Campus Mobility

EEP 10

UTA

Initiative

Shift to sustainable mobility patterns that support emissions reduction goals

LEAD: Parking & Transportation Services
with support from the Office of Sustainability

Definition

Promoting safe, shaded, and accessible mobility infrastructure options like walking, cycling, public transit, and electric shuttles across the campus will reduce emissions while improving campus health and happiness. This section identifies how efficient land use, shading, and access to sustainable mobility options will support the University's commitment to reducing its environmental impact.

Resilience Co-benefits

- Supports Community Health
- Enhances Environmental Quality
- Shrinks Carbon Footprint
- Establishes UTA as a Regional Leader

UTA's approach to campus mobility must address both transportation needs and environmental impact in an increasingly challenging climate. With summer temperatures regularly exceeding 95°F and the urban heat island effect intensifying in highly paved areas, the quality of the pedestrian experience significantly impacts how the campus community chooses to move throughout the university grounds. The campus is also connected with the City's Entertainment District – Cowboy's Stadium, Ranger's Stadium, Texas Live, Six Flags over Texas, and many more attractions. The surrounding area alone hosts upwards of tens of millions of visitors to Arlington per year.[23] With events like the 2026 FIFA World Cup being hosted at Arlington, this presents a great opportunity for the campus to champion accessible and sustainable mobility despite difficult climatic conditions through parts of the year. Better campus connectivity also increases foot traffic through the campus and encourages attendance at campus-hosted events as well as further improving partnerships with nearby businesses.

Source: The Shorthorn

23 Entertainment District preps for influx of major events, visitors

Current Transportation Patterns

The campus community primarily relies on the following transportation modes to and from the campus:

- Personal vehicles (majority of commuters)
- MavMover campus shuttle system
- Pedestrian, cycling, and newly instated Veo e-bikes and scooters
- Regional connections via Trinity Metro

Due to the car-centric nature of mobility around Arlington, high-traffic volume parking lots and expansive paved surfaces contribute to localized heating, with surface temperatures frequently exceeding air temperatures by 50-90°F during summer months. The campus encourages the use of bikes and has set up bike racks and repair stations. However, the UHI-induced heat and high average temperatures during the summer create significant barriers to walking and cycling, particularly during peak class transition times.

Emissions Impact

UTA has eliminated the use of diesel in its campus fleet and has achieved a nearly 27% reduction in emissions from gas-operated fleet operations from 2018 to 2023.[24] Initiatives such as a year-round anti-idling policy for vehicles over 14,000 lbs have also contributed to the success of this effort.

Transportation-related activities that contribute indirectly to UTA's emissions inventory include:

- Daily commuting by students, faculty, and staff
- Goods purchasing, movement, and delivery services
- Business travel
- Waste removal transportation

24 UTA FY2023 Greenhouse Gas Emissions Report

Source: UTA Cycling

UTA is recognized as a Bronze-level Bicycle Friendly University by the League of American Bicyclists

Fleet Electrification

The University owns, leases, and rents motor vehicles, including golf carts, mules, and other low-speed vehicles;[25] electrification of this campus fleet will eliminate all transport-related scope 1 emissions. The replacement of fuel-run vehicles with electric vehicles (EVs) is driven by the commitment to aggressively reduce energy consumption and emissions intensity of the campus. While EVs produce zero tailpipe emissions, they do require electricity for charging. With the wider Texas grid expected to increase its percentage share of energy generated by renewables over the next decade, the energy consumed to operate EVs will have low environmental impacts. While UTA already has three EV charging stations for public use, EV conversion of the current fleet will require additional charging stations, electrical load coordination with utility operator and Facilities Departments, and the implementation of fleet management systems.

EV Charging Stations on Campus
As of 2024

Electrifying these fleet vehicles can significantly reduce UTA's impact

- LOW-SPEED
- SECURITY
- RIDESHARE
- CARS
- LANDSCAPING
- BUS
- MAINTENANCE
- MICRO

25 Driving UTA Vehicles: UT Arlington

MASTER PLAN ALIGNMENT
Incorporate shaded areas along the proposed pedestrian promenades

Tree canopy expansion in high-traffic areas

Green infrastructure integration

Cool pavement technologies for walkways, roads and parking lots

Creating a More Walkable Core

The University can enhance pedestrian comfort and safety and improve the health of the UTA community by developing a walkable core across campus that prioritizes student and visitor access. The campus can achieve this by developing walkways, green spaces, and shaded stretches to reduce thermal stress during summer months.

Images created by SmithGroup and AI

Improving Physical Spaces

Creating stress-less pathways for students to move throughout campus becomes increasingly important as conditions during the school year change and periods of extreme heat begin earlier in the spring and extend later into the fall. Since 2003, Arlington has experienced an average of 24 days over 100°F;[26] as full exposure to the sun can increase heat index values by up to 15°F,[27] spending time outdoors can be unsafe especially in the summer and early fall. Providing places of respite from the heat can make it safer to be outside and encourage students to walk or bike to class. Some ways to improve the outdoor experience include providing shade structures along sidewalks and trails, covering seating areas, planting trees with large canopies, and installing additional drinking fountains and misting systems along walking paths and in gathering spaces. Further, using construction materials with high albedo can help to keep spaces cool by reflecting heat away from surfaces.

26 DFW - 100° Day Data

27 Heat Forecast Tools

EV Station Education

- Signage encourages vehicle electrification by demystifying the charging process, highlighting priority parking, and sharing environmental impact metrics
- Retractable cord management ensures charging stations are safe and accessible
- Sufficiently lit areas discourage vandalism and theft while also increasing user safety and comfort when charging at night

Behavioral Change

- Encouraging early adopters of modal shifts and leveraging their experiences, positive or negative, will result in more uptake, discussion of ways to improve, and a general pursuit of transportation culture change
- Engaging and marketing new alternate modes with the help of grass-roots organizations like Walkable Arlington and BikeDFW will help the campus community connect with the new offerings.
- Capturing “a day in the student life” walk-throughs of the campus before and after improvements will also help increase awareness of the need for both physical infrastructure and behavioral changes

Deploy EV charging infrastructure on campus to support a greener campus

ACTION ITEMS 2

Study portions of campus with highest parking density to evaluate pilot EV program

Partner with local EV charging installers and campus facilities teams to build a robust and resilient EV charging network

Transition to an electrified fleet for University operations

ACTION ITEMS 2

As MavMover buses need to be replaced, consider purchasing electric shuttle buses for campus transportation

Seek funding through federally available grants to upgrade to an electric fleet

Promote active mobility like walkable connection to downtown, bike paths, etc.

ACTION ITEMS 3

Continue to pedestrianize major interior arteries of campus

Monitor for City of Arlington major roadway improvements; advocate for the installation of protected bike lanes on major campus commuting routes when timing is appropriate

Seek guidance from Vision Zero traffic safety guidelines with major transportation projects to protect pedestrian safety

Transition to a campus owned fleet for university transportation

ACTION ITEMS 1

Decrease reliance on single-occupant car transportation options and on-demand travel in favor of expanding on-campus transportation network