallons have been converted to gallon equivalents (e.g., compressed natural gas).

Parking Spaces: Slightly Declining
22,988 spaces
Description: After reaching a peak of over 24,000 spaces, inventory has declined over the past few years.

Air Travel: Increasing
59,055 flights
Description: UCLA business-related air travel flights have recovered from recession lows and have increased significantly.

EMPLOYEE DRIVE-ALONE
Commuting Rate
51.2%
2013
Downward trend continues
Average Vehicle Ridership

On a typical weekday, how many employees travel to campus, and how many vehicles are used to convey them?

UCLA Employees' Average Vehicle Ridership: 1990 - 2013

Category Name: Average Vehicle Ridership

**AVR**

**Description:**
Average Vehicle Ridership (AVR) is a regulatory metric required by the South Coast Air Quality Management District. It is the number of campus commuters divided by the number of vehicles used to get them to campus.

**Category Name: Employees**

**1.67**

**Description:**
The Air Quality Management District set the passing grade for AVR to 1.50 for the zone that the UCLA campus lays within. UCLA has met or surpassed this goal for every year since 2001. The 1.67 in 2013 is the highest AVR yet measured at UCLA.

**Category Name: Combined Employee & Student**

**3.21**

**Description:**
When employees and students are blended together, the students' penchant for walking to campus lifts the combined AVR to a high 3.21 rate, suggesting that for every three people reaching campus, only one vehicle was used to get them there.
GHG EMISSION DETAILS

LOCATION & DISTANCE

UCLA mobile source emissions are predominantly from employee commutes to and from campus. The nature of the Los Angeles region, with its sprawling urban footprint, impacts the GHG emissions of UCLA employees. Far flung residential locations and a population conditioned to long commutes means that the UCLA workforce comes from all corners of the L.A. area. While the area near campus does hold a significant number of employees, extreme commutes are not uncommon, with some employees commuting 50 or more miles each way.

Overall Campus Greenhouse Gas Emissions Percentages - 2012

Fleet 5,892 MT
Commutes 48,554 MT
Air Travel 18,907 MT
### Performance Measures

#### Developed Space Sq. Ft.
- **Students**: +26%
- **Employees**: +38%

### SINCE 1990

**Description:**
Since 1990, traffic volume at UCLA has decreased by approximately 23%. Concurrently, square footage of developed space has increased by approximately 40% and daytime campus population has grown by more than 15,000 people, a gain of over 30%.

### Employee Solo Drivers
- **14,710** people
- **2.58 MT** per capita

The number of employee commuters who drive alone to campus as their commute mode, and their annual per capita greenhouse gas emissions for this mode.

### Student Solo Drivers
- **7,379** people
- **0.6 MT** per capita

The number of student commuters who drive alone to campus as their commute mode, and their annual per capita greenhouse gas emissions for this mode.

### Carpool Participants
- **4,152** people
- **1.29 MT** per capita

The number of both employee and student commuters who carpool to campus as their commute mode, and their annual per capita greenhouse gas emissions for this mode.

### Vanpool Participants
- **1,632** people
- **1.45 MT** per capita

The number of both employee and student commuters who vanpool to campus as their commute mode, and their annual per capita greenhouse gas emissions for this mode.

### Fleet
- **1,050** vehicles
- **> 40%** AFV

The UCLA vehicle fleet includes sedans, work trucks, neighborhood electric vehicles, natural gas buses, among other vehicle types, and almost half the fleet consists of alternative fuel vehicles.

### Fleet GHGs by Type
- **Unleaded gasoline**: 82%
- **ALT. FUELS**: 18%

Unleaded gasoline is still the most commonly used fuel for the UCLA vehicle fleet, consumed at approximately a half million gallons per year.