

# Parking . Access . Utilities

## 2.3

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## 2.3 PARKING . ACCESS . UTILITIES

### 2.3.1 Goals

- ***Provide convenient and coordinated auto, transit, pedestrian and bicycle circulation within the campus.***
- ***Support transportation demand management (TDM) strategies, such as carpooling, park and ride lots, transit passes and bicycle and pedestrian facilities to minimize parking demand on campus.***
- ***Encourage comprehensive, multiple building site parking strategies that minimize redundant access and maximize public space.***
- ***Promote pedestrian and bicycle safety within the site, by limiting automobile traffic speed and designating bicycle lane networks throughout the campus.***

### 2.3.2 Surface Parking

Surface parking should offer convenience and access to buildings and reinforce public spaces throughout the campus.

- Individual parking lots should be part of a strategic system of campus entrances, driveways, pedestrian circulation and buildings.

- Parking lots should generally be located to the side or rear of buildings to promote the public character of streets and buildings, according to the design intent of the Master Plan.
- Accessible parking spaces shall be provided according to the Americans with Disabilities Act Accessibility Guidelines (ADAAG) for Buildings and Facilities.
- Driveways and curb cuts should have minimum widths at the sidewalk for pedestrian safety and comfort. One-way driveway entrances should be no more than 15 feet. Two-way driveway entrances should be no more than 24 feet.
- Alternative paving materials, such as pervious concrete, should be used to enhance stormwater retention in parking areas to the extent possible.

#### Sustainable Design:

- *Use light colored paving surfaces with a SRI greater than 29 to limit heat island effect. For reference, typical new white concrete has an SRI of 86; typical new grey concrete has an SRI of 36; and typical new asphalt has an SRI of 0.*

**Reference:** *State of Tennessee Sustainable Design Guidelines, section 1.02; (A.5.iii) Design to reduce heat islands.*

### 2.3.3 Surface Parking: Perimeter and Interior Landscaping

- Parking lots should include perimeter plantings that are consistent with adjacent public spaces and buildings.
- Interior landscaping islands should include 1 tree per every 12 parking spaces.
- Perimeter and interior planting areas should allow stormwater to collect and percolate into the ground.

#### Sustainable Design:

- *Plant tree types that will shade paved surfaces within 5 years to reduce urban heat islands.*
- **Reference:** *State of Tennessee Sustainable Design Guidelines, section 1.02; (A.5.iv), Design to reduce heat islands.*



### 2.3.4 Surface Parking: Lighting

- The lighting style for parking lots should be consistent throughout the campus.
- Recommended light level guidelines and uniformity ratios established by the Illumination Engineering Society of North America (IESNA), in the IESNA Lighting Handbook (current edition), should be considered when determining appropriate lighting design solutions.
- Lighting should utilize automatic controls systems to eliminate excessive light during non-active hours of site and building operation, while maintaining safety and security.
- Full cut-off fixtures, mounting heights, and shielding should be utilized to effectively control glare and light trespass on adjacent buildings and properties.







### 2.3.5 Structured Parking

Structured parking plays a key role in achieving the public spaces identified in the Master Plan. Limiting the presence of surface lots, structured parking allows buildings and active uses to frame public spaces.

- To minimize surface parking, each building should contain a minimum of one level of structured parking where feasible.
- Wherever parking structures front streets and public spaces, walls should be consistent with surrounding buildings in materials, colors and patterns of openings.
- Sloping floors of parking structures should not be visible to public view from outside the structure.

- Parking structures should be compatible with adjacent buildings in form, proportion, massing, and articulation.
- Stand alone parking structures may allow pedestrian friendly, ground level retail/commercial uses consistent with the Master Plan, as well as facilities such as fitness centers and bike lockers and showering facilities for bicycle commuters.
- Pole mounted light fixtures on upper decks of parking structures shall use full cut-off fixtures, have a maximum height of 16 feet and be located between internal parking rows rather than at the structure's perimeter.
- Lighting should be planned at the minimum level required for security of areas used only during peak hours (e.g., upper decks).
- Parking structure walls facing residential areas should minimize openings to avoid noise and light impacts. This may be accomplished by the following:
  - Square openings, rather than horizontal
  - Louvers
  - Decorative metal grills
- Parking structures should be easily able to support electric plug-in vehicle receptacles and recharging services.
- The upper deck of parking structures should be planned for the installation of solar panels as a renewable energy source, following acceptable standards as they develop.

**Sustainable Design:**

- *Provide parking decks to reduce the area of asphalt contributing to heat islands and to reduce the overall impervious area contributing to runoff.*

**Reference:** *State of Tennessee Sustainable Design Guidelines, section 1.02; (A.5.ii), Design to reduce heat islands.*

**2.3.6 Loading, Service and Storage**

- Buildings should locate loading bays, service areas and trash storage at a single point oriented away from public spaces, and typically accessed from secondary roads and parking areas.
- Screen loading, service and storage facilities with landscaping and/or well-designed vertical structures consistent with the architecture of the buildings.

**2.3.7 Utilities**

**Utilities include all systems and equipment providing mechanical, electrical, plumbing and drainage for a building or site area.**

- Equipment such as meters, electrical cabinets, transformers and switchgear should be located within the building they serve to the extent possible.
- Any equipment located outside building enclosures should be screened with landscaping and/or well-designed vertical structures consistent with the architecture of the building.
- Building systems equipment and distribution systems should be incorporated in the overall composition of the building or be visually seamless.
- For communication and information technology, all campus buildings need to comply with University of Tennessee, Knoxville campus design standards.

**Sustainable Design:**

- *At a minimum, the following systems and equipment should function per the design intent and be verified through a commissioning process: heating, ventilating, air conditioning, and refrigeration systems and equipment; lighting controls; domestic hot water.*

**Reference:** *State of Tennessee Sustainable Design Guidelines, section 1.02; (C.1.), Energy efficiency and building systems.*