

**MAKING A SMALL TOWN LIVABLE:
PROMOTING SUSTAINABILITY
THROUGH A NEW URBANIST
APPROACH IN MEBANE, NORTH
CAROLINA**

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Abstract

A contemporary nexus of urban development discussions is the concept of sustainability, which is often presented as a viable remedy to many of the contemporary urban ills, i.e., diminished livability that is mostly blamed on suburban sprawl.

Not only large metropolitan areas experience sprawl. Numerous relatively small towns have also been undergoing this kind of spatial transformation as their cores are emptied in favor of suburbs. Town of Mebane, North Carolina, is one such small town.

Today, downtown Mebane is home to manufacturing plants, retail stores, institutional buildings, and residences as well as empty lots and boarded-up buildings. Its architectural scale is still charming and its gridiron network of streets is capable of accommodating various modes of traffic although precedence is given to the car. Furthermore, some of the downtown buildings are worthy of consideration as historic landmarks, although many have been clad with metal panels, disguising their authenticity.

This paper is a progress report on the first of three phases of an urban design **action-research project** on downtown Mebane, being

undertaken by NC State University Architecture Faculty and Doctoral Students. The goal of the project is to generate sustainable urban development principles, guidelines and standards that promote urban livability. This phase involves an inventory of the town's physical, social, environmental and economical resources with New Urbanist "lenses" to develop specific sustainable urban development goals for the town's future and strategies to achieve these. In the subsequent phase of the project, proposals will be developed with citizens' input through citizens' charettes. It is envisioned that the process and the consequent proposal developed for Mebane is presented as a model to other small North Carolina towns that are striving to alleviate many of the ills of sprawl in the last phase of the project.

Introduction

Urbanism is at a unique and unprecedented point in its history. There are profound questions about future growth and development patterns of human settlements. Responses to these questions will help determine urbanism's economic vitality, extent and health of social interactions it initiates and sustains, and its compatibility with the natural environment, i.e. quality of life for the present as well as the coming generations of city-dwellers. In this regard, one of the most fundamental issues faced in contemporary urbanism becomes whether the currently dominant spatial structure of urban development in the U.S. and in many other parts of the developed world, should still be allowed, let alone encouraged.

The physical characteristic of contemporary cities' growth patterns since the beginning of this century, but particularly after the World War II, is often referred to as "suburban sprawl". Such spatial patterns although dominant in major metropolitan areas, are not limited to large cities but can be found at small and medium scale of human settlements. In order to explain why such a generalized claim can be made, the discussion of urban development patterns needs to be taken beyond the somewhat pejorative term "sprawl" and the characteristics of the prevalent urban spatial structure with its consequences explained.

Current Urban Morphology

The characteristics of the current urban morphology found in many parts of the U.S. and the rest of the developed world are low density and segregated land uses, with a strict hierarchy of streets and roads in the urban area's transportation network (Langdon 1994). This network, designed according to standards predominantly dictated by moving motor vehicles, naturally gives precedence to private automobile. Furthermore, in this dominant urban development pattern, the line of demarcation between where urbanization begins -or ends- is not clear. Human settlements just ooze into their hinterland. Similar to not having an edge to urban development, it can be argued that the developed area does not have a focus or a center. Neither does it have a sense of place that distinguishes one settlement from the other near or far. These generalized attributes of urban sprawl are elaborated upon below:

Low density: Whether in housing or in commercial and institutional uses, but particularly in retail and employment centers, low density growth pushes the developed urban area deep into agricultural and natural ecosystems. In many cases fertile farming land and open space -with the beauty and drama of the landscape- that once surrounded the urban area are lost (Goldfield and Brownell 1990). In others, fragile biological systems, e.g., wetlands and animal and plant species, are endangered. The most apparent physical evidence of the low density is the seeping of the urbanized area into the rural **without a boundary**, as one new project leapfrogs another. The loss of open space yields consequences that are irreversible whereas the consequences of lost farmland can only be compensated by bringing new land into agricultural production, but often at high economic and environmental costs. Encroaching urban sprawl on rural farming communities can be devastating. For one, as these are transformed into "bedroom suburbs," their original stable socio-economic structure is changed forever.

Segregated land uses: One of the most distinguishing characterizations of contemporary suburbia in the U.S. and developed countries is how land uses are separated from each other into distinct and segregated locations, usually by heavily used arterial roads or open space. Such specialization of land utilization in many instances is taken to an increasingly finer scale within a given single project as well. For example, within a residential development, single-family dwellings on large lots are segregated from higher density multi-family complexes of the same neighborhood. In employment centers service oriented uses are disassociated from retail uses. One major consequence of this spatial pattern in housing is the resultant socio-economic uniformity of residential subdivisions where people of very similar income and family composition tend to congregate mainly due to the fact that individual dwelling units are virtually of the same specifications and hence cost (Kunster 1994). One other consequence of this separation is the loss of relationships between the different elements of the urban area. Every single land use is turned onto itself with barely any reference to its neighboring constituents of the urban area. As a result, there is neither a hierarchy nor is there a "center" around which urbanism is organized. Furthermore, the open space between the segregated land uses is a leftover or an after thought and not an intentionally designed urban element that helps shape community formation and identity, a **sense of place** (Duany et al 2000).

Strict hierarchy of roads in the transportation network: As suburban subdivisions are plotted, houses are usually clustered on cul-de-sacs or streets of lowest order in vehicular traffic carrying capacity, mainly to assure tranquillity and safety (Langdon 1994). These local streets are then linked to collectors or distributors that are themselves connected to arterials that circumscribe the development. Street widths, curb and sidewalk specifications, and parking provisions -all dictated by moving motor vehicles- also follow this hierarchy to match the projected level of roadway use in terms of volume and speed. The guiding concept of the hierarchical transportation network is that it

facilitates differing degrees of access within the development. For example, local streets provide access only to residents who live on them and thus carry very low volumes of traffic at relatively low speeds. The ubiquitous curvilinear geometry of the street layout of the contemporary suburbia typically requires relatively lower speed limits, which further contribute to the safety. The traffic volume and allowable speed increase as the transportation network moves from local streets to arterials. The highest order streets, i.e., arterials, are connected to regional highways at limited locations, in order to mainly discourage through-traffic. By the same token, pedestrian and biking paths are independent of, and often segregated from, motorized travel modes by providing exclusive pathways that rarely cross roads or streets.

Study Area

These generic characteristics of recent urban development are actually present “in-situ” in Mebane, North Carolina. This is a small town in the Piedmont region of the state. It is located roughly midway between two major metropolitan areas of the state, the Triad and the Research Triangle Park, which are connected by a heavily-traveled interstate highway simultaneously designated as I-85 and I-40. This highway is a few miles south of the town’s downtown.

Town of Mebane is both a typical as well as a unique town. It shares many attributes with numerous towns in the region: It is a railroad town that sprouted from a stop on the east-west and north-south regional rail routes. It is also a manufacturing town as it was home to one of the major furniture factories in the state - White Furniture Company- until its closure more than a decade ago. It continues to be the host to various other manufacturing establishments and was seriously considered when Mercedes-Benz was evaluating various U.S. locations for its North American production facilities.

Today, the forces that initiate and sustain suburban growth are transforming

Mebane. Its "downtown" is slowly hollowing out as residential, commercial, and institutional land uses locate to the outskirts of the town. The latest of these was the U.S. Post Office.

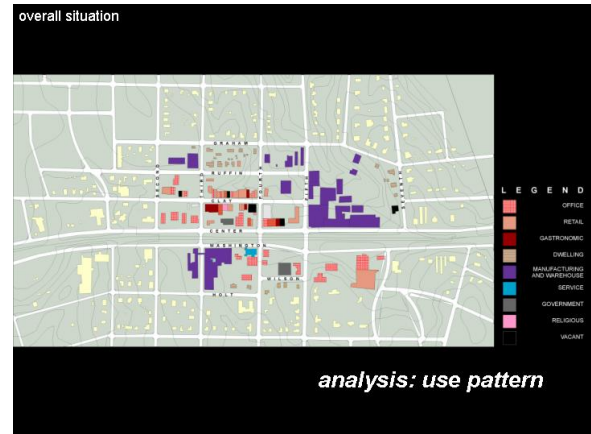


Figure 1. Mebane Study Area.

Against this backdrop, NC State University faculty and doctoral students initiated an action-research project that is aimed at helping the town move in the direction of a more sustainable future. A study area of 15 blocks in the center of the town was selected as the area of study. (Figure 1.)

This project entails three parts: It begins with an inventory and analysis of the physical attributes of the study area in the context of the entire town. The aim of this first phase is to develop goals and strategies that promote sustainable development of the downtown. The tenets of New Urbanism serve as the guiding principles for the strategies developed in order to achieve the goals. At this point in time this phase is being concluded.

The second phase of the project is a synthesis where proposals are to be developed. These proposals range from small scale improvements, such as streetscape enhancements using vegetation to devising design guidelines for physical development of the study area, e.g., how to serve the parking needs in downtown. A series of charettes involving town hall staff and citizens are scheduled to institute an iterative proposal development process in this second phase. In the last phase, lessons learned in the Mebane project will be used to develop a "handbook" for similar efforts in many other North Carolina small towns.

Phase One: Inventory And Analysis

In the analysis phase the following conclusions were drawn:

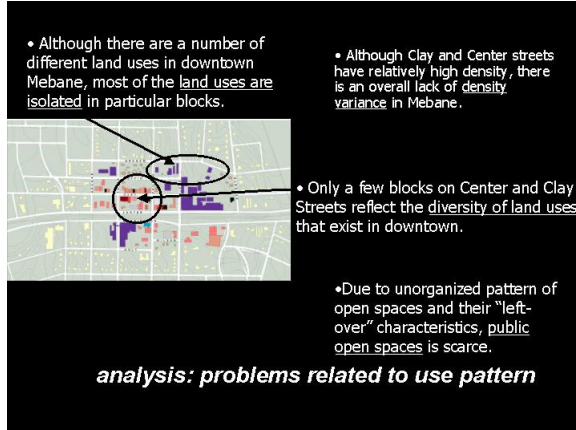


Figure 2. Problems Related to Use Pattern

The study area is rich in diversity of uses from residential in its north to manufacturing and institutional uses (town hall, police and fire stations) in its southern boundary. However, the land use diversity is locked in blocks -not at building- scale. Except for Clay Street, density is uniformly low across the entire study area. There are many vacant lots but there is a lack of designed open space. (Figure 2.)

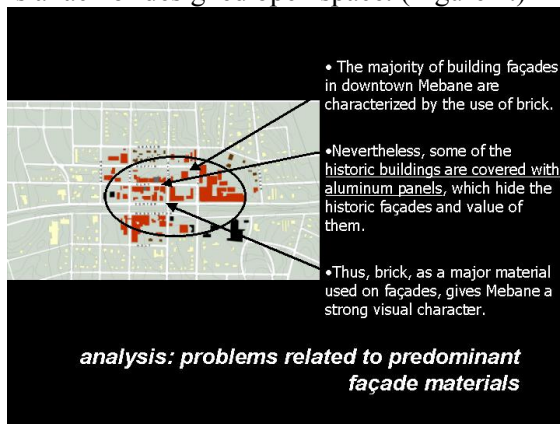


Figure 3. Problems Related to Physical Condition of Buildings.

Brick is the material of choice in the study area and this gives the place a character. There are numerous buildings in the study area that could be candidates for historic building designation. However many facades of commercial buildings have been covered with metal paneling. (Figure 3.)

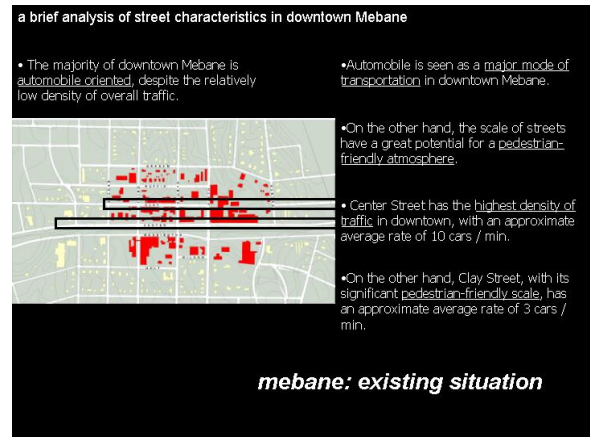


Figure 4. Problems Related to Accessibility.

It would not be a stretch to declare the study area an automobile oriented neighborhood. Furthermore, the railroad tracks that dissect the study area isolate the four blocks on the South side from the rest. Clay Street, which is home to diverse commercial uses, has a pedestrian friendly aura. (Figure 4.)

Phase One: Goals And Strategies

In light of the above inventory and analysis, the following goals were developed:

- Help downtown Mebane evolve into a lively destination:

Increasing land use density, developing innovative solutions to anticipated parking needs, and eliminating segregation of transportation modes are some strategies that would help achieve this goal. Furthermore bringing new land uses to the area such as a branch of the local community college and diversifying land uses at both urban design and building scales would be appropriate strategies.

- Exploit the location of Mebane between two major metropolitan regions of the state and the presence of the railroad that goes through its downtown, to make it a major transportation node.

Strategies for achieving this goal include encouraging alternative modes of transportation to and through the study area, and establishing a rail hub for commuters.

- Revitalize identity and urban life in downtown. Buildings in the White Furniture Company campus have worthy potential for adaptive reuse. Redesigning Clay Street into a pedestrian

promenade with the White campus as its terminus is an appropriate strategy for this goal. It should be noted here that since the action-research process employed in this project is not simply a linear undertaking but is made up of iterative loops, the above is not the complete list of strategies that help achieve those goals. Neither are the goals themselves all there is. As the second phase gets underway new goals and strategies are expected to come out of the iterative efforts.

Conclusions

The above has been a "progress report" on this action research project. It is an outline of the first phase achievements. As the subsequent synthesis phase is undertaken to develop specific proposals, New Urbanism principles will be used as guiding posts. The ultimate goal to achieve at the end of this design phase is to propose a future for the downtown of Mebane that is:

- **Compact** with appropriately high land use densities;
- **Coherent** in its diversity of land uses;
- **Connected** in itself and to its context through various modes of transportation;
- **Contained** so that it has an identity that distinguishes it from its surroundings; and
- **Comprehensible** in having designed focal points and a sense of place.

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