

A Campus Without Barriers - Accessibility for All

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INTRODUCTION

College campuses are designed to support movement, connection, and access to education, yet their physical layouts often create unintended barriers for students with limited mobility. Steep terrain, long travel distances, uneven pathways, and poorly connected routes contribute to physically demanding and inconsistent navigation. Although accessibility standards under the ADA aim to remove these barriers, many campuses rely on retrofitted solutions that do not align with how students actually move through space, resulting in fragmented accessibility rather than a reliable system. This study examines how the physical layout and infrastructure of Cal Poly Pomona influence daily mobility experiences, focusing on key routes between Parking Lot J, Building 7, and the College of Science Building; using a mixed methods approach. The findings demonstrate that accessibility challenges stem from the combined effects of terrain, infrastructure, and planning decisions, supporting the need for more cohesive and inclusive design strategies to improve campus connectivity and equity.

Case Study: *UC Berkeley Accessible Paths and Places Master Plan (Sasaki. UC Berkeley Accessible Paths and Places Master Plan.)*

- The University of California, Berkeley developed a campus-wide accessibility plan that maps accessible routes and prioritizes improvements based on mobility barriers. Rather than focusing on individual buildings, the plan addresses accessibility as a connected network across campus.
- Outcome:** This approach improves route continuity, safety, and navigation by aligning infrastructure with real movement patterns, creating a more reliable and inclusive campus environment.
- Relevance to the study:** This case demonstrates how network-based planning can reduce accessibility.

METHODOLOGY

Research Question: *How does the physical layout and infrastructure design of Cal Poly Pomona shape the daily mobility experiences of campus users?*

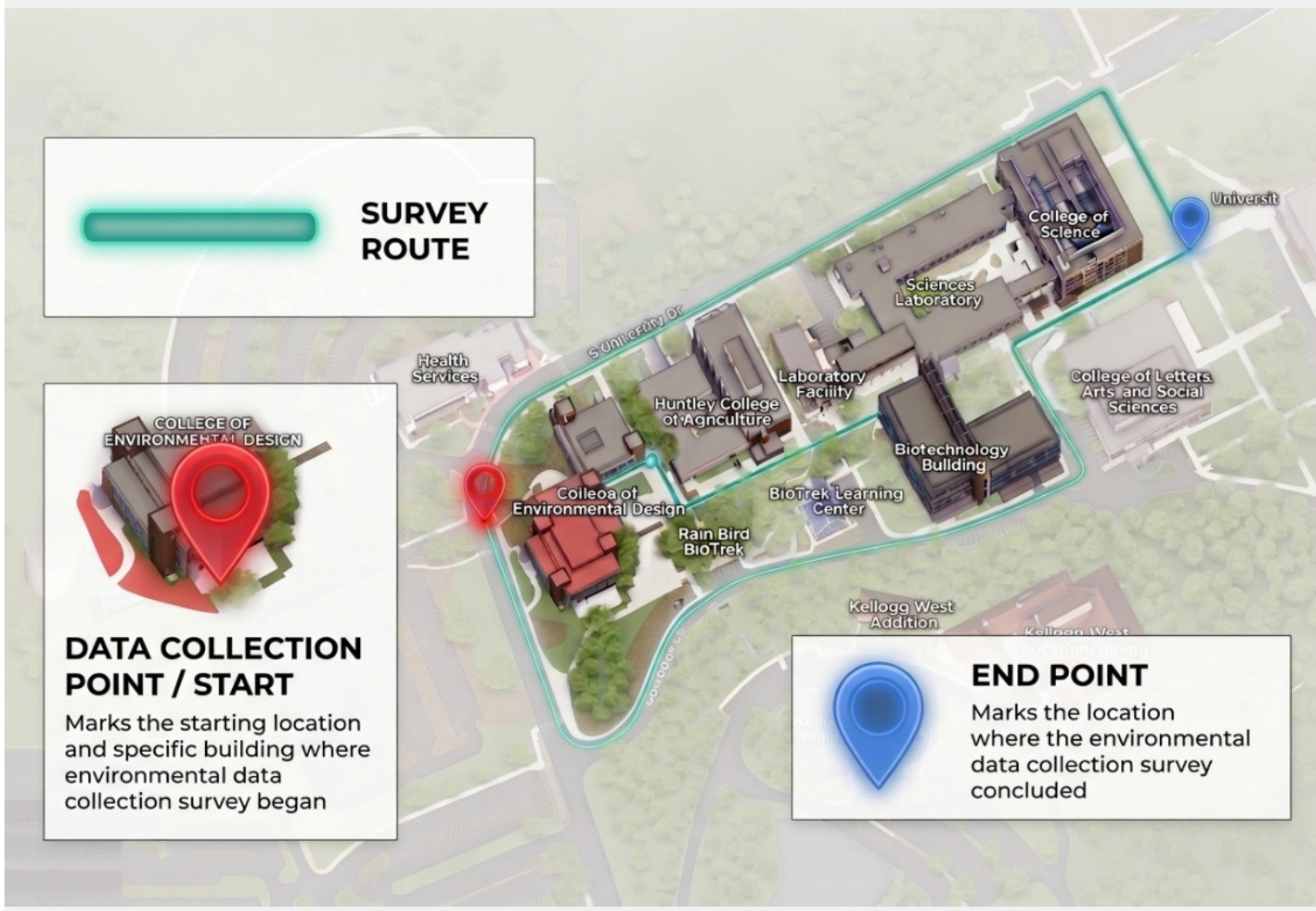
Study approach:

- Evaluates how the physical layout and infrastructure of Cal Poly Pomona shape daily mobility along a primary route between Parking Lot J, Building 7, and the College of Science Building.
- Focuses on a high use corridor to capture real everyday mobility experiences.
- Uses surveys to assess travel difficulty, safety, route clarity, and mobility barriers.
- Uses field observations to document activity, crossing behavior, and physical conditions such as slope and pathways.
- Compares low and peak periods to understand how mobility conditions change.

Themes:

- Topography and physical effort
- Perceived safety at crossings
- Wayfinding and route clarity
- Direct vs indirect routes
- Traffic and activity levels
- Limited support for mobility needs

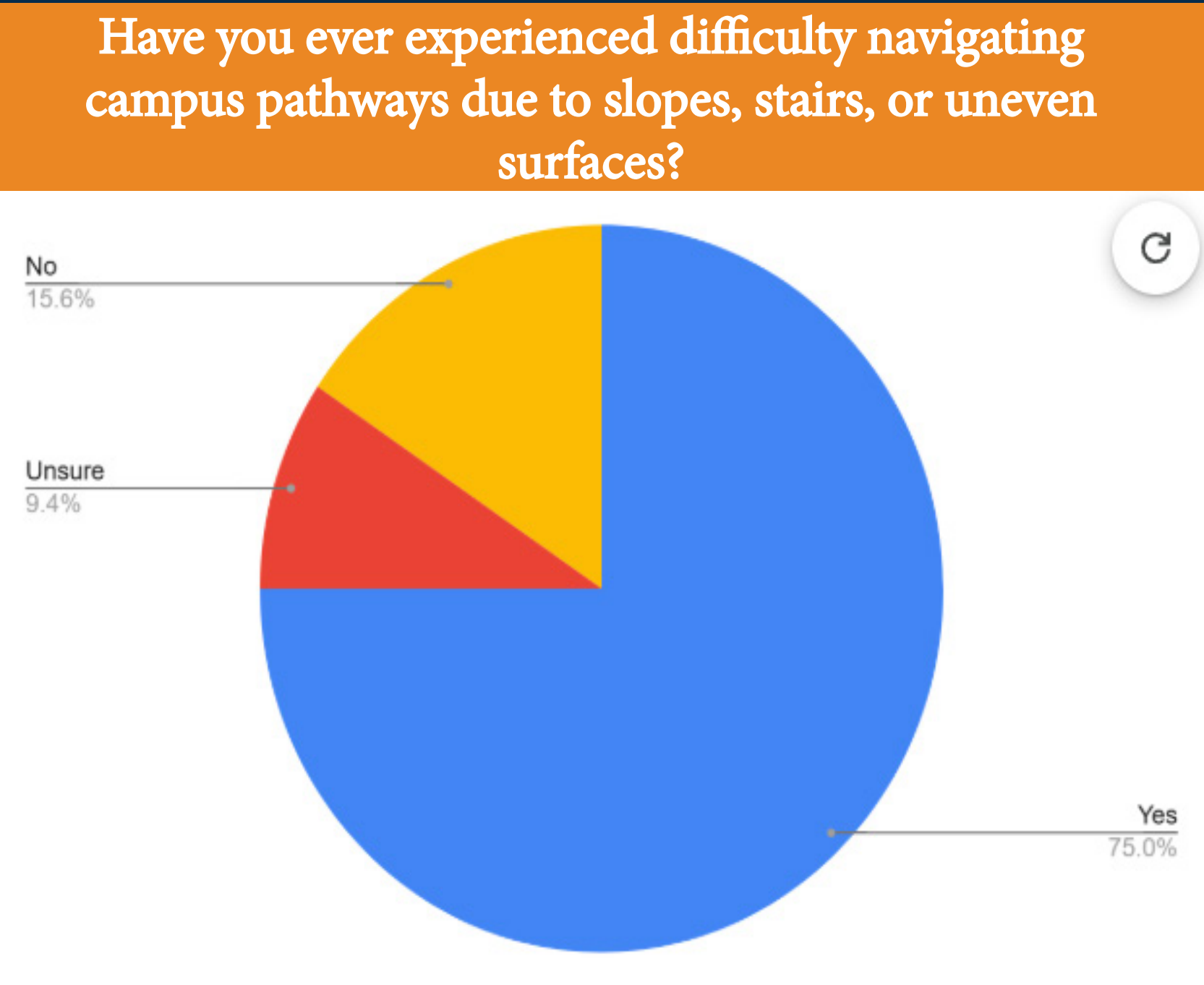
STUDY AREA



Summary of Observed Conditions:

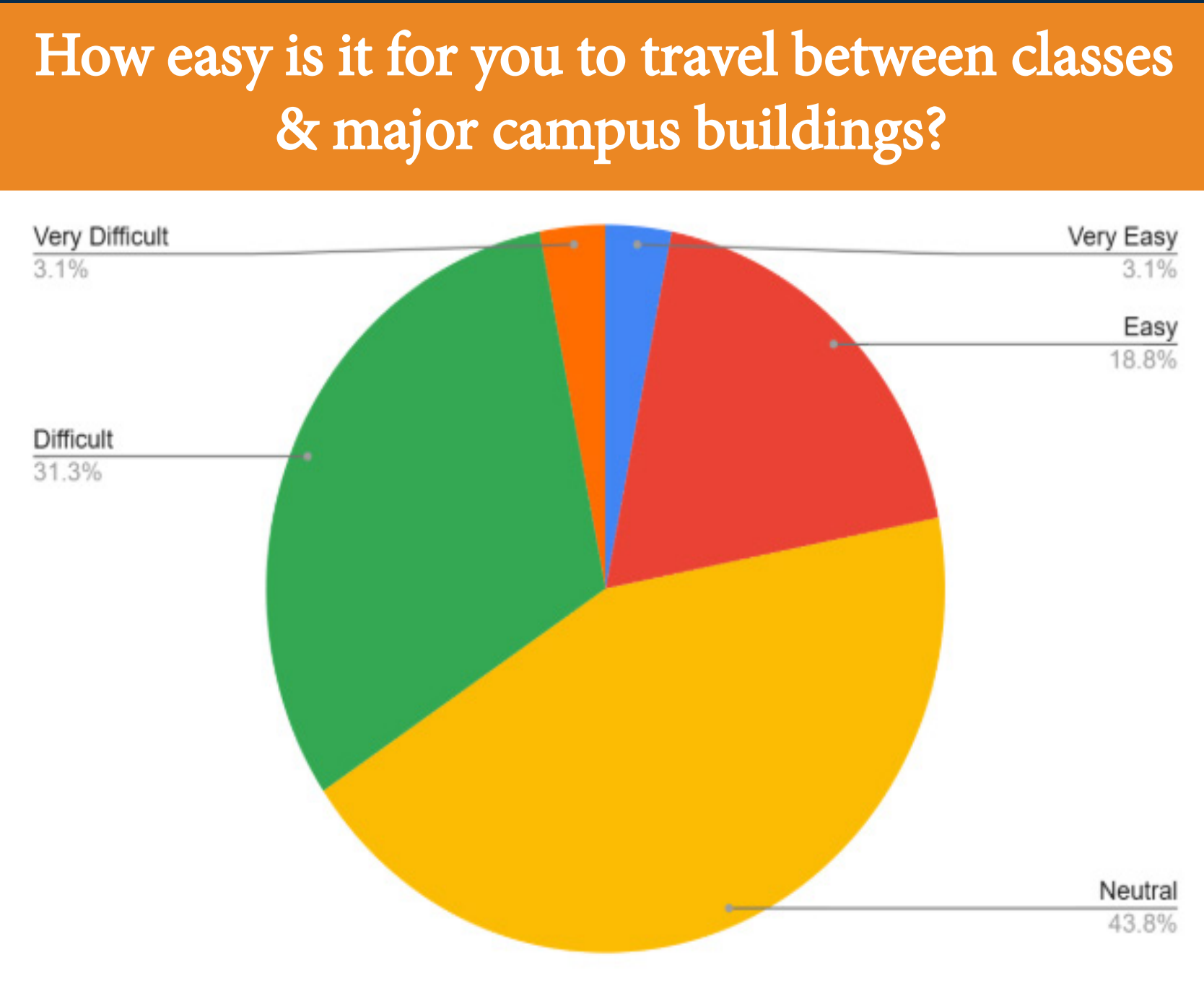
Category	Evidence	Insight
Terrain	Slopes, elevation, & long distances	Primary barrier to movement
Safety	Driver behavior & crossing activity	Infrastructure does not ensure safe conditions
Route Clarity	Survey responses on navigation	Unclear paths create confusions
Mobility Support	Survey responses on accessibility	Accessibility features do not fully support users
Activity Levels	13 to 56 pedestrians, 34 to 70 vehicles, 6:00PM and 3:30PM	Peak periods increase risk

FINDINGS



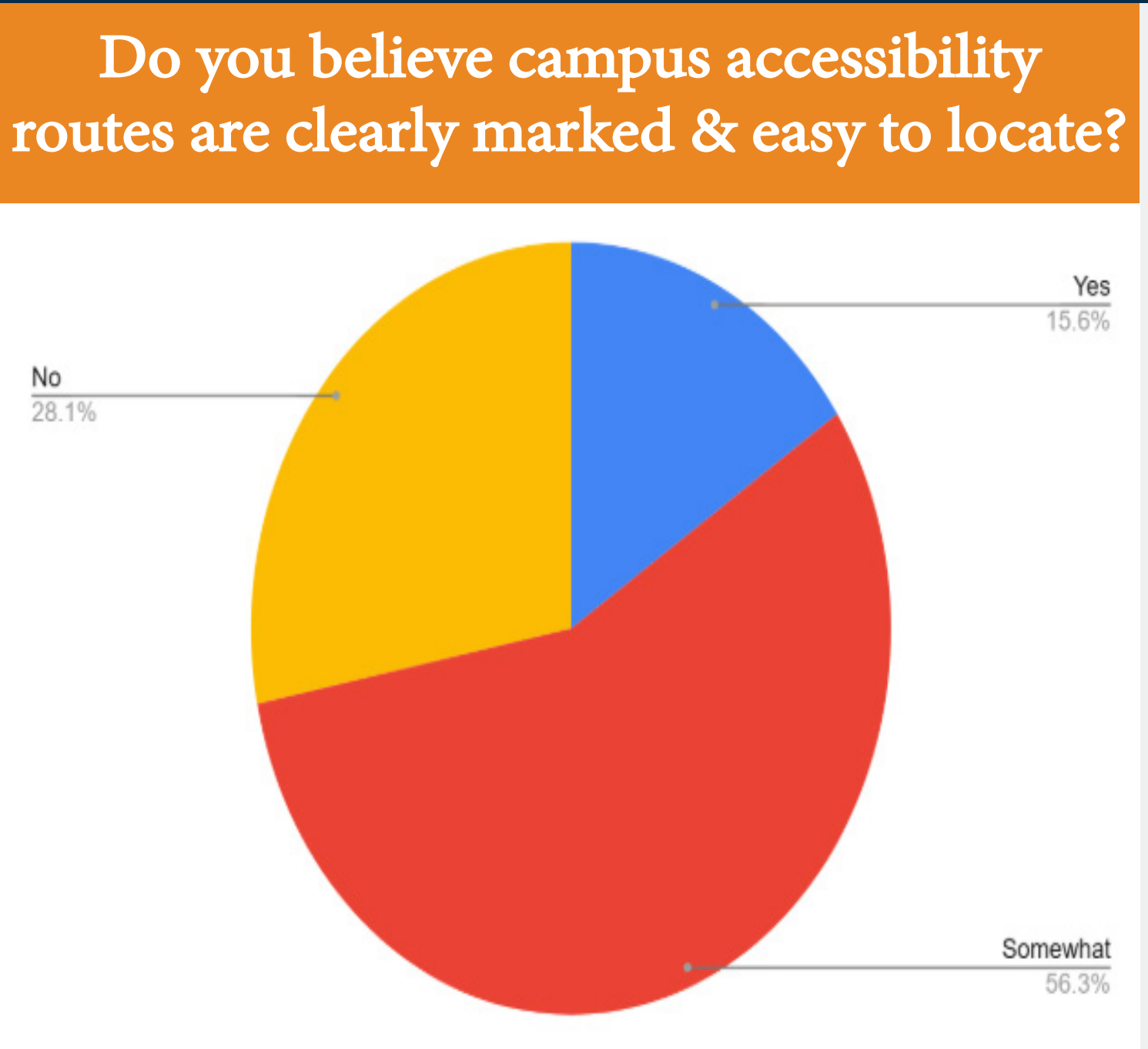
Mobility is physically demanding: 75% reported difficulty navigating pathways due to slopes, stairs, or uneven surfaces.

Key Insight: Campus mobility often requires significant physical effort due to slopes, stairs, and uneven pathways.



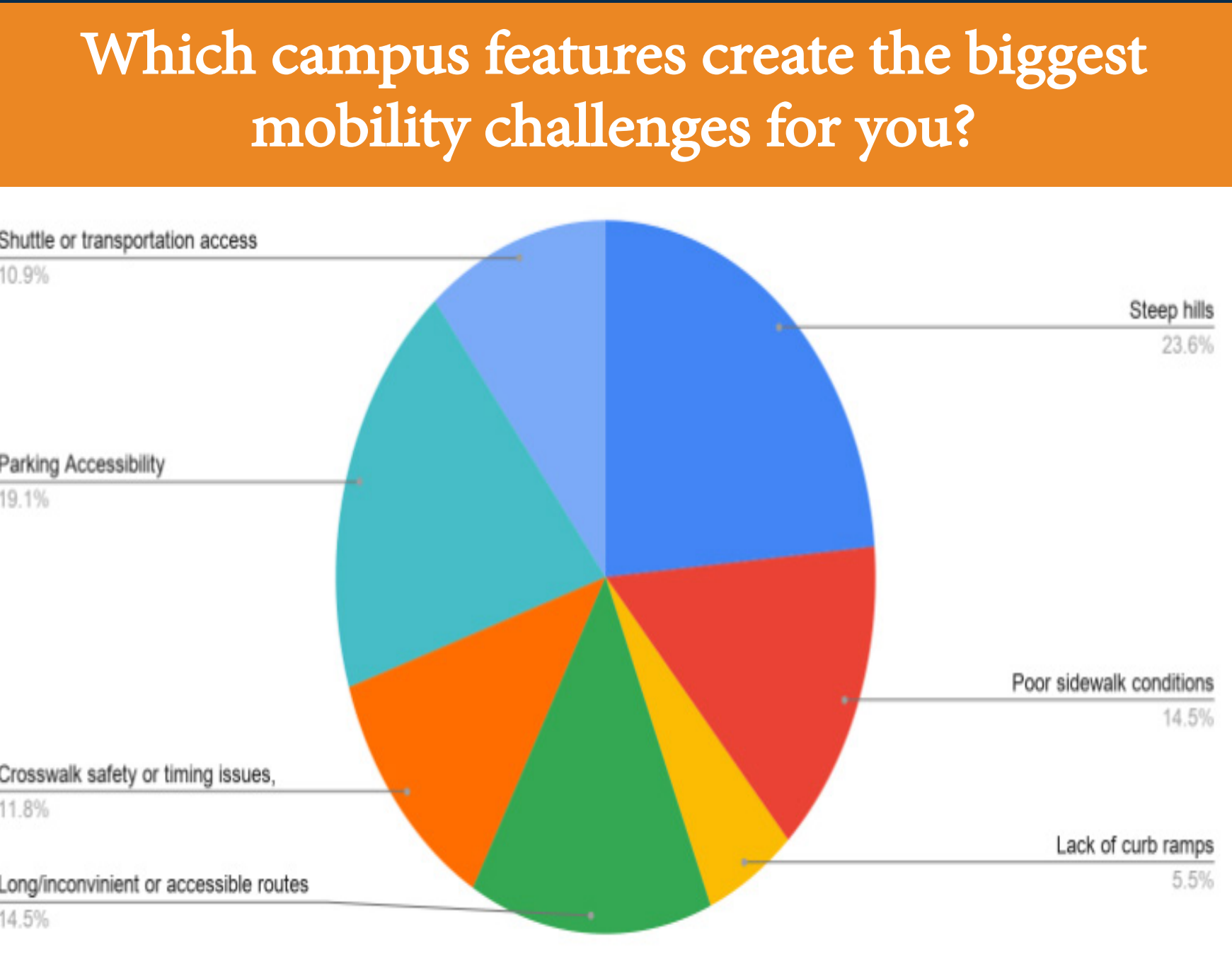
Safety is a concern for many users: Over 30% reported difficulty and feeling unsafe.

Key Insight: Safety concerns are tied to inconsistent crosswalk and pedestrian route conditions across campus.



Route clarity is weak: Only 16% said routes are clearly marked.

Key Insight: Many students rely on familiarity with the campus instead of clear route signage to navigate between destinations.



Terrain barrier: Over 23% identified steep hills as the biggest challenge.

Infrastructure condition: Over 14% reported sidewalk conditions as major issues.

Key Insight: Steep terrain and inconsistent sidewalk conditions create the greatest barriers to accessible campus movement.

RECOMMENDATIONS



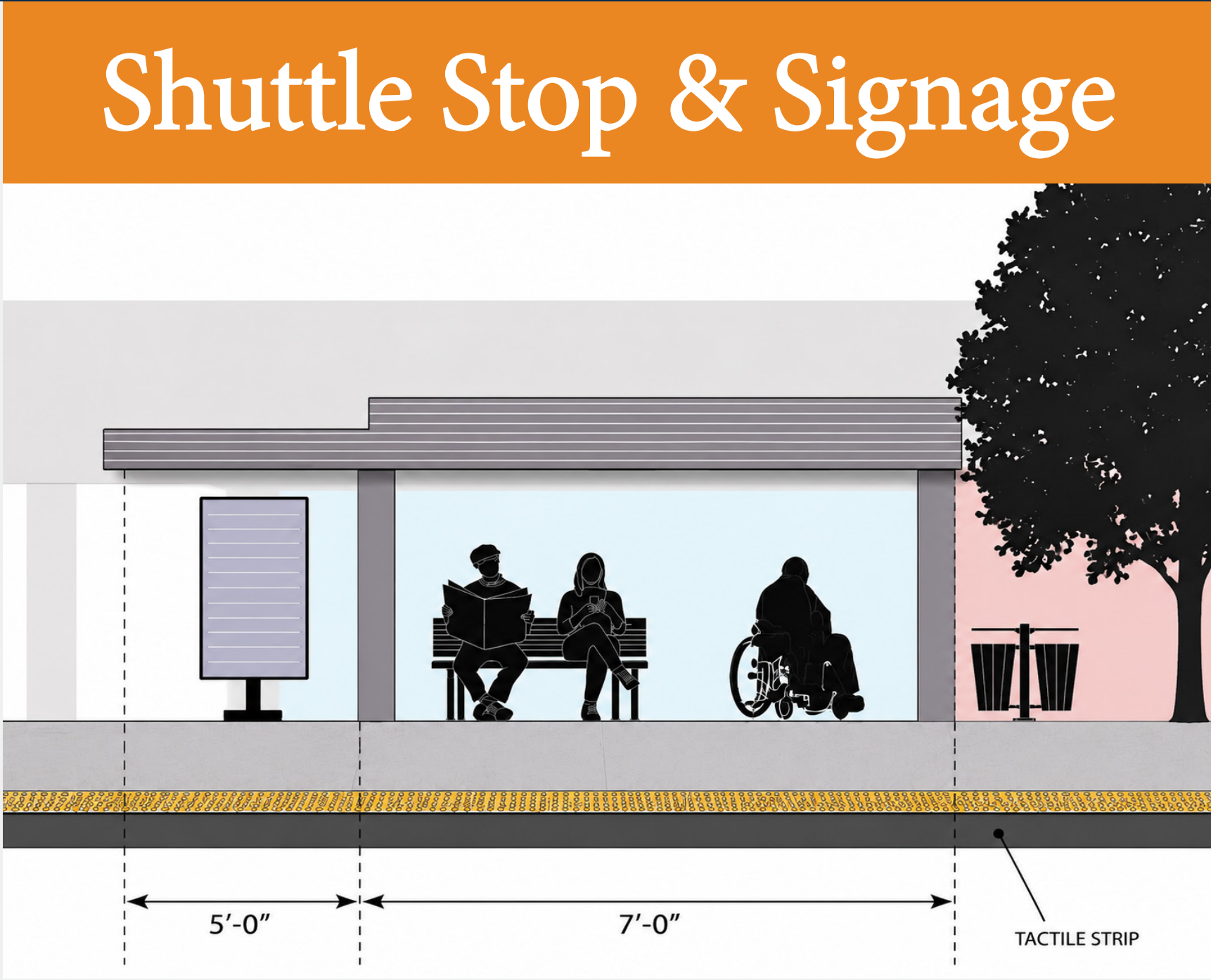
Proposed shuttle connection between Parking Lot J, Building 7, and the College of Science Building.

Key Insight: Improves access for students with mobility limitations, temporary injuries, and tight class schedules.



Pedestrian safety crossing with traffic control and warning systems.

Key Insight: Responds to concerns regarding unsafe driver behavior and inconsistent yielding.



Shaded shuttle stop with seating and wayfinding signage for easier campus navigation.

Key Insight: Encourages more students to use campus transit services.



Wayfinding sign that helps students navigate campus routes and destinations.

Key Insight: Strengthens route clarity by guiding users through major campus corridors.

CONCLUSION

The findings show that accessibility at Cal Poly Pomona is influenced by how terrain, infrastructure, and movement patterns work together across campus. Steep hills, long walking distances, unclear routes, and inconsistent pedestrian conditions continue to make daily travel physically demanding for many students. Improving campus accessibility requires more than isolated fixes. Stronger pedestrian networks, safer crossings, reliable shuttle connections, shaded transit areas, clearer wayfinding systems, and more thoughtful route planning can help create a campus environment that is safer, easier to navigate, and more supportive of independent mobility for all users.