



The Influence of Building Facades on Urban Walkability: A Spatial and Perceptual Analysis



Introduction

Walkable and visually appealing streetscapes play a key role in shaping how people move, interact, and experience urban environments. Building façades are important because their design can either encourage or discourage pedestrian activity, influencing a sense of place, social engagement, and overall health.

This study examines how façade elements such as transparency, materiality, and active frontage affect pedestrian perception and behavior. Focusing on Downtown Brea, the research uses streetscape observations, in person interviews, and online surveys to understand what design features attract a walkable lifestyle.

Methodology

The research uses a qualitative method combining spatial observation, inperson interviews, and surveys to evaluate how façade design and streetscape features shape pedestrian experiences such as comfort, safety, sociability, and aesthetics. The study area is W Birch Street in Downtown Brea, a corridor with mixed-use development and active frontages, to understand how built form and perception influence walkability. Pedestrians and local workers responded to open ended questions about their own experiences, preferences, and desired improvements through a survey.

Spatial Variables & Pedestrian Perception

- Facade articulation
- Transparency
- Sidewalk width
- Shading
- Material variety
- Imageability

Key Findings

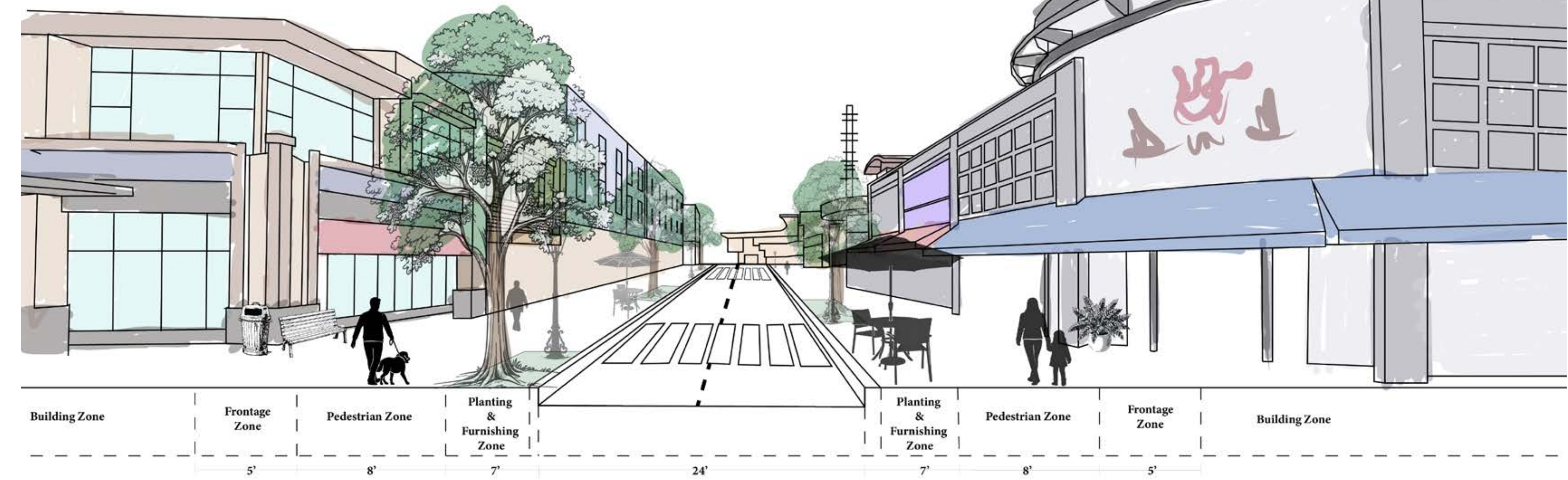
Pedestrian interviews conducted over three weeks on weekends in Downtown Brea show that W Birch Street functions mainly as a lively destination for dining, shopping, and entertainment rather than an everyday corridor. Most participants found the street comfortable, enjoyable, and safe due to active storefronts, visibility, and the presence of other people.

Frequently Mentioned Topics From Findings

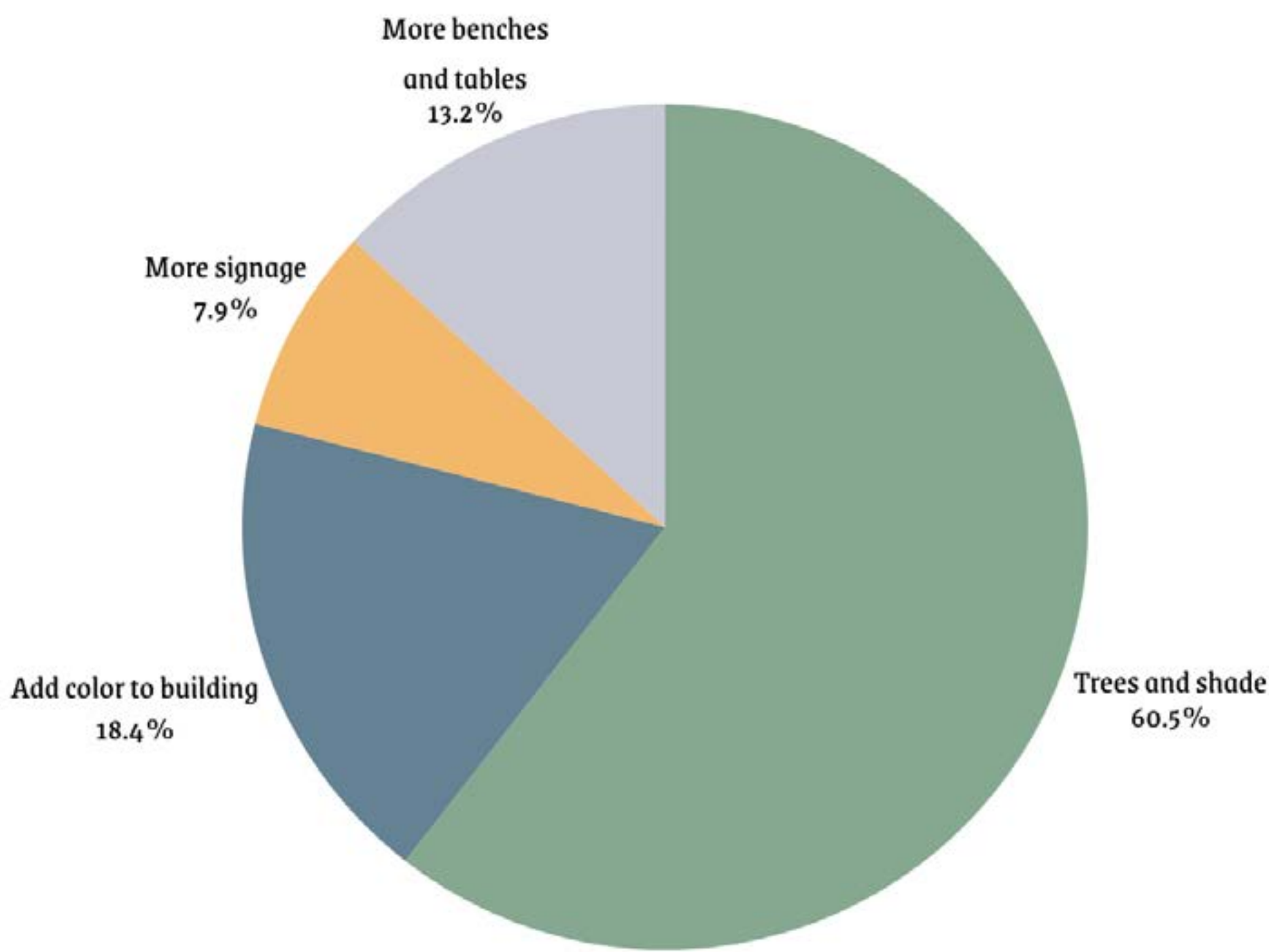
- Transparent facades
- Variety of shops
- Wide sidewalks
- Outdoor seating
- Lighting
- Landmarks (like the clock)
- Lack of shade
- High pedestrian activity

Overall, the street supports both social activity and movement, with design elements influencing whether people choose to linger or move through. Small improvements especially increased shading and greenery could further enhance walkability and comfort.

Redesign of W. Birch St With Implemented Recommendations



Elements Pedestrians Would Like to See More of



Recommendations

- 1. Increase Shade and Comfort**
Expand shade coverage by planting larger canopy street trees, adding awnings, and incorporating shade structures. Encouraging businesses to include covered outdoor seating can help attract pedestrians to stay longer and improve comfort, especially in warmer conditions.
- 2. Enhance Active and Engaging Façades**
Avoid blank or inactive walls by maintaining transparent storefront windows that promote visibility, safety, and curiosity. Incorporating diverse materials, textures, and colors can strengthen visual interest and create a distinct sense of place.
- 3. Expand Public Amenities and Green Infrastructure**
Provide more public seating areas that are not tied to businesses, allowing pedestrians to rest without needing to make a purchase. Adding greenery such as planters, shrubs, and landscaping can improve aesthetics, comfort, and overall streetscape character. Removing curbside parking.