



Smart growth principles:

Creating walkable neighborhood

Lecture by: Assist. Lect. Sakar Yousif

Prepared by staff

2022-2023

Urban Smart Growth

Fourth stage

Architectural dept.



In previous lecture;

- **Sprawl** Vs. **Smart Growth**

- **sprawl:** A form of urbanization **distinguished** by jump patterns of development, commercial strips, low density, separated land uses, automobile dominance, and a minimum of public open space. (Gillham 2002, 8)



Smart growth: covers a range of development and conservation strategies that help protect our natural environment and make our communities more attractive, economically stronger, and more socially diverse (EPA 2008)

Smart growth and walkability

- **Smart growth** and new urbanism both have the goal of creating walkable neighborhoods that reduce the consumption of natural resources by reducing the need for automobile transport for basic living and social necessities (Walmsley 2006).



Smart growth and walkability (continued)



- one of the principles of creating smart growth cities is to make it **possible for pedestrians to reach transit destinations** (bus stops, train stations etc.) **without using their cars to get there.**
- **By creating walkable cities**, the inhabitants will be more willing to make use of the pedestrian routes, which will lead to less traffic on the roads and which will also ensure that less emission gasses are released into the air (Frazier et al., 2001).



walk, walkable and walkability



- The most fundamental mode of transportation is **walking**; it has a great role in designing communities from the earliest human settlements (Steiner and Butler, 2007).
- People are walking for purpose of **transportation or recreation**
- **Its benefits:** improving public health, cost saving, providing equity, environmental protection and livability.
- **its characteristics:** sociable, accessible, livable, attractive, mixed use, diverse, healthy, safe and environmental friendly.

Walkable is defined by Oxford dictionaries as “an area or route suitable or safe for walking” and by Merriam Webster dictionary as “capable of or suitable for being walked”; and

walkability is defined by Macmillan dictionary as “a measure of how easy it is to walk around in an area easily and safely.”



THE GENERAL THEORY OF WALKABILITY

In his 2012 book, *Walkable City*, Jeff Speck, co-author of *Suburban Nation* and *The Smart Growth Manual*, branches out on his own to nail down a comprehensive guide to walkability.



He contends that a great deal of money and muscles have gone into streetscape improvements



The general theory of walkability convinces people to walk in their cities.



This theory explains how, to be favored, a walk has to satisfy four main conditions –It must be useful, safe, comfortable and interesting

THE GENERAL THEORY OF WALKABILITY



1. Useful: Most aspects of daily life close at hand and well organized



2. Safe: Streets that are designed to be safe and also feel safe to pedestrians



3. Comfortable: Urban streets as outdoor living rooms



4. Interesting: Sidewalks lined by unique buildings with friendly faces

WALKABLE CITY -OBJECTIVES

To create safe and diverse meeting places and spaces across the city.

Planning should take into account the need for a diverse range of attractive, safe and transboundary meeting places both outdoor and indoor.

The people should have good access to attractive parks and green spaces and sport facilities.

Good conditions are to be put in place for pedestrian and cyclists across cities.

Carefully preserves and upgrade buildings that contributes toward the character of the city.

Seek to create a good local environment surrounding existing and new homes.

Recommendations for making neighborhoods more walkable.



1. Develop a pedestrian master plan.

- The **pedestrian master plan** should provide an approach to walkability that is consistent, yet allows flexibility, by adopting policies, prioritizing current and future funding mechanisms, and furnishing design and implementation guidelines for projects.
- **During the planning process**, the entire community should be involved, with a special emphasis on getting **the participation of senior citizens, children, people with disabilities, and people who do not use cars.**

2. Design communities so that kids can walk to school.

Establish formal programs to improve **safety for children** who choose to walk. **A clear, understandable and organized sidewalk, street and land-use system** consistent with the scale and function of the surrounding urban context.



Recommendations for making neighborhoods more walkable.



3. Use trees and other green infrastructure to provide shelter, beauty, urban heat reduction, and separation from automobile traffic.

- Clean, efficient and well-maintained surroundings, with adjacent storefronts and activities that provide sidewalk interest

4. Encourage safe pedestrian routes to transit.

- A pattern of design and usage that unifies the pedestrian system with making balance among transportation modes that will accommodate and encourage pedestrian participation.

5. Develop walking awareness and promotion programs.

- Inform community members about pedestrian infrastructure and services. Newsletters, maps, walking guides, and pedestrian-scaled signage may promote available and planned walking routes as well as the benefits of walking to nearby destinations.



Recommendations for making neighborhoods more walkable.

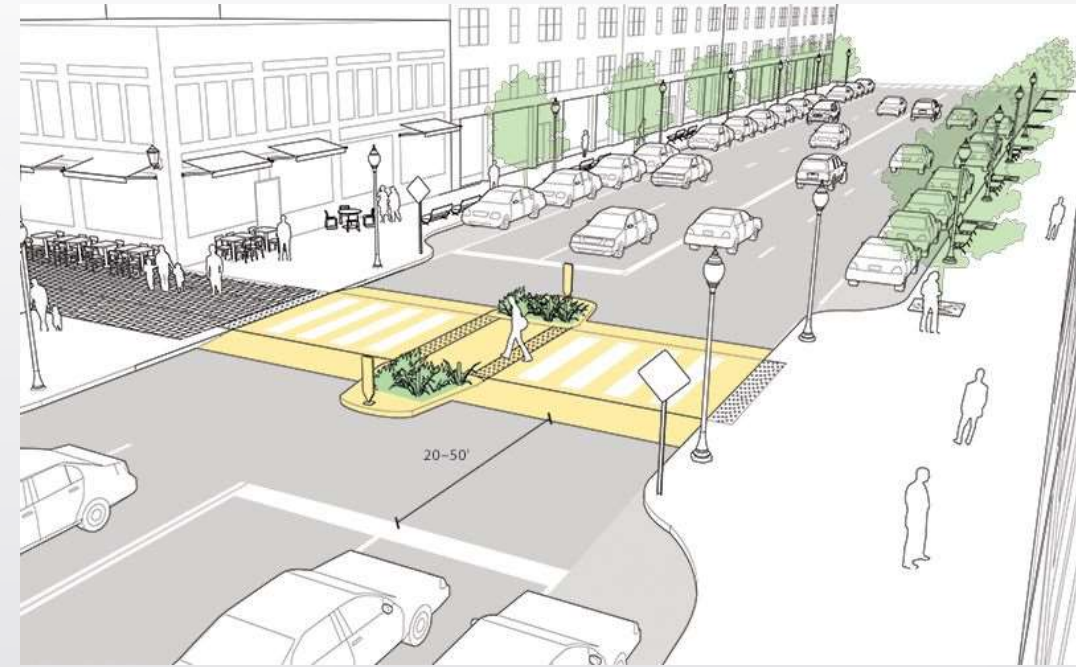


6. Use modern technology to increase pedestrian safety

- crosswalks with automated in-pavement flashing lights can be used to notify drivers when pedestrians are crossing. Countdown signals mounted on crosswalk signs indicate to pedestrians the amount of time remaining to safely cross before the light gives automobile traffic the right of way.

7. Use visual cues and design elements to indicate pedestrian rights of way and minimize conflicts

- Well-articulated street-level or overhead signs both warn pedestrians to watch for cars and emphasize the pedestrian right-of-way to approaching cars.
- Breaking up street continuity using colored pavements, signs, or highly visible crosswalks also can communicate frequent pedestrian activity to drivers.



Recommendations for making neighborhoods more walkable.



8. Situate parking to enhance the pedestrian environment and facilitate access between destinations.

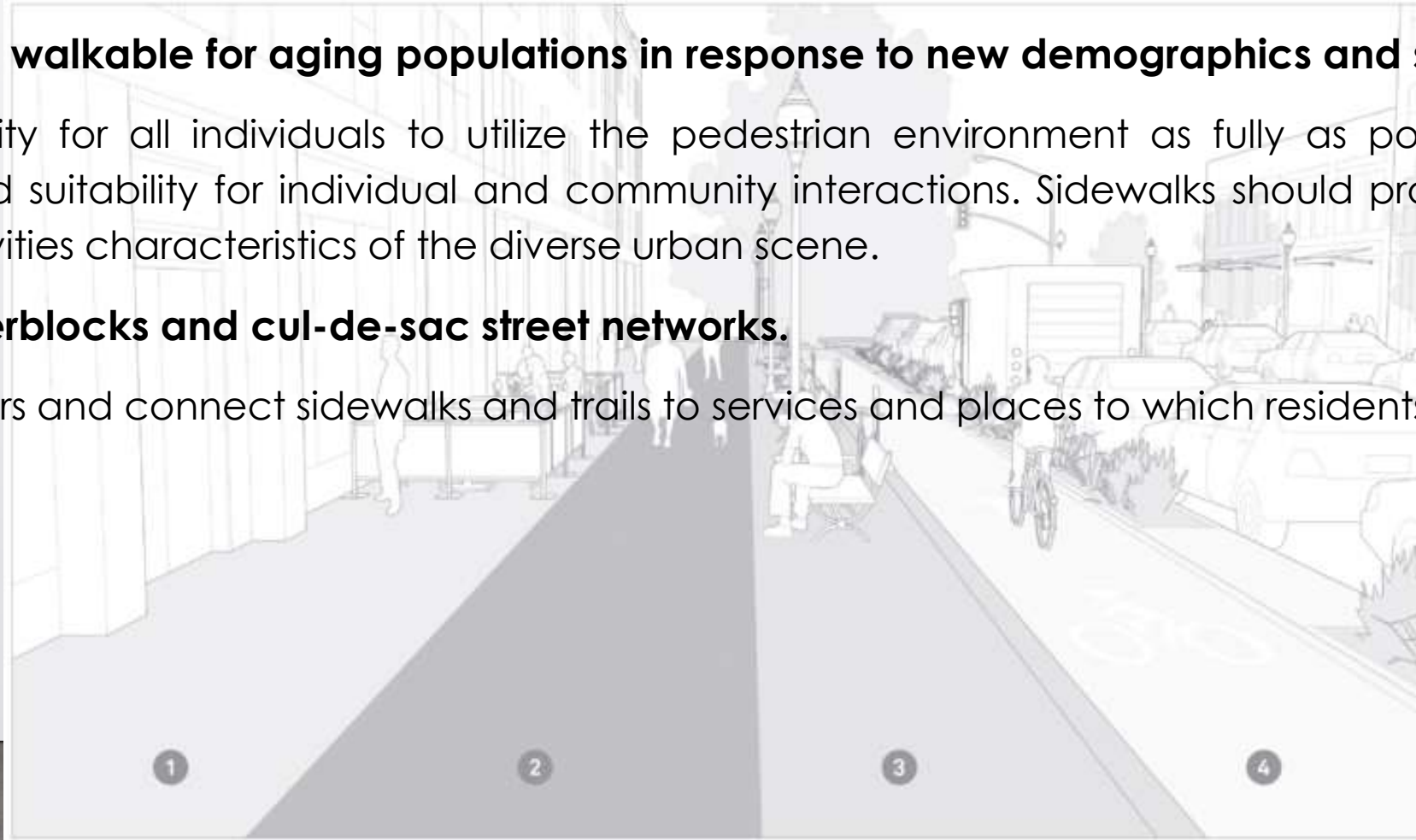
- Well-designed parking can actually enhance convenience and accessibility for those on foot. For example, on-street parking may reduce auto speed and function as a barrier between pedestrians and cars.

9. Make places walkable for aging populations in response to new demographics and special needs.

- The opportunity for all individuals to utilize the pedestrian environment as fully as possible. With sense of hospitality and suitability for individual and community interactions. Sidewalks should provide for a variety of uses and activities characteristics of the diverse urban scene.

10. Retrofit superblocks and cul-de-sac street networks.

- remove barriers and connect sidewalks and trails to services and places to which residents would usually drive.



Walkability Policies and Regulations



- Adopt Complete Streets or comparable standards
- Develop and implement a pedestrian master plan
- Design and execute Safe Routes to School programs
- Adopt pedestrian friendly standards for sidewalk design
- Develop a traffic management (traffic calming) plan to enhance pedestrian safety



Components of Walking Systems:

It's considered that in any community that the pedestrian system consists of some simple physical elements which give importance to this system. These elements are:

- **Sidewalks and Walkways:** sidewalks normally placed on one or both sides of the streets within limited surrounding strips at least (2m) wide.
- **Surfaces:** material type which is used for sidewalks and the finishing result has three points of concern which are: ease of walking, permanence, and visual attractiveness.
- **Drainage and Lighting:** need for drainage system to maintain clear paths and check structural damage in the infrastructure. Lighting is needed to provide adequate illumination along pathways, also it provides visual interest and crime prevention.



Components of Walking Systems:

□ **Traffic Control Devices and Accessibility Concerns:**

availability of crossing means such as simple stop signs for vehicles, regular traffic signals, and controls with special phases for pedestrians.

□ **Grade Separation and Multiple Levels:** in the case of heavy vehicular traffic that results in serious conflicts.

□ **Roofs and Shade:** for protection during extreme climates it's required to have canopies and shelters somewhere along pedestrian network.



Components of Walking Systems:



□ **Landscaping and Amenities:** to create an attractive pedestrian environment it is required to add some such as benches, water fountains, telephone booths, signs, information kiosks, public toilets, and litter baskets.

□ **Mechanical Movement Assistance:** when some parts of pedestrian system need to accommodate a high volume of walkers, mechanical auxiliary means of mobility can be used such as horizontal or inclined belts or escalators





Crosswalk signals and red-light camera

On-street parking

Crosswalk

Paving treatments



Entertainment use

Wide Sidewalks

Reduced number of lanes

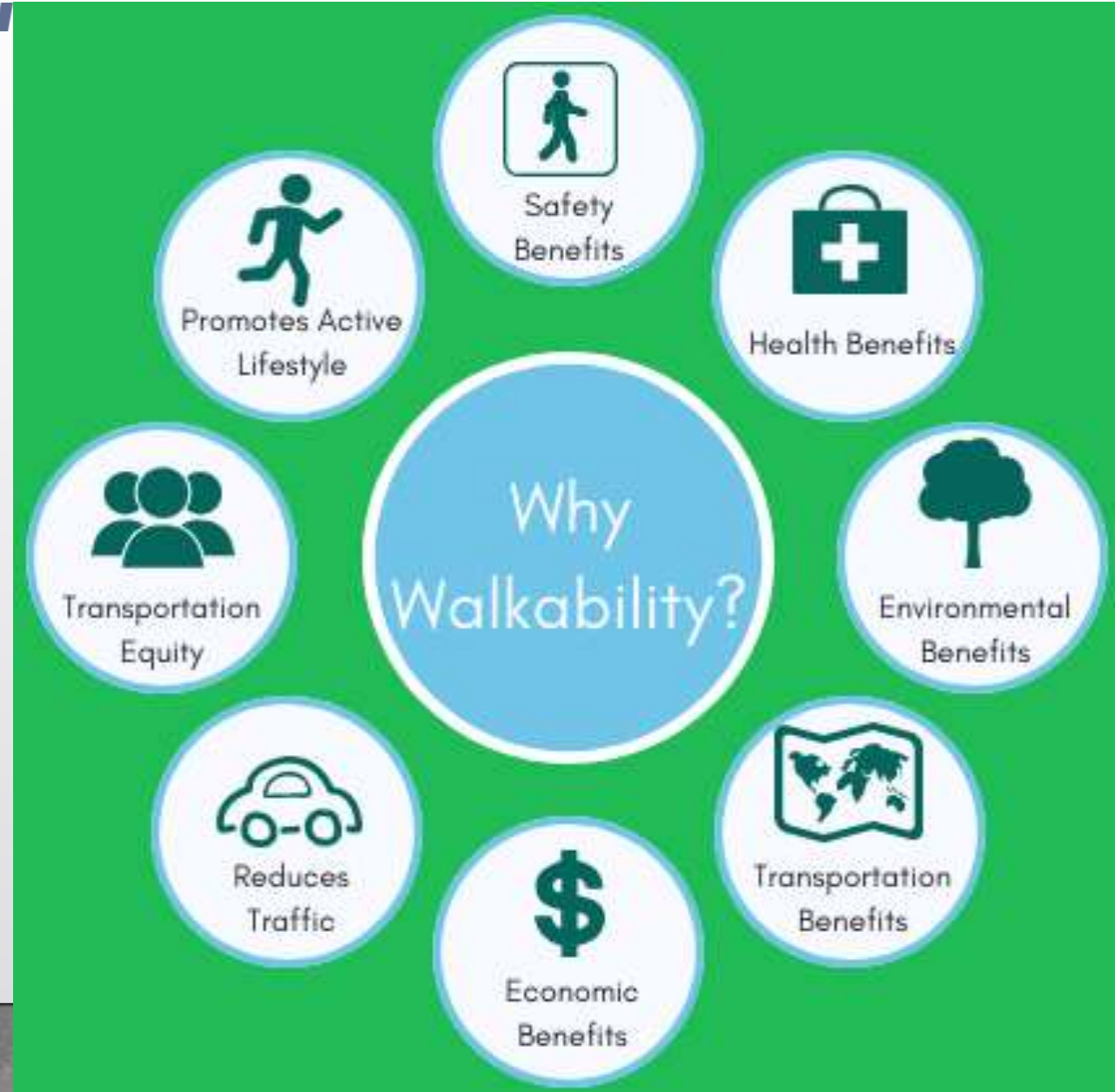
Landscaping

Street furniture/lighting

Create Walkable Neighborhoods, why?



- Walkable neighborhoods **offer the opportunity to walk** by providing safe sidewalks, but also somewhere to walk to — such as the corner store, the transit stop or school.
- Walkable neighborhoods are **safer for children** who can walk or bike to school or the local park without dodging high-speed traffic, and are **healthier for our seniors** who can get their daily exercise walking to their friends' homes or a nearby restaurant.
- Walkable neighborhoods **reduce transportation costs** by offering choices to take some trips without using our cars and they **create more opportunities to get to know our neighbors** when we meet them on the sidewalk (rather than just recognizing each other's car as we drive past each other).
- Compact, walkable neighborhoods **encourage healthier lifestyles** (more walking!), protect the environment and save costs and energy by reducing car dependence.



Finally...



Walkability: It's not about the buildings, or even the streets. It's about the experience.



Step it up! Help make your community more walkable. Learn how by visiting www.SurgeonGeneral.gov



• Thanks

