

INTRODUCTION

Old Salem is a wonderfully walkable historic museum in Winston-Salem, NC. Unfortunately, highways and blight cut off pleasant pedestrian access to walkable sectors of the rest of the city. The Salem Bypass, to the west of the museum, and Coffee Pot Square, to the north, create barrier effects due to poor facilities, road-width, urban design, and programming. Winston-Salem is therefore a good test subject for various walkability assessment tools.

CONTEXT

Old Salem's disconnection separates the old town from the museum's newer acquisitions. More importantly, it precludes the museum from interacting with the rest of the city. With a better connection locals might visit the district, and the museum could market integration with a vital city.

At 60- to 100-foot wide and with few crosswalks, the four-to-five lane Salem Bypass is an impediment to pedestrian circulation. To the north of the museum is blight, interrupted by a few brick buildings, the chasm of an interstate, and finally downtown Winston. The first few blocks of blight are due to the intersection of the Salem Bypass with Main Street at Coffee Pot Square.

Two models for analyzing pedestrian friendliness are the CDC's *Walkability Audit Tool* and Ewing et al.'s *Identifying and Measuring Urban Design Qualities Related to Walkability*. While the former is well suited to analyzing pedestrian facilities, it fails to take into account many urban-design factors that very much affect pedestrian demand.

THE CDC'S FACILITIES MEASUREMENTS OF WALKABILITY

The CDC uses nine factors in grading walkability: facilities, conflicts, crosswalks, maintenance, path size, buffers, universal access, aesthetics, and shade. Segments' risk and attractiveness are designated based on this score: 0-39 is "high-risk and unattractive," 40-69 is "medium-risk and average," 70+ is "low-risk and pleasant." How do our study locations score, and do the resulting judgment ring true?

Salem Bypass

The Bypass has limited, disconnected sidewalks. While there is a large, attractive pedestrian bridge at Walnut Street, most people simply cross at grade, where there is no crosswalk. With 36 points, the Bypass is correctly rated "high risk and unattractive."

Can we use the CDC's instrument to suggest potential action? Five-foot sidewalks with four-foot buffers and a crosswalk at Walnut Street would mollify the CDC, scoring the segment 90 points as "low-risk and pleasant." Would, however, this treatment make the Bypass penetrable? Would it stitch together Old Salem and allow the local residents to access the museum easily? Unfortunately, there is still a *barrier effect* that is due at least partially to road width.

Put the Salem Bypass on a Road Diet

According to Burden and Lagerway's *Road Diets*, the ideal candidates for dieting are four-lane streets that have less than 8,000 – 15,000 ADT; the Bypass has carried around 6,000 ADT consistently for the past two decades. The authors present many examples of successful four- to three-lane (TWLTL) conversions. Positives of road dieting include: increased pedestrian safety, mobility, and access. In addition, the increased pedestrian permeability of a smaller road would knit the flanking neighborhoods together.

Coffee Pot Square

At "Coffee Pot" Square, the Bypass completely disconnects from the street grid, diagonally bisecting a grass-covered block with no pedestrian facilities. In the CDC's Walkability Audit Tool, the current conditions would score 53 points, "medium risk and non-descript looking."

We could again follow the facility-oriented adjustments that the CDC's prioritization suggests: construct five-foot sidewalks, four-foot buffers, and crosswalks between. The potential for pedestrian conflict is still relatively high, however, because the Bypass still bisects the square. These facility treatments would score 82 points, with top marks for all categories save pedestrian conflicts, aesthetics and shade. The CDC calls this "low-risk and pleasant" *even though both risk of conflict*

and aesthetics were specifically identified as unsatisfactory. While CDC's suggestions may be necessary, they are proving insufficient.

EWING'S DESIGN ELEMENTS OF WALKABILITY

Though not intended as a LOS measure, Ewing, et al. provide a more design- and programming-based measure of pedestrian friendliness. They found the following correlates of walkability, in declining importance: human scale, tidiness, transparency, enclosure and imageability. How can we integrate these elements into the Salem Bypass and Coffee Pot Square, and is it possible to do so in a manner that also integrates the facilities discussed above?

Salem Bypass

The major hurdles to human scale on the Bypass are: road width, lack of sidewalks, and crossing difficulty; these issues would be addressed in the facilities adjustments and road dieting discussed above. In order to further contribute to human scale, the establishment of a true "parkway" is in order. The Bypass runs along a former streambed, with a park and under-visited historic buildings to one side and the more visited part of Old Salem to the other. Steps toward human scale include: preservation of the grand oak trees that line the street (which would also add to a sense of enclosure), integration with adjacent parkland, and extension of the newly daylighted creek. The parkway should incorporate Old Salem's distinctive Macadam pavement, street furniture, unique signage, pedestrian-level lighting, distinctive paths and snake-rail fencing.

If transparency means perceiving "human activity beyond the edge," increasing accessibility of the parks to either side of the street and making the street itself more penetrable will foster this correlate of walkability. Because the Parkway would be directly abutted by vegetation and not buildings, glass windows are not really the type of transparency that is called for. Instead, picnics, dog walking, and tourists crossing the street to see the other half of Old Salem should be encouraged. As William Whyte tells us, "If you want to seed a place with activity, put out food." The Moravian roots of Old Salem suggest the wonderful German-Czech outdoor vending institution: the Biergärten; this should build upon Winston-Salem's already lively craft-brewing industry.

Main Street Between Old Salem and Downtown Winston

Several of Ewing's elements of walkability could be improved through the removal of the Bypass from the center of Coffeepot Square and creative infill. The street should be rerouted, gently connecting into and becoming an extension of South Liberty Street. Pedestrians could then reclaim Coffee Pot Square.

The whole of Main Street, from Brookstown Avenue to Business 40, could do with greater building density. Instead of a complete break in the city fabric, there could be street-facing buildings that create a sense of room-like enclosure. A sensitively scaled building type would provide mixed-use and mixed-income units while visually connecting pastoral Old Salem with the commercial downtown Winston.

There are several possible architectural typologies that would be good precedents, all of which are human-scaled, afford shops in the first floor and mixed-use above, are visually interesting, and fit the area. One to look to is the typical and distinctive North Carolina urban and commercial construction of the day, for example to the diverse 200 block of Fayetteville St. in Raleigh, NC. These 19th and early 20th century buildings are intricately detailed and relatively thin, affording visual diversity, and they have first-floor shops, creating transparency.

CONCLUSION

While facilities-focused analyses such as the CDC's Walkability Audit Tool give very good guidance, the suggested actions are not sufficient to create wonderful pedestrian environments. Planners ought to look to more radical tools which can see beyond facilities, such as road dieting, urban design and programming.

Burden, D. Road Diets. *Walkable Communities*, March 1999, pp. 1-15.

Centers for Disease Control and Prevention, *Walkability Audit Tool*. http://www.cdc.gov/nccdphp/dnpa/hwi/toolkits/walkability/Walkability_Audit_Tool.pdf Accessed April 28, 2009.

Ewing, R. et al. Identifying & Measuring Urban Design Qualities Related to Walkability. *J. Physical Activity & Health*, 3, Suppl 1, 2006, pp. S223-S240.