

A silhouette of a city skyline with various buildings and structures, set against a blue gradient background. The skyline is positioned at the top of the slide, with the rest of the slide having a green-to-white gradient background.

# **WHAT IS A SUSTAINABLE PARKING LOT?**



# OUTLINE

## Issues:

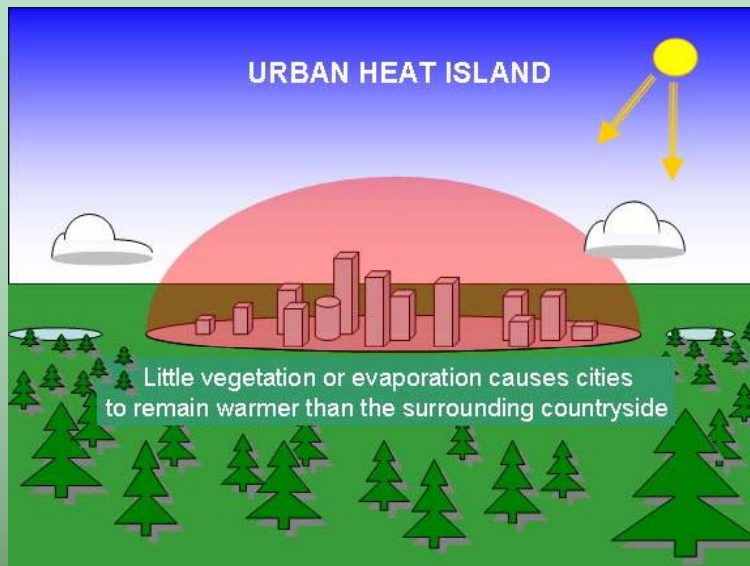
- Urban heat island effect
- Stormwater
- Depletion of open space

## What is a sustainable parking lot?

- Transportation system
- Walkability
- Air and energy
- Water

# URBAN HEAT ISLAND EFFECT

- Elevated emissions of air pollutants and greenhouse gases
- Impaired water quality
- Increased energy consumption



# STORMWATER ISSUES



- Increased stormwater runoff
- Impaired water quality



# LOSS OF OPEN SPACE

## Conservative estimates for the Kansas City metropolitan area:

- 1.5 parking spaces per person
- 225 square miles of parking lots
- 3 percent of our landscape is parking lots



# **ELEMENTS OF A SUSTAINABLE PARKING LOT**

A silhouette of a city skyline with various buildings and structures, set against a blue and green gradient background.

# PLANNING ISSUES


## How do we reduce demand for parking?

- **Transportation system:** Looking at parking lots in the context of all modes of transportation
- **Walkability:** Creating parking lots that are less dominated by cars

A silhouette of a city skyline with various buildings and structures, including a prominent tower and a bridge-like structure, set against a blue sky background.

# TRANSPORTATION SYSTEM

- Reducing minimum parking requirements. Minimum parking requirements increase supply and reduce the price
- Apply maximum limits on parking
- Area-wide parking caps, especially in commercial centers where land is scarce and expensive
- Reduced stall size requirements



**“Understanding the problem as too few parking spaces, planners require developers to provide more parking. But if the problem is too many cars rather than too few parking spaces, minimum parking requirements make the original problem even worse.”**

**Donald Shoup**

# TRANSPORTATION SYSTEM

- Variable-rate parking pricing
  - Long-recognized as the most powerful and effective parking tool

The effects of parking prices on Grosvenor Square in London. (David Shoup)



*No meters*



*Meters*



*Price quadrupled*

# WALKABILITY

- Locate parking strategically
  - Placing parking behind or on the sides of buildings helps establish a pedestrian environment
- Require bicycle racks
- Limit curb cuts
- Separate automobile and pedestrian traffic



A silhouette of a city skyline with various buildings and industrial structures, set against a blue gradient background.

# DESIGN ISSUES

**AIR / ENERGY / WATER**

# AIR AND ENERGY

- Require minimum landscaping and trees
  - Differing canopy cover effects on air pollution and stormwater management benefits
- LED and solar-powered lighting
- Alternative material composition and color
  - How do differing materials effect albedo rates?
- Signage to navigate parking



# WATER

- Stormwater Best Management Practices (BMP's)
- Pervious pavement
- Efficient irrigation technology
- Native plantings





# A NEW WAY TO PUT PARKING INTO PRACTICE

OLD	NEW
Parking is a social good	Parking is not an entitlement
More parking is always better	Too much parking can create problems
Governments should establish minimum parking requirements	Governments shouldn't mandate parking and should instead establish maximum parking allowances where they make sense
Parking costs should be bundled into the cost of housing, goods and services	Parking costs should be unbundled from the cost of housing, goods and services
Parking is a burden to government, and subsidies to parking will compete with other priorities for available funding	Parking can be a source of revenue for government, and if priced correctly, can fund other city priorities
Parking should be priced to encourage full use	Parking should be priced so as to create some available spaces most of the time
Cities should use time limits to increase parking availability and turnover	Cities should use price to increase parking availability and turnover