

13th Street

A MidTown-Uptown Connector
for Transportation, People and Business

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Prepared For

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Columbus, Georgia



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INTRODUCTION

This study assesses the existing and potential design of 13th Street in Columbus, Georgia. Recommendations are made to revitalize the corridor by reconverting outside lanes to parking in the commercial section. The Viaduct would also be reduced, to four lanes. The main revitalization street concept would be implemented by an upcoming resurfacing project by Georgia DOT during 2018 and 2019.

Field review was accomplished by Richard A. Hall, P.E. on January 8th and 9th, 2018, followed by January 22nd and 23rd 2018 afternoon and evening presentations on Walkability, Complete Streets and study recommendations before citizens, property owners and the Columbus City Council.



Figure 1. 13th Street, between Webster Avenue and 10th Avenue w/ 4 lanes, Westbound View

This transportation design assessment report includes the following:

- I. Background
- II. Design Issues
- III. Recommendations

I. BACKGROUND

The 13th Street corridor, 10th Avenue to 13th Avenue has reached a 60 percent vacancy and underutilized status. Economic redevelopment of the corridor is a stated priority goal for the city. Action to revitalize a corridor begins with community vision and plans for action. Transportation infrastructure plans also require the same foundation of economic revitalization.

Recent public and/or private initiatives focus on incremental economic development and the quality of connections:

- ❖ Columbus 2025 is the city's holistic, community and economic development strategic plan. It provides a vision of increasing prosperity, reducing poverty and improving quality of life. A revitalized 13th Street connector reflects several goal areas within the plan, including "Vibrant and Connected Places" and "Targeted Economic Growth"
- ❖ The City's 2014 acceptance of a Complete Streets policy
- ❖ The Dragonfly Trail network, existing and planned as 60 miles of interconnected trails
- ❖ Work by the Incremental Development Alliance to help renew small-scale in-town redevelopment
- ❖ The Knight Cities Challenge, award-winning Minimum Grid Plan. A community study by Gehl Studio, sponsored by Knight Cities Challenge and the Community Foundation
- ❖ A ULI (Urban Land Institute) Technical Assistance Program (TAP) helped refine the corridor vision with road diet recommendations for the viaduct

They concluded the 13th Street corridor shown in Figure 2, can attain a quality of place, mixed use, multimodal mobility that is an essential driver for economic development.



Figure 2. 13th Street, Between the Viaduct Over CSX Rail Yards and the Old Commercial Section Through 13th Avenue

II. DESIGN ISSUES

The 13th Street corridor area is in a period of decline. Tony Nelessen, in his book *The New American Dream*, describes the Built Form Evolutionary Spiral. As shown in **Figure 3**, an area under study will pass through four quadrants in the cycle. From the optimum development condition, a place eventually declines and experiences a period of rehabilitation/redevelopment, leading to growth and return to the optimum development status. Since its original formation, the 13th Street corridor has experienced a number of cycles through all quadrants of the built form spiral. The current period of decline will advance to redevelopment and growth based on the energetic, community visioning and planning applied by MidTown, Inc. and many other dedicated partners.

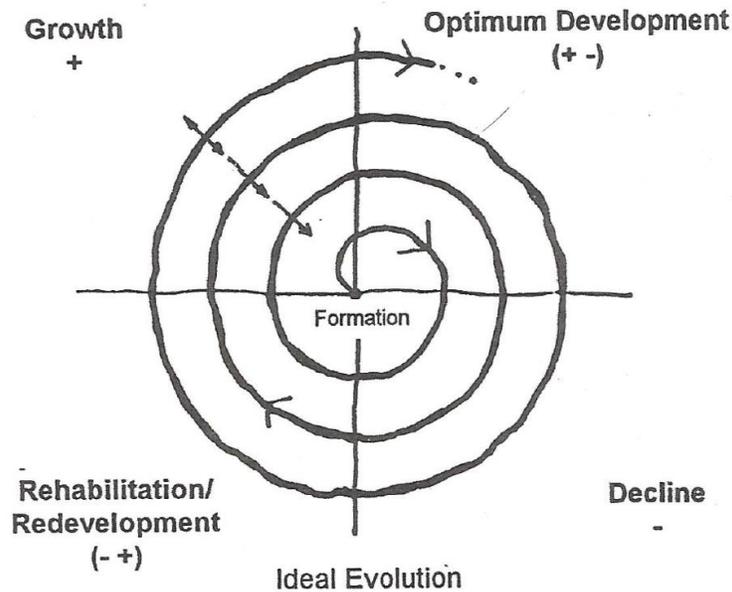


Figure 3. The Built Form Evolutionary Spiral

Walkability in current planning and engineering terms refers to safe and convenient travel by walkers, cyclists and transit users, as well as motor vehicles. For over half a decade from 1930 to 1980, motor vehicles dominated the other three modes based on a deliberate design focus for more automotive and truck mobility. The Columbus studies stated above, demonstrate that the city is moving toward walkable, multimodal planning and engineering in support of economic sustainability.

During field investigations, motor vehicle speed measurements made in the 13th Street corridor between 10th Avenue and 13th Avenue show that, during off-peak hours, the drivers travel 5 to 10 miles per hour above the 35 mile-per-hour posted speed.

While suburban driving speeds of 35 to 45 mph on arterials feels normal and is expected, for walkable districts this speed range is decidedly uncomfortable and unsafe. A 13th Street business placed a sign in their street facing door stating, "Please Do Not Park or Pickup in Front of This Door Use the Parking Lot." This is clearly a harsh environment for walkable retail and commercial activity.

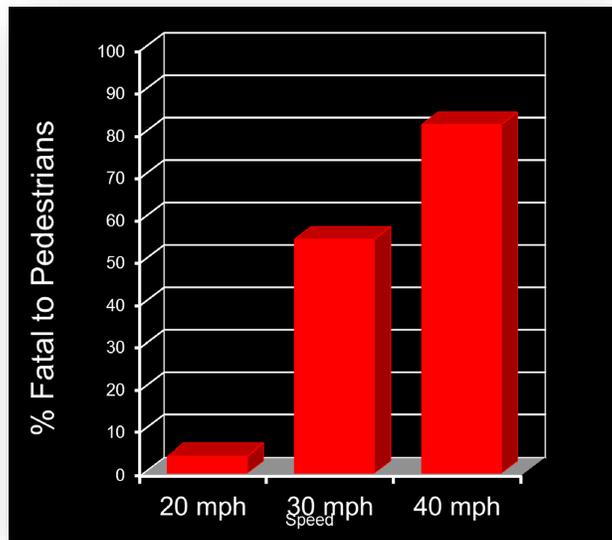


Figure 4. Pedestrian Fatalities and Speed Relationship

Pedestrians can suffer harsh results when mistakes are made and crashes involving walkers occur. The chart in **Figure 4** shows the percentage of fatal results when pedestrians are struck by moving vehicles traveling at three speed levels. Speeds of 30 and 40 miles per hour do not allow drivers to react when they are surprised by a pedestrian in the street. Whether the driver or pedestrian is at fault, the end result is fatal for the pedestrian at the 50% and 80% levels respectively. Therefore, motor vehicle speeds in the 25 mile-per-hour range are essential for walkable streets.

Many years of experience has taught us that ten elements of street design and operation contribute to great walkability:

1. Small Block Size
2. Buildings Fronting the Street
3. Mixed Land-Use
4. Lower Traffic Speeds
5. On Street Parking
6. Interconnected Streets
7. Narrow Streets
8. Sidewalks
9. Lower Traffic Volumes
10. Street Trees

On the positive side, the 13th Street corridor has 1. Small Block Size, 2. Buildings Fronting the Street, 3. Mixed land-use, 8. Sidewalks (although in poor condition), and 9. Lower Traffic Volumes.

Conversely, 13th Street lacks 4. Lower Traffic Speeds, 5. On Street Parking, 7. Narrow Streets and 10. Street Trees.

To achieve greater walkability, these missing elements must certainly be reintroduced and corrected. Pedestrian scale features were clearly ignored in the last modification to 13th Street with the removal of on street parking.

Item 9. Lower traffic volumes are measured and documented in the “SPUR 22 TEST” of June 6th 2017. The section of 13th Street from 5th Avenue to 13th Avenue was tested.

- ❖ 5th Avenue to 10th Avenue on the viaduct was tested w/ 4 lanes
- ❖ 10th Avenue to 13th Avenue tested w/ two through lanes

In a summary by GDOT, “based on the data we gathered in the field, it seems that demonstration with barrels produced good results and received overall positive feedback from the community. ... The travel time distance (with the barrels in place) was negligible, however, we do recommend that the signal timing be modified once permanent striping changes are made to ensure that congestion is lessened as much as possible.”

Measured traffic volumes (see **Figure 5**) show the baseline traffic count through the day rose to a peak at 9 AM and continued in the range from 500 to 650 vehicles per hour throughout the day before dropping at 6 PM in the evening. During the pilot test with barrels in place, traffic volumes varied from 400 to 550 vehicles per hour between 9 AM and 6 PM. These measured traffic demand levels are then compared to capacity of 13th Street at its intersections.

The fundamental traffic volume on urban streets has a maximum of 1,800 vehicles per hour, in each lane. Traffic signal green time for the main traffic direction varies between 50% and 66% percent in the peak hours, therefore the capacity would be somewhere between 900 and 1,200 vehicles per hour, per Lane. The measured volumes, all below 700 vehicles per hour can easily be accommodated on the two lane section of 13th Street, especially when signal timing is refined as part of the design process. In summary, the lane reduction on 13th Street, both on the viaduct and on the 10th Avenue to 13th Avenue section, will work even with some growth in traffic over the next decade.

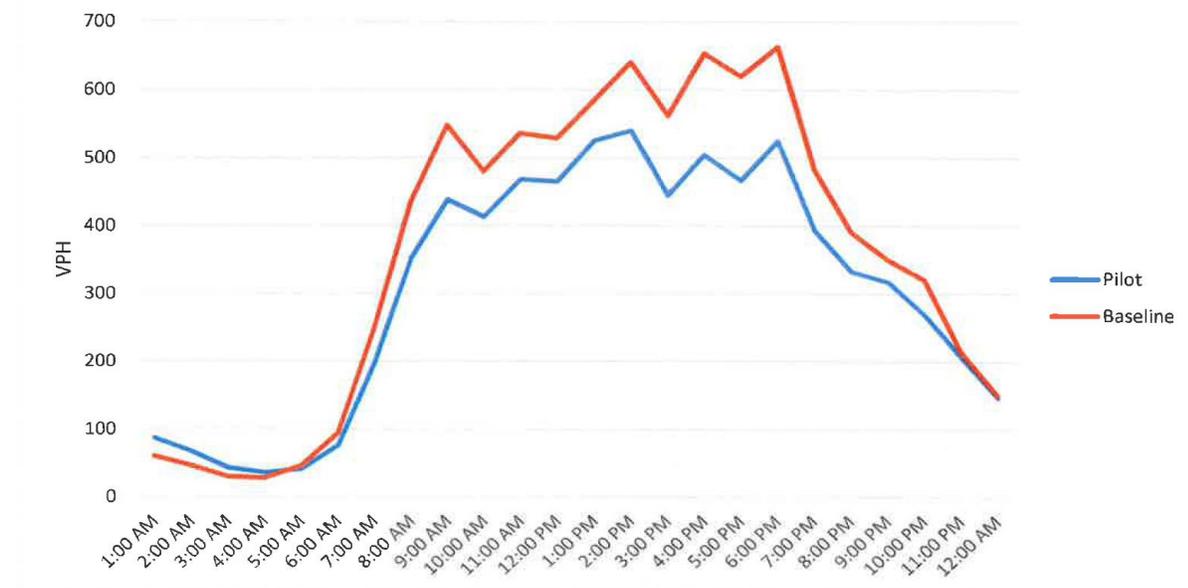


Figure 5. Weekday Average Eastbound Traffic By Hour

III. RECOMMENDATIONS

Based on the field review and analysis, and interaction with all stakeholders, the following recommendations are made:

- ❖ Phase 1) Convert outside lanes to parking
 - Potentially angle on south at 17 feet, Parallel on north at 8 feet
 - Rehab sidewalks & the crosswalks, use zebra pattern stripes
 - Posted Speed. Reduce from 35 to 25 mph
- ❖ Phase 2) Rework lighting, signal arms, median, trees
 - Narrowing the pavement helps manage speeds

The Recommendations are depicted below in **Figure 6** showing an 11 foot lane against the 8 foot parallel parking and a 12 foot lane against the 17 foot angle parking.

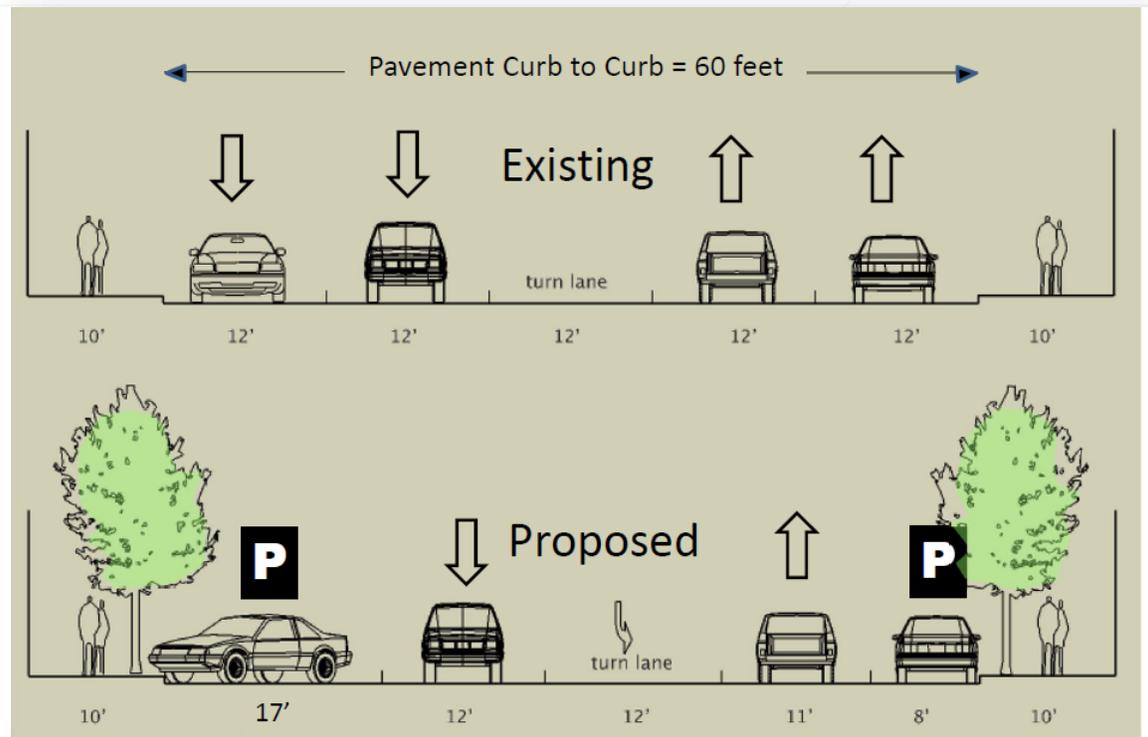


Figure 6. Existing and Proposed Street Sections

The sequence of slides below, produced by Steve Price of Urban Advantage, Inc., help visualize the change that could occur on 13th Street.



Figure 7. Existing Conditions



Figure 8. Phase 1, After GDOT Resurfacing to Two Travel Lanes and On Street Parking



Figure 9. Phase 2, After Property Owners Likely Redevelop in Response to GDOT Resurfacing to Two Travel Lanes and On Street Parking



Figure 10. After Trees Mature and Activity Emerges on Redeveloped Section of 13th Street

These recommendations will contribute greatly to pedestrian friendly, managed speeds along 13th Street, and thus, to a premier walkable Complete Streets community for Columbus.