Netherlands Redesign - USF Walk/Bike Plaza
Between Leroy Collins Blvd and Bull Run Drive

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CGN 6933 Sustainable Urban Mobility: Special Topics in Civil and Environmental Engineering

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Project Boundary: Bertini Boulevard
Existing Conditions: Car Volume
Summary of Main Problems

Bicycles and pedestrians **should not mix!** In the Netherlands, it is against the law!

Starts in a parking lot - ends in a parking lot. Many awkward and confusing paths with no indication of uses and many conflict points. No signage whatsoever.

Large car/bike/ped/golf cart crossing @ Maple with no signals.

Students from housing on 50th St. use this path to get to almost all central buildings and west side of campus.
Confusing and dangerous crosswalk into a large parking lot. Cars, golf carts, pedestrians, wheelchairs and bikes conflict here.
- 9’ sidewalks on the north and south side of a central 10’ sidewalk.
- Maple Drive: Peds, Bikes, Wheelchairs, Golf carts etc. crossing car and bus traffic.

- BullRunner bus stops exist on north side of crossing, both directions.
- No signals or mode separation.
Existing Conditions on Maple Dr.
- Mixed bike/ped
- No crosswalk from parking to gym
- High volume of peds
- Bikes going downhill at high speeds
● Multiple confusing access points from parking to sidewalk
● Bike lanes end; bicycles often cut to sidewalk diagonally.
Project Aim

Integrate modes, including the BullRunner along Maple Drive, bicycling, pedestrian traffic, golf carts, wheelchairs, motorchairs, and other modes like longboards and e-scooters, and segregate uses where feasible to improve the safety of the path and incentivize non-SOV use.
## Table 20. Possibilities for combining bicycle and pedestrian traffic

<table>
<thead>
<tr>
<th>Number of pedestrians per hour per metre of profile width¹</th>
<th>Recommended solution [33]</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 100</td>
<td>Full combination</td>
</tr>
<tr>
<td>100 - 160</td>
<td>Separation; traffic path with continuous profile (no differences in height)</td>
</tr>
<tr>
<td>160 - 200</td>
<td>Separation; traffic path with sectional profile</td>
</tr>
<tr>
<td>&gt; 200</td>
<td>No combination possible</td>
</tr>
</tbody>
</table>

¹) the number of pedestrians that pass an imaginary line straight across a street in an hour, divided by the total profile width in metres
Key Features of Redesign

1. 2-way cycle track to replace south-side sidewalk.
2. Bike and car signals added at Maple Drive and BullRun Drive.
3. Bike and ped signs added along the corridor.
4. Bicycle-only overpass added from stadium to gym.
Summary of Redesign

Source: Pedestrian Grade. Separations, Memo to Designers. Caltrans June 1989
Summary of Redesign

2-way cycle track along the corridor separated from pedestrian walkway by
- Different Colors
- Textured pavement separation
- Turf separation
- Signage
Excerpts from Campus Master Plan

Policy 4.5.2: The University shall preserve existing street corridors for circulation and open space use. In support of sustainable planning principles a more pedestrian dominated core, improved campus wayfinding, and increased pedestrian, bicycle and vehicular safety, roadway modifications are recommended

Leroy Collins shall be modified to reduce vehicular-pedestrian conflict and become primarily ceremonial drive north of Alumni Drive. Primary modifications include: termination of roadway just south of Sessums Mall to allow free pedestrian flow east to west on Sessums; and reduction in traffic accessing parking areas including surface lots and rerouting Collins Garage traffic to USF Willow.

Policy 5.1.4.2: (on-campus); The University shall incorporate pedestrian safety features, including high-visibility crosswalks, warning signage, countdown pedestrian signals, and generous pedestrian landings, at new or improved mid-block, intersection, and roundabout crossings, as well as countdown pedestrian signals at all new or improved signalized intersections.

Policy 5.1.5.11: (on-campus): The University shall encourage increased pedestrian and bicycle mobility through the provision of shaded sidewalk/pathway connections and continuous on-road bike lanes to reduce vehicle trips and inter-modal conflicts. The University shall also provide secure bicycle storage and consider providing changing and shower facilities for bicycle commuters.
Future Campus Master Plan Changes

Future Light Rail Route

New Buildings in Core Academic Area
Segment 2

- Redesign Ped Crossing Access
- Two New Crosswalks
- Remove North Sidewalk
- Keep Existing Central Ped Path
- Turn South Sidewalk Into 10' 2-Way Cycle Track
● The lanes on the eastern side of the roadway to a two-way cycle track
● The lanes on the western side will now become a two-way bus/car roadway
Segment 3

- Community involvement in projects such as crosswalk paintings can encourage use of new facilities.
- This makes pedestrian crossing safer as they interact with less heavy vehicles.
- The intersection time will also be limited to allow one/two vehicles to pass at a time.
• Identified as one of the most dangerous intersections on campus master plan
• Improved layout would make multi modal travel more efficient and much safer as the vehicles traveling can be slowed down further by speed bumps or visual disturbances that encourage speed reductions
Segment 4

- Make a bike ramp to go above the pedestrian traffic at the Yuengling center and the gym
- Since there are a lot of crossings, walking traffic, and lack of space, it was not possible to place a bike path next to the existing sidewalk
- There is enough space on either side to create a ramp that is 200ft long, goes up to 10ft tall, at a 5% grade
- Build with bricks to limit biker speed
Segment 4

- West side of segment, the bike path will go south and curve around to go above the pedestrian walkway
- There will be bike parking at the base of ramp for bikers who are heading to gym
- The 2 way bike path will continue the entire way
- A lot of trees will be planet, any that need to be removed will be transplanted if possible
Segment 4

- On the east side of segment, the elevated bike path continues.
- After champions choice, the downward ramp continues at a 5% grade.
- To the south, between the stadium and the ramp there will be bike parking for games.
- This is to lessen car traffic to games.
- The path continues towards the intersection of Bull Runner and Elm Drives.
Segment 4

- The intersection of Elm and Bull Runner needs to be remade
- The bike lane just ends right now and there is a lot of confusion
- To redo it: the bike path needs to be placed on the south side of the sidewalk
- Signalizing the intersection is also needed to create a smooth movement between pedestrians, bikers and cars
- The bike path will split on the east side of the intersection
Further Action

- Intersection improvements at USF Sycamore Drive and Elm Drive, and at 50th Street and USF Elm Drive
Almanac

2015-2025 USF System Campus Master Plan Updates [https://www.usf.edu/administrative-
services/facilities/documents/planning/cdc/cdc-usftpa-master-plan.pdf]

2007 Design Manual for Bicycle Traffic (CROW)

NACTO Transit Street Design Guide

[https://nacto.org/publication/transit-street-design-guide/intersections/]
Thank You! Questions?