

CPLN560
Graphics for Urban
Designers

Spring 2020 Final Assignment
Intersection of 34th and Wal-
nut Street Redesign Project

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Site Introduction and Analysis



Site Location

The intersection of the 34th Street & Walnut Street

Site Characteristics

- Close to the campus of University of Pennsylvania, especially School of Design
- On weekdays, many people (students, faculties, neighborhood residents, etc) pass through this intersection by driving, biking, walking and public transit, which causes this intersection crowded and sometimes dangerous for pedestrians and bicyclists

Surrounding Streets' Information

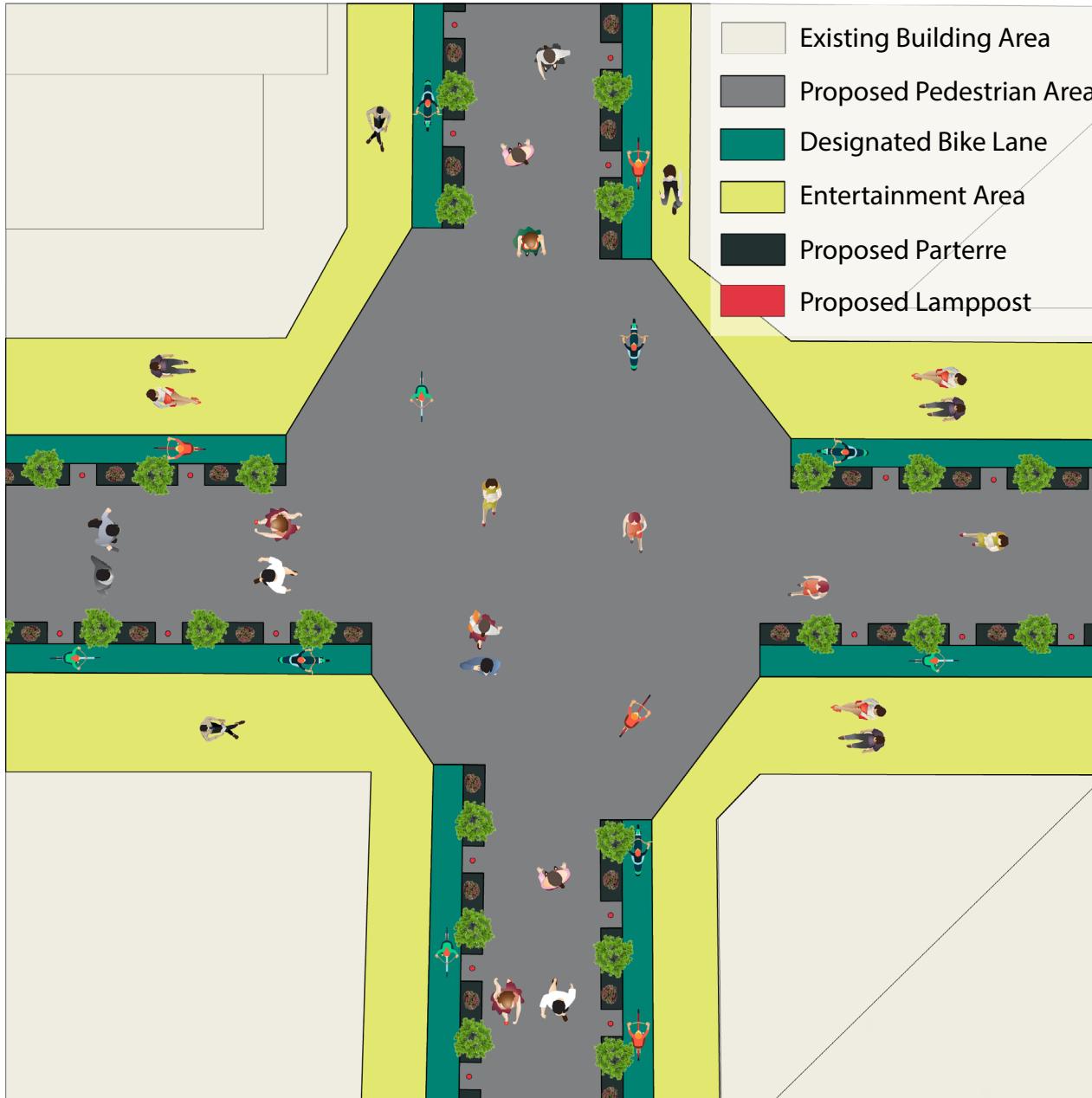
34 Street

- One-way (southbound)
- 33 feet wide on average
- Generally with 2 vehicle lanes and 1 vehicle-bike shared lane

Walnut Street

- One-way (westbound)
- 44 feet wide on average
- Generally with 2 parking lanes, 2 vehicle lanes and 1 bike lane

Site Redesign Idea (Plan)



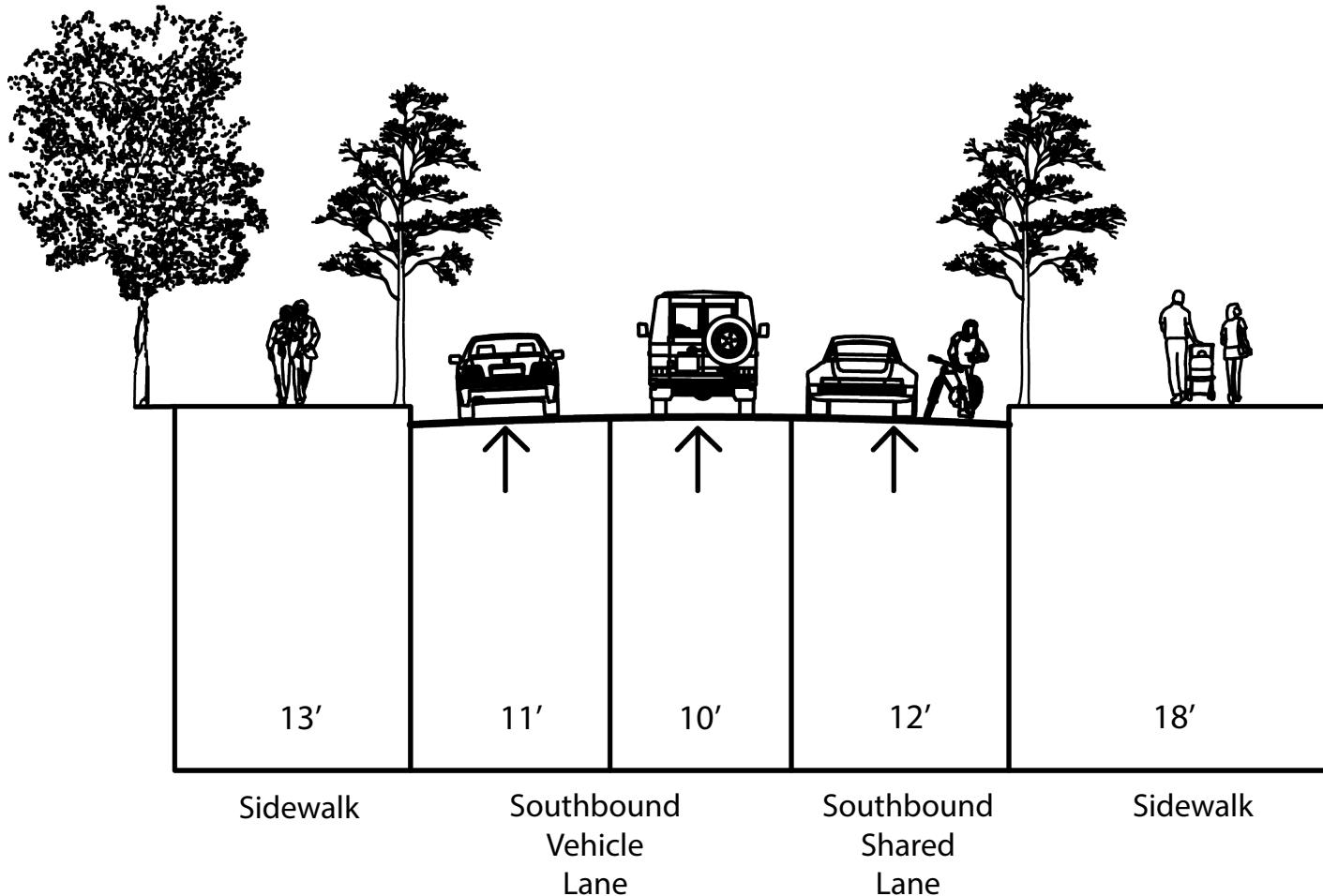
Main Idea

Redesign the intersection and surrounding road-sidewalk spaces to improve the safety for pedestrian and cyclists not only at this intersection, but also at the surrounding intersections, especially that of Spruce and 34th St (a dangerous one).

Proposed Redesign Ideas

- Keep the width of the pedestrian lanes to be about 25', which will be in the middle of the street areas
- Replace all or a part of the existing sidewalk areas to be the entertainment areas
- Make sure both 34th and Walnut St to have two designated bike lanes (6'), one for each direction
- Locate the bike lanes next to the newly added entertainment areas
- Separate the pedestrian area with each bike lane by a 4'-wide vegetation/decoration lane, composed of 4'-wide, 15'-long & 3'-high parterres
- Set a 5' gap for landscape lampposts between parterres
- Remove all traffic signals and convert the other signs and posters to be only pedestrian- or cyclist-related.

Site Redesign Idea (Section 1) - Before



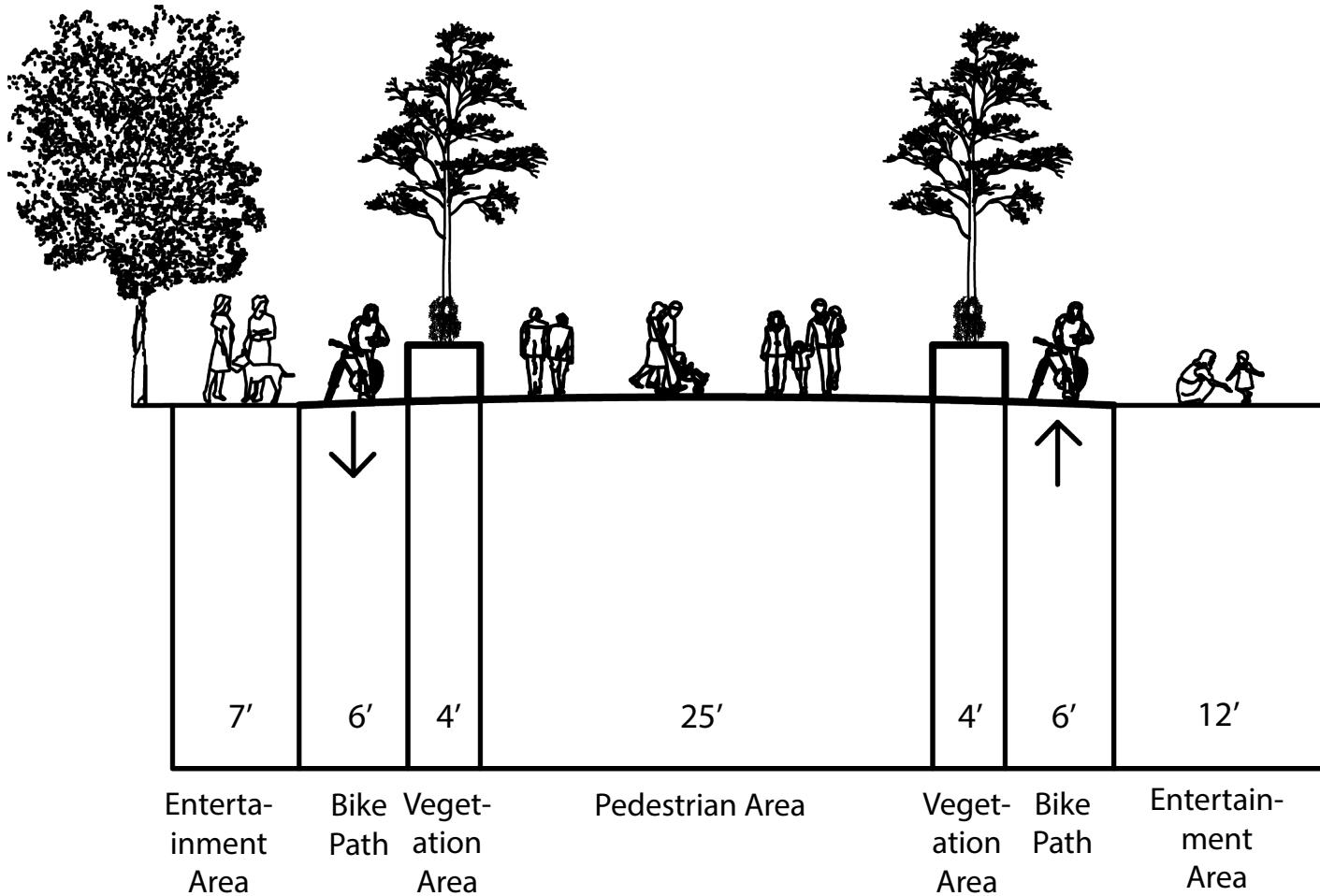
Location

- 34th Street North Side

Existing Conditions

- One-way Traffic (South-bound)
- Road surface width is 33'
- 13' elevated sidewalk on east side & 18' elevated sidewalk on west side of the street
- A 11'-wide southbound vehicle lane, a 10'-wide southbound vehicle lane, and a 12'-wide southbound vehicle-bike shared lane exist from east to the west of the road surface between the sidewalks
- Currently, there's no designated bike lanes

Site Redesign Idea (Section 1) - After



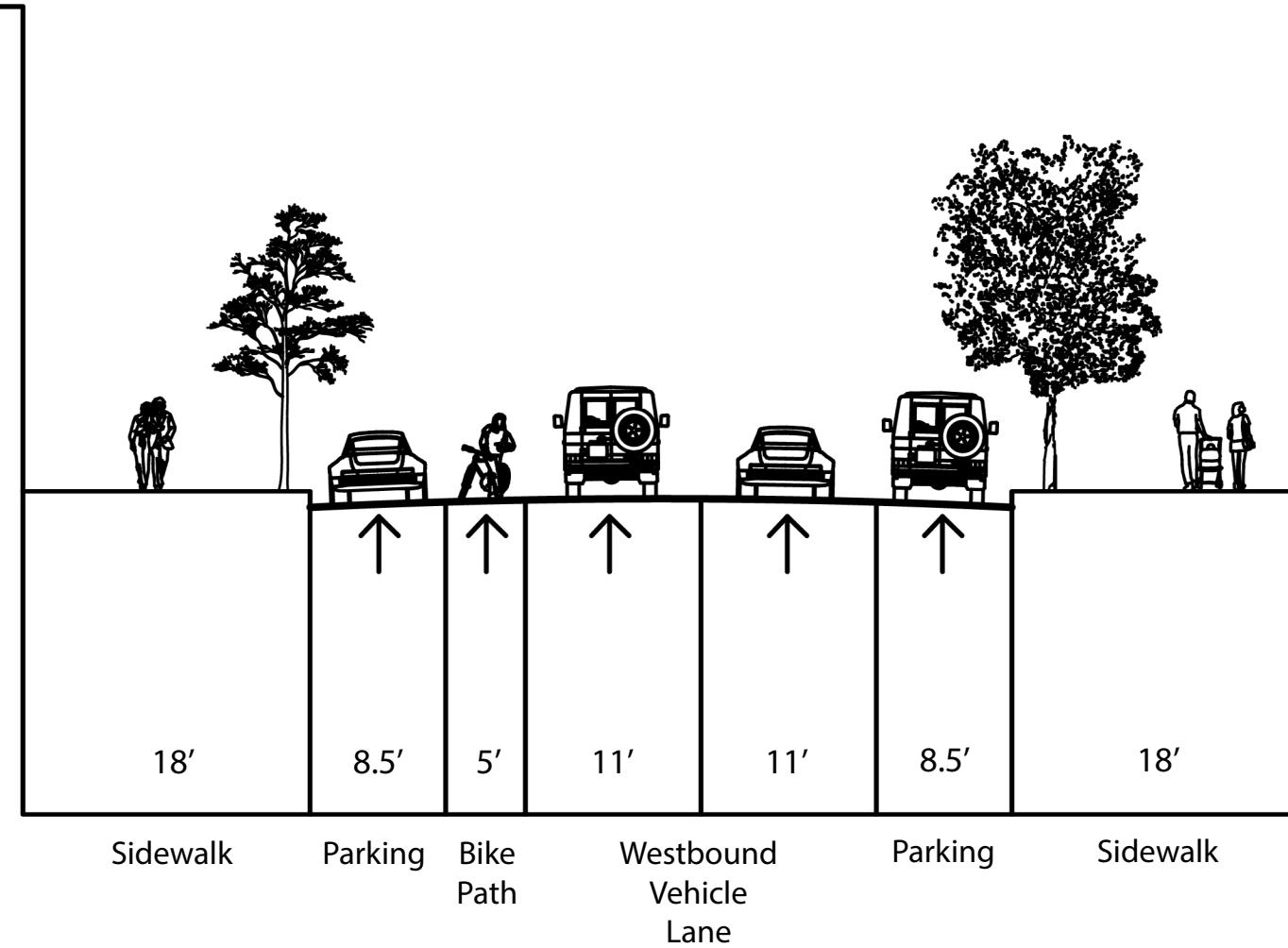
Location

- 34th Street North Side

Conditions after redesign

- A 7'-wide east-side and a 12'-wide west-side ground-level entertainment area replace a part of the previous sidewalks
- Two 6'-wide designated bike lanes next to the entertainment areas(the one close to the east side is northbound, the other one close to the west side is southbound) replace the rest of the sidewalks
- 25'-wide pedestrian area will be left in the middle of the street
- Two 4'-wide vegetation/decoration area designed between each of the bike paths and the pedestrian area with 4'-wide,15'-long & 3'-high parterres; lamp posts are set up in the 5' gap between two parterres
- Road surface width will become 45'

Site Redesign Idea (Section 2) - Before



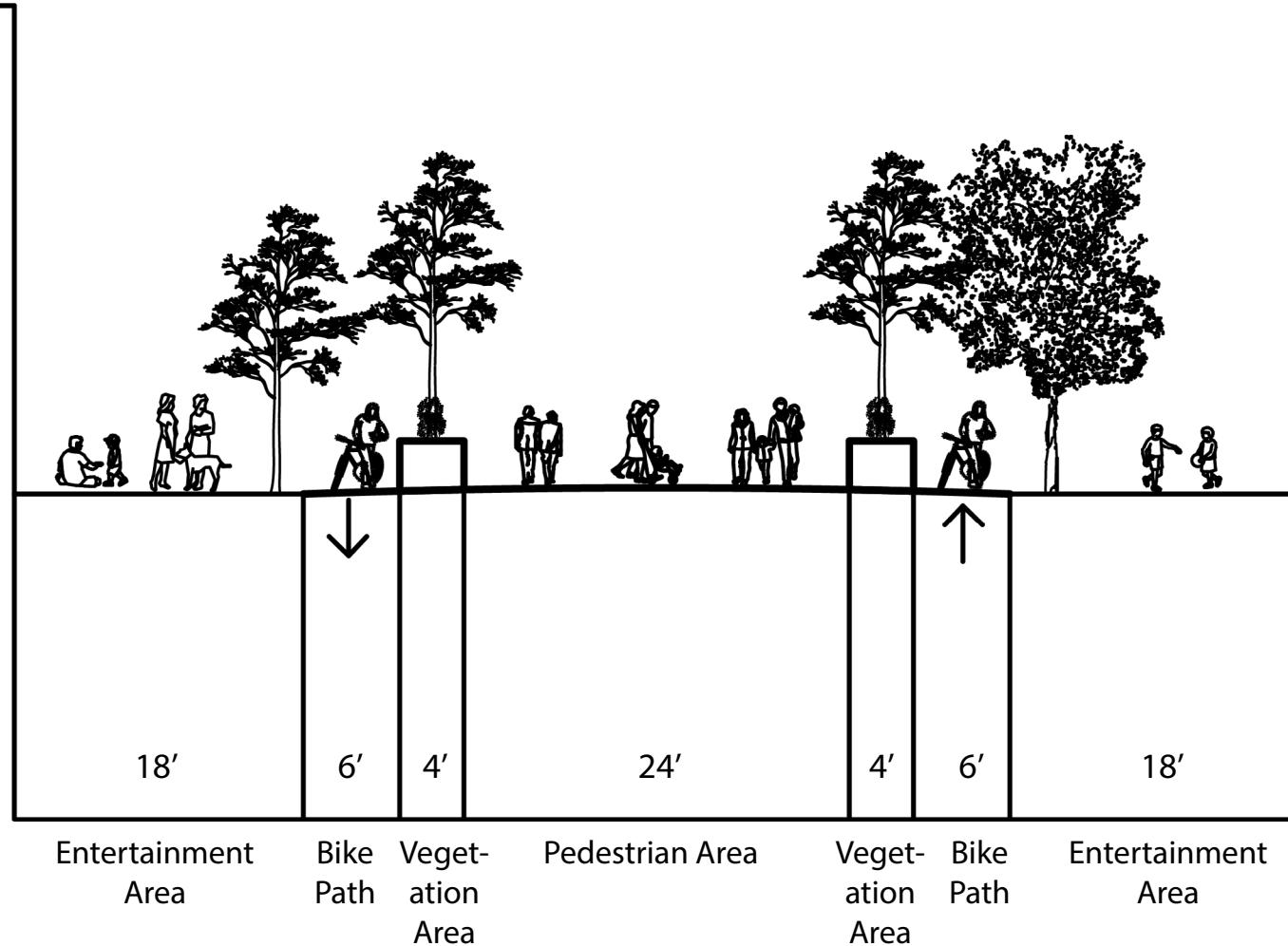
Location

- Walnut Street East Side

Existing Conditions

- One-way Traffic (West-bound)
- Road surface width is 44'
- 18' Sidewalk on both sides of the street
- Each of the two 8.5'-wide parking lanes are designed next to the sidewalks
- A 5'-wide westbound bike lane designed next to the south side
- Two 11'-wide westbound vehicle lanes are designated in the middle of the street
- Hidden danger exists for the potential conflicts between different traffic modes

Site Redesign Idea (Section 2) - After



Location

- Walnut Street East Side

Conditions after redesign

- 18'-wide ground-level entertainment areas replace the previous sidewalks on both sides of the street
- Two 6'-wide designated bike lanes next to the entertainment areas: the one close to the south side is eastbound, the other one close to the north side is westbound
- 24'-wide pedestrian area will be left in the middle of the street
- Vegetation/decoration areas designed same as those on the 34th Street to separate bike paths and the pedestrian area
- Road surface width is still 44'

Perspective - Before



Perspective - After

