Power to the People: The Reconstruction of Streets Focusing on the Pedestrian Realm and the Boulevard

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LA 404 5th Year Comprehensive Projects

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Abstract

Power to the People: The Reconstruction of Streets Focusing on The Pedestrian Realm and the Boulevard

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Near the start of the 1930s and intensifying after World War II, the emerging field of traffic engineering embraced the concept of “the functional classification of streets” (Jacobs 2002). With an increase in the number of automobiles and trucks, there was a greater demand for adequate travel routes between locations. The need for limited access roadways or other streets serving single or limited functions seemed justifiable. This new approach to transportation planning concentrated on auto traffic and strove to accomplish a specialization of urban streets according to the movement functions they were primarily intended to serve (Jacobs 2002). The new objectives for street design showed a concern for the vehicle, but very little concern for the pedestrians and the environmental quality of the streets. The power of the street space had been shifted from those who live around it, to those who pass through it.

In recent times, the deterioration of our public streets has been brought to the forefront of city issues. We have recognized a problem and now question the evolution that brought us from the once pedestrian oriented streets to the current vehicular dominated streets. Design focus now again includes the detail design of the elements of a street, not just the buildings that line them or their vehicular functions. When working towards enhancing the pedestrian realm, the concept of the boulevard rises to the surface having much to teach. Boulevards are first and foremost public, and their design purpose, beyond that of the movement of goods and vehicles, is for people (Jacobs 2002). This study attempted to analyze the design concepts of the boulevard, combined with the current trends of “great streets”, and apply them to a deteriorated site. Information gathered from various successful examples of past streets and public space was compiled and used for guidance and case studies.

The location targeted for the purpose of this study was a segment of Tillotson between Riverside and White River Boulevard. The site is overrun by the vehicle and pedestrian use is severely limited. This study provides a master plan intended to help increase the quality of life along this commercial corridor.
Part One: Introduction
Purpose of the Study
Significance of Study
Purpose of the Study

In many locations throughout the United States we have witnessed a decline in the quality of life along or on our streets. The overpowering demand of the automobile and the necessity to link all places by road has resulted in the creation of many poorly designed streets. Our essential pathways have become broken and fragmented, crowded and fast, or empty and deteriorating.

The City of Muncie is a witness to the unpleasant characteristics of the vehicular dominated corridors that cut through it at various places. Massive industrial development during the late 1800s and early 1900s boosted Muncie to the forefront of Indiana production of glass and tool and die manufacturing for the new wave of automobile use. By the 1960s Muncie continued its rapid growth geographically with the expansion of the Muncie Sanitary District (Comprehensive Plan). Rural residents could now have the same benefits as city residents and more streets were created to fulfill the demands of new neighborhoods and businesses.

Unfortunately for Muncie, many of these streets eventually developed into high speed commercial strips that are coming forth as community weak points. Throughout the course of this study, the main objective was to help the people of Muncie prepare for the future and provide for them a higher quality of life. The focus was on an area of Tillotson between Riverside and White River Boulevard where the street was more of a community weakness than strength, but there are opportunities for great improvement. Through redevelopment and revitalization, the hope was to alleviate existing weaknesses and provide for a street usable by more than just the vehicle. The intention was that these changes would encourage more economic development and enhance the overall attractiveness of the community.

Information gathered from various public meetings and documented in the comprehensive plan highlight that the growth, development, and redevelopment of the community is important to most people. Residents also expressed a strong desire to live and work in an attractive community where economic
development is an important element. The goal of this project was to show the people of Muncie how those desires may be fulfilled while focusing on current design trends and the concepts of the boulevard.

**Significance of Study**

This study provided an example of how through planning and design it is possible to create a fabric where the pedestrian, the vehicle, and the business are woven into one functional piece. Learning from the failures of past streets, designers are working to ensure that new streets promote a high quality of life and old streets can be redesigned to better suit our needs. This sort of urban revitalization has become a popular trend and a prominent role for the landscape architect.

This study used current design trends and concepts to explain how the redesign of a street can impact the surrounding context. It is a topic that will continue to surface in the future for landscape architects as people look to make positive changes within the communities they live.
Part Two: Review of Related Literature

Historical Perspective
Relevant Theory
Case Studies
Designs Issues, Trends, and New Ideas
Historical Perspective

Over the years streets have evolved and changed parallel to the advancement of civilization. The interest in the streets that connect our societies has been a subject explored by many over the years. It has been debated by scholars, philosophers, architects, city planners, and others. Streets are the interlocking framework of any city, town, or place. They are a system of connections originally created to help those in movement more easily get form one point to another. In an urban environment, it is just to say that the use of streets is unavoidable. They are our primarily source for transportation. With that in mind, it becomes easier to understand the desire for many more than just landscape architects to understand the dynamics of these essentials pathways.

When searching for the historical data regarding street design, you inevitably find yourself facing many different topics. Street design is more than just a single subject, but is a culmination of human needs and a direct reflection of a society’s culture. Often times the formation of streets is driven by current societal needs and advancement. This leaves a broad topic to cover. This review provides the information necessary to understand the development and evolution of the pathways we have created to interlock our worlds. More importantly, to trace the course of the streets that have proven to be “great”. For the evolution has been grand. Today we often forget that streets were originally designed for the pedestrian, when now we rarely think of streets for anything more than the vehicle.

The Pattern

Before looking at the detailed history of streets, it is important to understand their existence. Streets and block patterns reflect differences among cities beyond those of scale, complexity, available choices, and the nature of spaces. They are representative of a time period when a city was built, to geography, to differing cultures, to city functions and purposes, to design or political philosophies, and to technological demands (Jacobs).
Street and block patterns help us know more about their settings. Often times, not only are individual streets designed, but whole sections or urban areas. The street and block pattern helps us to understand more about each street. The pattern can translate the importance of contrast, scale, ordering systems, focus, and starting and ending points. It can help us locate specific streets of importance or special interest (Jacobs).

**The Greatest Streets: The Boulevards**

In the building and rebuilding of cities, there seem to have been very few occurrences when the major concentration of the design efforts has been in streets. Not necessarily the pattern of the streets, but the functional-sensual arrangement of the streets themselves – their sizes, the detailed design of their parts, and their embellishment in the context of a particular city (Jacobs). During the latter half of the nineteenth century, particularly in France, there began a period where design focus was more on streets than the buildings that surrounded them. Boulevards evolved as a part of Louis Napoleon's and Baron Haussmann's modernization and expansion projects. The primary objective of boulevards was to beautify the city. Other objectives were to help move people and goods through old medieval street systems that had become overly congested, to improve communications, to add sanitation lines and other infrastructure systems, and to allow police and militia easy access to crowded neighborhoods where social unrest was present (Jacobs 2).

When tracing the history of streets, of good streets, boulevards naturally rise to the surface having much to teach. Boulevards not only provide information about the design of a particular type of street, but about streets in general. They are first and foremost public, and their design purpose, beyond that of movement of vehicles and goods, is for people. They are often most intimately experienced in small segments and as parts of daily urban life. They serve as places for the enjoyment of the city and provide comfortable places for walking (Jacobs). The uses of boulevards were restricted from the start. Early
on only pedestrians and pleasure vehicles were allowed; carts and commercial vehicles were prohibited (Jacobs 2).

Boulevards eventually found their way to the United States as a part of the park movement of the late nineteenth century and were a major part of the formal vocabulary of the city beautiful movement of the early twentieth century. The first city to build a system of boulevard systems was Brooklyn, and the city hired no other than Frederick Law Olmstead and Calvert Vaux (Jacobs 2).

Olmsted and Vaux proposed a series of boulevards to link Central Park with other proposed parks. Having witnessed the success of the European boulevards, the partners saw the potential for the streets to serve as linear parks connecting residential areas to larger parks. Pushing forward their boulevard concepts, which they referred to as “parkways”, they developed a theory associating the advance of civilization with changes in street patterns. Their theory divided the history of streets into five sequential stages (Jacobs 2).

The first stage they noted as the narrow pedestrian streets of the early villages and walled towns. In the second stage, they described the same streets, yet now congested as wagons and pedestrians fought for space. In the third stage, originating in the mid-eighteenth century, there is now a distinguishable separation between pedestrians and roadways for horses. Separate raised and curbed sidewalks had evolved and sewers to some extent controlled human and animal waste. The streets of stage four are even further advanced with a center roadway by a raised and curbed landscape mall for pedestrians. Olmsted and Vaux saw their parkway concept, in which the central landscaped mall was itself divided by a central roadway for pleasure riding, as the fifth stage in the evolution of civilized town life (Jacobs 2).

The Decline of the Boulevard

Near the start of the 1930s and intensifying after World War II, the emerging field of traffic engineering embraced the concept of “the functional classification of streets”. Their main goal was to attempt to resolve the conflict between fast moving cars and safe access to property abutting the streets. Their
approach to transportation planning concentrated on auto traffic and strove to accomplish a specialization of urban streets according to the movement functions they were primarily intended to severe. Their ideas paid much less attention to the other appropriate uses of streets (Jacobs 2).

There was a legitimate time, after World War II, when U.S. cities were behind in road building. The number of automobiles and trucks had greatly increased and the demand for adequate travel routes between locations was present. Planners at the time felt that the existing roadways were too narrow to accommodate both slow and fast moving traffic. The need for limited access roadways or other streets serving single or limited functions seemed justifiable (Jacobs 2).

Eventually, safety and efficient transportation became a driving factor and the street-design standards published by highway and traffic-engineering organizations became widely accepted as good road building practice. Many cities have accepted these standards as the basis for street design and it has resulted in streets that are designed for cars and not for people. A current edition of the Traffic Engineering Handbook refers to street design as Roadway Geometric Design and describes the basic objectives of good geometric design to be: "to produce a highway that provides safe and efficient transportation which reflects the characteristics of the driver and vehicles that will use it, and that represents a reasonable trade-off in terms of its cost and other impacts" (Jacobs 2). It is clear that these new objectives for street design show a concern for the vehicle, but show very little concern for the pedestrians and for the environmental quality of the streets. This is a great contrast compared to the boulevards.

To enhance the problem, the engineering orientation towards street design, or lack of design, has generally been advocated by two or three generations of city planners and architects and for the most part accepted by the public. This has resulted in the current extreme imbalance of power on what are supposed to be public streets. The vehicle has taken control over the street, thereby dominating public space. Pedestrians and non-motorized vehicles have been removed from the streets. The power of the street space has been shifted from those who live around it to those who pass through it (Jacobs 2).
Relevant Theory

There has been some debate when trying to clarify the theories behind creating a great street. Some believe that it is the physical design of the street that makes it great, the lasting impression, or the economic characteristics and location. Regardless of what you choose to believe, streets must still be designed, and as designers we must create guidelines and clarify what makes one street better than another.

As Allan Jacobs so wonderfully summarizes in his book Great Streets, a great street should help to make a community. It should facilitate people acting and interacting to achieve in concert what they might no achieve alone. The best streets will be those where it is possible to see other people and to meet them. He adds that a great street is a most desirable place to be, to spend time, to live, to play, and to work.

Jacobs continues with the idea that a great street is physically comfortable and safe. Successful streets will be full of light, yet also shadier and cooler on a hot summer day and therefore more pleasant to be on. A great street should also have varying microclimates, but without the worry of sudden, unexpected gusts of wind off buildings. In regards to the user of the streets, one should feel safe and not fear the vehicle or worry about tripping over uneven walkways.

The best streets also encourage participation. Streets should provide a setting for people to stop to talk or sit and watch, taking in what the street has to offer. The best streets are those that can be remembered, leaving a strong positive impression and a desire to return.

Kevin Lynch also strongly believed in the image of the city and argued that the image of a place is important to how people understand and use their environment. Lynch saw the street as the center of that image. Imageability became the term introduced by Lynch representing the quality of a physical object, which gives an observer a strong, vivid image. Again, he believed that a well-formed city is highly reliant upon the most predominant city element, paths.
Streets should be channels which the user customarily, occasionally, or potentially moves. People observe the city while moving through it, and along these paths the other environmental elements are arranged and related.

Street should be memorable paths. Such qualities could include special lighting, unique signage, or a clearly evident direction. A great street would not include ambiguous turns or confuse the user. When the appropriate elements are designed together to form a cohesive unit, they increase human ability to see and remember patterns. These patterns make it easier to learn and remember, creating the lasting image.

Case Studies

The following studies are a compilation of examples which helped to provide guidance and inspiration for this project. Not all of the studies are located in towns within the Midwest, but each example offered insight on how to resolve problems similar to those faced in this project.

Castro Street: Mountain View, California

Approximately ten years ago the city of Mountain View, California, recognized a problem with the atmosphere, or rather the lack of atmosphere, in their downtown area. The core of this problem was Castro Street, the principle downtown roadway, and the blocks abutting it.

From the beginning, Mountain View recognized that its relatively small downtown never could be competitive with suburban-style shopping centers unless they addressed issues related to parking, repaving, tree planting, and pedestrian space that helped to create a downtown with a look of appeal and charm, yet still contemporary (Costa Times).

The outcome of the re-development project was a wonderfully executed design with a strong concept. What makes Mountain View particularly interesting are their creative methods of dealing with a limited amount of space and
maximizing potential. As a model, there is much to be learned from their willingness to remain flexible with the design and how that flexibility helps to promote an engaging atmosphere, rather than one that remains static and dormant.

The design for Castro Street is relatively simple, dividing the street into three levels: sidewalk, parking, and auto cartway. What is unique are the subtle changes in elevation among the three components, and how the elevation change helps to distinguish the components. The sidewalk is at the highest level, which helps to separate the pedestrians from the cars and provide a better than normal view over cars to the other side (Jacobs). This helps to increase the views of the pedestrian and promote the visual experience of walking down a street.

The parking apron also has a slight elevation change and helps to clearly separate it from the street. With trees planted along its outer edge towards the street, it creates a transition zone which clearly favors the movements of the pedestrian (Jacobs). This design concept is quite intriguing when you analyze its possibilities. By creating an elevated parking zone, you create a buffer between the pedestrian and moving traffic, which would increase the feelings of safety while traveling on foot. More importantly, the parking zone helps to accommodate for sidewalks that may not be as wide as desired. On special occasions, the raised apron can be used for outdoor restaurants or exhibition space. This flexibility allows Castro street to be successful as a smaller city street, yet still expand when necessary to take on larger activities.

Castro Street provides an example on how the creative use of space can help to achieve goals previously not obtainable. Once designed, space does not have to remain constant. It can flex and stretch with the demands of the city
Williamson Road: Roanoke, Virginia

Williamson Road at one point was a major thoroughfare through Roanoke, Virginia. When the coming of a new highway directed travelers from the road, it reduced the need for the motels and businesses that served them. Gradually residential uses began to disappear and a variety of small, and not always desirable, uses sprung up in their place (Williamson).

In search of a change, the people of Roanoke worked with the city to reshape the image of Williamson Road. An image of the road as an attractive, thriving commercial street with a variety of neighborhood services and businesses emerged. The community created a list of simple objectives that assisted them throughout the project. The list is as follows:

1. *A positive image for Williamson Road*: This included the removal of billboards, and increase in landscaping, new light poles and banners, and a new entry sign.

2. *Attractive renovation and infill development*: New pedestrian oriented shops were proposed, along with renovated facades, and new building signs.

3. *Provisions of needed neighborhood services*: This included new curb cut entries and street landscaping, the additional of a food/drugstore, and new uses for existing properties.

4. *Rehabilitation of undesirable uses*: New traffic signals and directional directional signs were added, underground utilities were provided, and a proposed renovation for a theater was included.

5. *New street furniture/ traffic improvements*

6. *Williamson Road as a major entity*: This idea included new uses in the strip mall and an entry sign which would provide a model for other city entries.

Williamson Road provides an example of how the community desires of the community can be translated into a list of design guidelines. These guidelines can be used by the designer to appropriately execute the task at hand.
El Cajon Boulevard: San Diego, California

El Cajon Boulevard has suffered commercial decline due to the construction of a nearby interstate highway and the change in the demographic characteristics of adjacent neighborhoods. The development of mini-malls and fast food franchises threatened the local color and entrepreneurship of the area which the people hoped to preserve. In many places along the corridor strong imagery still remains from the fifties, when the boulevard thrived as a major cruising strip with auto showrooms, neon signs and drive-ins (Landscape Architecture).

The intent of the project was to help revitalize the existing commercial corridor and attract new development by enhancing the physical appearance of the street. The main concept was that El Cajon Boulevard should aim for revitalization as a major urban road that incorporates the strip imagery of its past (Landscape Architecture). The proposed design embraces the automobile and the mini-mall while still providing for the pedestrian.

Specific concepts included the development of pedestrian oriented, specialized, mix-use nodes at major corners. Automobile oriented convenience and commercial uses were continue to be permitted, but are organized into linear districts between corridors. Design elements are used to make reference to existing and historic icons and color becomes an important element that can create a secondary district overlay. Similar businesses for example, would be keyed by a reference color in the building façade (Landscape Architecture).

The proposal for El Cajon provided a creative attempt to revitalize a corridor while still embracing its past. Understanding the purpose of the street has proved to be essential before beginning the design. It is possible that all of the elements that assisted in deteriorating a street may just need to be redesigned in a more efficient manner. Signage for example, may be converted to a positive theme of a street rather than a negative trait.
The Town of Oswego, Oregon

Up until the late 1980s, the historic downtown area of Oswego, Oregon was rapidly fading. Due to the result of poorly designed “highway improvements” centered around the use of the vehicle, the downtown became isolated from the surrounding community. Tired of the current state, the city developed the “Street Beautification and Improvement” committee to push towards a massive redevelopment project (Great Streets).

One of their main goals was to focus on the design of the street rather than just the buildings that lined them. One street in particular, “A” Avenue, placed an extraordinary amount emphasis on the details and the pedestrian realm. At the main intersection in the downtown, there is a subtle change in elevation and in paving that has profound results. The combination of the contrast in paving textures and the 4” rise in elevation helps to control the speed of the vehicles. The rise also helps to create a much more inviting environment for the pedestrian (Great Streets).

Through strategically placed benches and other accessories, the pedestrian areas were also successfully divided into pedestrian travel space and sidewalk activity space. The design creatively uses tree gates and fixed benches to define the two spaces (Great Streets).

The majority for the success of this case is again a very creative approach to dealing with issues of space. One example was the cities design of walls that were appropriate for seating but also incorporated news stands in non-traditional manner. Rather than allowing the news stands to dominate space on the sidewalk, they became part of the wall (Great Streets).

Another aspect of this design was the cities willingness to incorporate a large amount of public art in the design. The use or art helped to enhance the continuity of the spaces as well as enhancing the character of each space. The art varied from wall fountains to paving details to sculpture (Great Streets).

This case was yet another example of how a once prosperous downtown district that lost it’s identity due to rapid growth can regain power and a stronger
character. Utilizing space and being receptive to creative design ideas can be very beneficial.

Design Issues, Trends, and New Ideas

By this point we have a good idea of what makes a “great street”, but as designers what steps can we take to ensure that we too create a great street? We are aware of the concept and theory of a great street, now it is time to look closer at the design details. The following is a list of criteria and design issues for a successful street:

Places for People to Walk

We must never forget that the primary function of streets include gaining access to abutting uses and getting from one place to another. Good streets must provide this function, and the journey should be comfortable, safe, pleasing, and even enlightening in terms of the experience they offer of the city.

Successful past examples (as well as modern examples) show us that every fine street invites leisurely, safe walking. There must be walkways or channels that permit people to walk at varying paces. While walking, they should also feel neither a sense of crowding nor being alone, and that they are safe from vehicles (Jacobs).

Physical Comfort

The best streets provide a comfortable setting for the user. Of course, this idea has limitations, but a street should be as comfortable as it can be in its setting. Seasonal changes are often unavoidable, but should be taken into consideration without trying to avoid the natural environment (Jacobs). Streets should provide shelter, places to sit, gather, and have distinct separation between vehicular travel and pedestrian travel.
Definition

A great street will have definition and clear boundaries that communicate where the edges of the street are. Streets can be defined vertically through the use of buildings, walls, and trees, and horizontally which is closely related to the length of and spacing between whatever is doing the defining. In regards to vertical definition, it would seem to be a matter of proportion. The wider the street gets the more mass or height it takes to define it (Jacobs).

Qualities That Engage the Eye

Great streets require physical characteristics that create visual complexity. People, foliage, cars, signs, and storefronts all add to the visual enjoyment of a street. Sufficient light is also necessary, since it is often different surfaces in which light constantly moves which keep the eyes engaged (Jacobs).

Transparency

The best streets have about them a quality of transparency at their edges. While traveling on the street, the user can see or have a sense of what is behind whatever it is that defines the street; it adds depth to the street and the visual experience. It can also promote a sense of invitation to stores or spaces. Usually windows, doors, or other screening help to define a space while maintaining transparency and not creating a barrier (Jacobs).

Trees

Trees may often be the most important factor of a great street. Not only do they provide oxygen but green is also a psychologically restful, agreeable color. Trees move and modulate the light, again further engaging the eyes and can also effectively create separation. Tree trunks and the branches create a screen, sometimes like a row of columns that gives a transparent but distinct edge.

For the use of trees to be effective they must be reasonably close together. The spacing of trees helps to create a line; a line that once started
should not be interrupted. Jacobs strongly enforces that if the emphasis is to be on the design of the street as opposed to items along the way, than the goal will not be achieved by responding to “special circumstances”. This is a key point that we often overlook.

**Beginning and Ending Points**

A simple concept, but most great streets seem to have a beginning and ending point. This could be represented by a visual gateway, landscape elements, or architectural elements. There should be something that creates the feeling that the user is entering a unique space, or leaving the space.

**Special Design Features**

When it comes to street design, quality in regard to details contributes mightily. Paving, street lights, benches, and plant selection are just some of the components. When one attempts to save money or cut corners, the result is often apparent in the built work. The great streets of our past appeared to worry little about the price, and it is clear that the rewards of these decisions are still present today (Jacobs).

**Accessibility**

Getting back to the basics, we can not forget that the major purpose of a street is to help get people from one place to another. With this in mind, a street must be fully accessible to anyone who desires to use it. Some of these ideas are becoming more important with the relatively recent design standards for handicap accessibility. These are issues that I predict where often overlooked in the streets designed in our past.
Simultaneous Movement Systems

More current design issues involve an understanding of the simultaneous movement systems along which city-dwellers move or are transported. Within this idea there are three concepts which must be considered:

1. Relationship of mass and space
2. Continuity of experience
3. Simultaneous continuities

Movement through space creates a continuity of experiences derived from the nature and form of the spaces in which movement occurs. As designers, regardless of the spaces we design, we must attempt to see the continuity of space experience in terms of a series of movement systems based on different rates of speed and different modes of movement. With today's application of mechanical power, the movement of man through space has greatly evolved. Up until relatively recent times, the speed of movement through space was much the same whether one walked, rode a horse, or traveled in a carriage. Thus the urban designer dealt with one basic system of perception (Bacon).

Today we must take into consideration all of the perceptions and forms of movement. When designing our streets, we must show an understanding for those moving on foot, on bicycle, in a car, or by a form of public transportation. The numbers of factors have greatly increased in comparison to past times.

Back to the idea of continuity and form, one of the elements that can help create a continuous experience of moving though space is color. Color is valuable to a designer and can be used to create sequence and anticipation (Bacon). Modern trends include using color as a method of distinguishing space. For example, differing colors can help to clearly define parking, pedestrian, and vehicular zones. Changes in colors in the use of paving can also notify vehicles of pedestrian areas.
Achieving Design Excellence

When focusing on the current design issues, trends, and new ideas, it is also important to set standards for design excellence. The book, Towards an Urban Renaissance, lists five solid steps to successful modern design. They are as follows:

1. A commitment to quality and creativity in the way which we design public spaces, buildings, and transportation networks.
2. The need to rekindle public interest.
3. Encourage involvement at a local level.
4. Place the needs of the pedestrian first – ensure that walking is the preferred option.
5. Embrace innovation, yet work to understand the historic character in order to protect and preserve the best of our past.

"An attractive, well-designed environment can help to create a framework for promoting economic identity and growth." (Final Report of Urban Task Force)
Part Three: Methodology

Project Type
Criteria for Site Selection
Description of Site and Context
Opportunities and Constraints
Site Analysis
Project Type

This project was a revitalization and implementation of current design trends and issues on a segment of road that has been overrun by the vehicle, severely limiting its use by pedestrians.

Within most cities the thoroughfare system can be broken down by major roadway classifications. Information from Muncie's Comprehensive Plan describes the classification system as follows:

- **Highways** are devoted to high-speed, long distance traffic movement with little or no access to adjacent land. They are often multi-lane and have controlled access.
- **Arterials** move traffic between principle traffic generators. Direct residential access is generally discouraged, but access to commercial and industrial areas is allowed.
- **Collectors** serve internal traffic functions within an urban area, generally link local streets to arterials, and can provide direct access to property.
- **Local streets** exist primarily to provide access to adjacent land.

This study focused on the revitalization of an arterial corridor with a high volume of traffic, high commercial use, weak economic development, and a high volume of users. The project addressed the needs of the users, the function of the street, commercial development, and public space for the community.

Criteria for Site Selection

In order to fulfill the goals and objectives of a project of this sort, it is necessary to have a site that will be receptive to the proposed concepts. The ideal site is an existing "strip development" street that is vehicular based. More than likely, it will be characterized by low density commercial use, often set behind parking lots. Shops along the street generally are too far apart to allow for a continuous experience of movement from one store to another. The high
volume of vehicles also makes crossing the street difficult for the pedestrian and can often only be achieved through the use of the vehicle.

An important factor when selecting the site is to determine whether there is the potential for a significant volume of pedestrians to be using the space, shopping at the stores, or crossing the street. A site surrounded by high residential density would be ideal.

A site with visual definition would also be desirable. Buildings that face the street and possible beginning and ending points would provide for design opportunities. It is also desirable to select a site that has existing successful commercial or business districts. These existing elements help to create a pedestrian draw that can then be further enhanced through the proposal of additional design concepts. Opportunities for commercial, residential, and public space infill would again be ideal.

**Description of Site and Context**

The site studied for the purpose of this project was the segment of Tillotson between Riverside (north end) and White River Boulevard (south end). Major intersecting streets include University, Jackson, Gilbert, Main, and Goodman. At the north end of the site is a connection to Ball State University and Ball Memorial Hospital, while the south boundary is defined by the river. Jackson also provides a link to downtown Muncie (see following pages for maps).

At the northern end of the site there is a church, a fire station, and some residential housing. As you begin to move further south you enter the existing medical district. Within this area Tillotson is a four lane road providing vehicular access to the adjacent medical facilities. There is little landscaping and sidewalks are few in numbers.

Continuing south, at the intersection of Tillotson and Jackson begins the commercial/business district. Within this area (all the way south until Ethel), there is a variety of restaurants, small business, fast food chains, and gas
stations. There are very few sidewalks, no landscaping, excessive curb cuts, billboards, many above ground power lines, and large amounts of parking.

Beginning at Ethel starts the third segment of the selected portion of Tillotson. Here Tillotson is four lanes with an additional center turn lane. Within this district there is an abandoned Ross, a Marsh, a gas station and a few other small businesses. The old Ross is to become a new medical facility in the near future. There are no sidewalks in this area and very little landscaping.

The following list provides an inventory for most of the facilities along the area of Tillotson under review:

<table>
<thead>
<tr>
<th>Public</th>
<th>Business</th>
<th>Food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Station</td>
<td>Walgreens</td>
<td>Long John Silver's</td>
</tr>
<tr>
<td>Medical Facilities</td>
<td>CVS</td>
<td>Pizza King</td>
</tr>
<tr>
<td></td>
<td>Radioshack</td>
<td>Greek's Pizzeria</td>
</tr>
<tr>
<td>Gas / Liquor</td>
<td>Marsh</td>
<td>Arbys</td>
</tr>
<tr>
<td>Marathon</td>
<td>Clancy's Car Wash</td>
<td>Taco Bell</td>
</tr>
<tr>
<td>Marathon (2)</td>
<td>GNC</td>
<td>Donatos</td>
</tr>
<tr>
<td>Speedway</td>
<td>Blockbuster</td>
<td>Mc Donald's</td>
</tr>
<tr>
<td>Muncie Liquors</td>
<td>Hollywood Video</td>
<td>Burger King</td>
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<tr>
<td></td>
<td>Star Financial</td>
<td>China Buffet</td>
</tr>
<tr>
<td></td>
<td>Bank One</td>
<td>Puerto Vallarta</td>
</tr>
<tr>
<td></td>
<td>Vogue Cleaners</td>
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</tr>
<tr>
<td></td>
<td>Muncie Cleaners</td>
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</tbody>
</table>

On a larger scope, the site is surrounded almost entirely by residential districts. There are a large number of residents living very close to this portion of Tillotson who could easily reach the site on foot or bike. In addition, information provided through conversations with the GIS Planner of the Muncie Planning Commission brought attention to the growing medical district in the north and south ends.
Site Context and Selection

Selected Area of Tillotson and Cross Streets
Opportunities and Constraints

The location of Ball Memorial Hospital, Ball State University, and the White River are key features which provide great opportunities. Found in Muncie's most recent comprehensive plan (2000), information gathered from surveys taken at various public meetings show that people generally saw all three elements as strengths within the community. Again, all of these sites are within the area proposed for redevelopment. In addition, the Hospital is rapidly expanding and acquiring land. In fact, the abandoned Ross and surrounding area will be developed into a medical center. This creates the opportunity to create a link between the existing medical district and the new proposed medical district. With the proposed plans for the White River pedestrian promenade, there was also the opportunity to create a link or destination between the river walk and the new medical district. This provides the opportunity to consider creating stronger links to these areas valued by the community.

Another huge opportunity is the ability to increase the road width to the maximum right of way. The majority of Tillotson is currently between 52-56 feet, but information gathered from the 1970 proposed right of way plan shows that Tillotson has the potential to expand to a width of 100 feet. This allows for a great deal of flexibility when considering issues such as street trees, medians, sidewalks, and other forms of pedestrian circulation.

There are not many restraints within this particular site. The only apparent restraint would be building fronts that would conflict with increasing the road widths. There is also the need to be aware of the surrounding residential neighborhoods and respect their needs when increasing business/commercial development.
Site Analysis

After a thorough inventory of the site, the next step was to gather all information and create an analysis to assist in developing goals and objectives and identifying the client. The following information and graphics are the results of the analysis:

The figure/ground image shows the relationship between the built structures and undeveloped areas. The parking image shows how much of that undeveloped portion is actually parking space. Together these two images help to see just how much space is devoted to parking or otherwise not used. For future development, there is no need to expand and acquire more land, but rather develop some of this parking/open space.
Areas Without Sidewalks

This image helps to illustrate the severe lack of sidewalks along this particular area of Tillotson. Pedestrian travel becomes very difficult when there are no sidewalks to assist with movement. Throughout the business/commercial section, there is also an excessive amount of curb cuts. This works towards destroying the continuity of the space and creates a lack of organization.

Areas Providing Landscaping (Minimal)

The above graphic highlights areas where landscaping is present. The highlighted areas are very generous, when in actuality the amount of landscaping along Tillotson is minimal. There are a few sporadic areas of plantings and trees, but there is nothing consistent. This lack of consistency works against achieving a sense of continuity and makes the street appear to be fragmented and unorganized.

The following images are pictures of the site which help to illustrate the poor conditions and lack of pedestrian environment along Tillotson:
This picture is an example of some of the many parking lots which could provide land for future development. It is also representative of the minimal amount of landscaping.

This image is a view looking down Tillotson from University at the existing medical facilities. It shows the lack of sidewalks on the far side of the street and lack of landscaping. Many hospital employees use surrounding areas for parking but then have no way of walking to work. They are forced to use the shuttle service.
The above image is a view of an abandoned lot within the commercial/business district. Within this area sidewalks are random and excessive curb cuts destroy the continuity of the street. The overall condition of this area is also very poor. There is an excess of parking and little landscaping.

This is a shot of the abandoned Ross where the new medical facility will eventually be. Within this area there are patches where landscaping is present, but there are no sidewalks. Pedestrian access to any area in this section is nearly impossible.
Analysis Overview

Now that the inventory and analysis has been completed, a general list of issues was developed. The following is the list:

- Sidewalk conditions are very poor inhibiting use by pedestrians. The lack of continuity of the sidewalks also limits travel if hoping to walk up or down the corridor.
- The excessive curb cuts destroy any sort of continuity and edge along the street while also creating confusions and disorganization for those traveling by vehicle.
- Throughout the site landscaping is minimal and limited to a few areas. The lack of landscaping destroys any sort pf pedestrian scale and is aesthetically unpleasing.
- There is a severe lack of continuity between the spaces. Curb cuts, landscaping, excessive parking, and buildings far apart from each other work against creating an edge and a continuous experience.
- The large amounts of above ground power lines and billboards create and unattractive skyline.
- Without landscaping and other street features there is a lack of pedestrian scale. A person feels out of place when in an environment overrun by the vehicle traveling at fast speeds.
- Again, there is an excess of parking within the site. These areas should be utilized for future development. They should also be reduced to limit the amount of rainfall runoff.
Part Four: Design Process
Guiding Questions
Identifying the Clients and Their Needs
Project Goals and Objectives
Assumptions and Delimitations
The Established Program
Design Concepts
Rationale for Selection of Concept
Guiding Questions

Now that the analysis has been completed, the next step was to develop a list of questions to assist in developing a solution for the problems at hand. The guiding questions helped to lead this project to a successful conceptual master plan for the designated section of Tillotson. They are as follows:

1. How can Tillotson be redesigned to help beautify the corridor, promote the exchange of goods, and cater to the pedestrian?

2. What is the function/role of the segment of Tillotson considered for redesign and revitalization?

3. How would the expansion of Ball Memorial Hospital impact the site and what issues should be considered to ensure expansion that respects the surrounding context?

4. How should entrance points or gateways to the corridor be expressed?

5. To what degree should Tillotson become more accessible to the pedestrian?

6. What architectural elements, such as signage and building materials, should be regulated?
Identifying the Clients and their Needs

The Clients
1. Ball Memorial Hospital
2. Local Residents
3. City Residents
4. Adjacent Businesses

Ball Memorial Hospital:
- Room for Future Expansion
- Adequate Parking for all Facilities
- Efficient Access to Buildings for all Clients
- Greater Ability for Pedestrian Access to Tillotson and it’s Amenities

Local Residents:
- Appropriate Zoning and Landscape Buffers to Help Protect Against the Growing Hospital and Businesses
- Traffic Calming Measures for Increased Safety
- An Attractive Community where Economic Growth is an Important Factor
- Improved Pedestrian Circulation
- Continuity of Experience
- Pedestrian Link to the White River

City Residents:
- Efficient Access to Tillotson and it’s Amenities
- Beautify the City
- Create a Possible Destination

Adjacent Businesses:
- Efficient Access to Buildings
- Ample Parking Near Facilities
- Store/Street Frontage and Opportunity for Signage
- An Environment that Promotes the Exchange of Goods and Services
Project Goals and Objectives

1. Landscape materials and design techniques will be employed to help beautify the corridor, promote the exchange of goods, cater to the pedestrian, and improve vehicular travel.

2. In response to the predicted future growth along and around Tillotson, a conceptual master plan shall be created designating pedestrian accessible space for development.

Assumptions and Delimitations

In order to see the successful creation of a conceptual master plan and proposed ideas, it was necessary to compile a list of assumptions and delimitations. Both helped to reached the desired outcome in the time allotted. The following is a list of assumptions:

- The proposed 100 foot right of way would be used to help create space for sidewalks, street trees, and medians.
- The surrounding residents would support the redesign of Tillotson.
- The owners of buildings abutting Tillotson would be willing to make changes to their property in favor of the community needs.
- The city of Muncie would have the financial reserve to complete a project at this scale.
The goal was to create a conceptual master plan for the segment of Tillotson between White River Boulevard and Riverside. If the clients were interested in further development of the plan they would need to pursue the assistance of a licensed landscape architect. For that reason, this project was not involved in the following tasks, though they would be necessary to complete the project:

- Constructions details, a maintenance plan, or a planting plan.
- Site surveying, engineering, or site grading.
- New traffic counts and surveys would not be executed; information would be used from numbers previously compiled.
- A conceptual master plan for Tillotson would be provided, but design suggestions for adjacent or interesting streets were optional.

**The Established Program**

The corridor shall be divided into three zones, each zone determined by particular use. The zones are as follows:

1. Medical
2. Commercial/Business
3. Proposed Medical

Within all zones, the proposed right of way of 100’ will be utilized allowing for additional space. This will provide the necessary room for the creation of sidewalks, street trees, planted medians, and other such features.
The above image shows the division of the three zones. Each zone was determined by its particular use and begins and ends on major cross streets.

**Zone One: Medical**

- Proposed areas for hospital expansion shall include a landscaped buffer providing separation between site and existing residential housing, while also creating boundaries limiting hospital expansion to select areas.
- Landscape materials will be used to help define edges and develop a stronger sense of pedestrian scale.
- Sidewalks and a median shall be added to ease access and movement between destinations.
- Both the sidewalks and the median shall have regularly spaced street trees to develop a sense continuity and flow.
- All power lines are to be buried to improve the aesthetics of the skyline while signage will also remain minimal in this district.
- Street lighting will be included for parking areas and travel routes.
Within this district the idea was that the area, with the majority of it already being used by the hospital, would embrace the future growth of the hospital. The design would reflect the need to designate more land for future growth, while also making sure that existing residential neighborhoods would not be disrupted by the expansion. Landscape buffers would be included to maintain privacy and also used to define boundaries for growth.

The other main concept is to enhance the pedestrian environment. Design ideas such as sidewalks, street lights, and landscaping would be included to help create a pedestrian scale. Within this area there would also be the implementation of a planted median. Street trees would be planted along the sidewalks and in the median at regularly spaced intervals helping to create a continuous movement throughout the space.

**Zone Two: Business/Commercial**

- Sidewalks with regularly spaced trees will be added to ease access and movement between spaces and develop a continuity of space.
- Curb cuts will be minimized to enhance traffic flow, create a greater sense of organization, and not interrupt the rhythm of the street trees.
- Landscape materials will be used to help provide buffers for the parking areas, develop a pedestrian scale, and reduce the current amount of paving materials.
- All power lines are to be buried.
- Understanding the needs of the business/commercial district, all forms of signage will be permitted with the exception of billboards.

The concept of this section is to develop a commercial/business zone that is anchored by two strong medical communities on each end. This will become a thriving market providing services to the medical facilities and their customers, the surrounding residential neighborhoods, and other users. The use of signs (with the exception of billboards), will be permitted to enhance the character of the space and add the energy of a commercial district.
Within this area great efforts will be made to relieve the conflict between the pedestrian and the vehicle. Street trees will be added and landscaping will be used to help screen the parking. Curb cuts shall be minimized and sidewalks will be added to allow for pedestrians to move throughout the site in a continuous line.

**Zone Three: New Medical**

- Street features such as sidewalks, street trees and median, lighting, landscape buffers, and burying the power lines which are represented in Zone One, will occur again in Zone Three.
- The medical district shall be developed with the building fronts facing the street, creating greater definition and establishing an edge.
- Retention ponds will be included to minimize the amount of rainfall runoff and enhance the opportunity for leisure activities.
- At the northern corners of the intersection of White River and Tillotson, landscape details will be included to create a gateway into the corridor.
- A connection shall be established between the White River and the proposed development.

This zone was intended to mirror the medical district found in zone one. The idea was that the abandoned Ross would be developed into a medical park. The buildings within this park would face the street helping to create a distinct edge. Behind the buildings would be the parking areas and a retention pond to help reduce rainfall runoff and add to the aesthetics.

The same concepts from zone one would be applied here in terms of adding features and landscaping to help improve pedestrian circulation.
Design Concepts

After a complete site analysis, identifying the clients and their needs, and creating a program based off of that information, the design naturally evolved. Closely following the program, a variety of concepts were introduced. The main idea was to follow the concept of three zones, with the two medical districts in the ends and the commercial/business in the center. This would provide the opportunity to create a strong medical district and a commercial area that had established boundaries but the ability to use existing space more efficiently and developed in to a dense, thriving business district.

Concept One

The above image shows the initial proposal for concept one. On the north and south ends there would be the opportunity for creating beginning and ending points. There is also space allotted for the expansion of the hospital and commercial redevelopment.
Like concept one, concept two embraces the idea of two medical districts on each end of a commercial/business district. Differing from concept one, concept two creates a landscaped buffer providing protection for the surrounding residential areas from the expanding hospital and commercial while also creating a boundary limiting the growth of these areas.

This concept also has all of the amenities that will enhance the pedestrian's ability to move along the corridor and helps to establish a pedestrian scale. Within zones one and three there will be street trees in addition to a planted median with trees. Zone two will have trees along the side of the street, but no median allowing for vehicles to cross the street and access the businesses.

This particular concept also includes utilizing a street east of Tillotson as an opportunity to create a vehicular link between the two medical districts. The idea was that these districts would be related and the shuttle service could provide access to both for hospital customers. The link would also serve as a boundary for the commercial/business district on the east side.
The above image is a section of zones one and three. The top image shows the existing conditions while the bottom image shows the potential to add sidewalks, street trees, and a median when utilizing the proposed 100 foot right of way.

This image is a section of zone two. Again, the top image shows the existing conditions while the bottom shows the potential if the proposed right of way were to be utilized.
Rationale for Selection

The second concept for the redesign of Tillotson is the stronger of the two. Most importantly, the second concept closely follows the program and fulfills all of the needs of the clients.

Dividing Tillotson into three distinct sections helps to enhance the image of the street while also creating a stronger sense of place. The medical districts would greatly contribute to the economy and continue to grow as an important feature within the community. Providing landscape buffers around these districts would insure the surrounding residents that their privacy will be respected while also forcing the hospital to use their current space more efficiently. By limiting space for new development and establishing boundaries, the hope is that both the medical and the business/commercial districts will become denser and create a stronger edge, sense of place, and enhance the living conditions along the street.

Through the use of landscape materials and design techniques, the second concept will help beautify the corridor, promote the exchange of goods, cater to the pedestrian, and improve vehicular travel. This will fulfill the project goals and create the boulevard which was ultimately desired.
Part Five: Design Development

Master Plans
Support Graphics
Conclusions
Design Development

With an understanding that the second concept was the stronger of the two, the final step was to take the conceptual master plan and work towards a series of more refined drawings. To help illustrate the design ideas and show how the program, goals, and client needs were addressed, various drawings were completed. Completed drawings included plans, sections, and other support graphics to enable the viewer/reader to see existing conditions versus proposed conditions, as well as help to explain how the concepts of the boulevard were implemented.

Though it is important to remember that the refined drawings are still conceptual, the following drawings illustrate a potential desired outcome. Applying the concepts within the program, each zone was looked at in more detail. Due to the large size of the site under review, it was necessary to select specific areas with the greatest need for improvement within each zone. This allowed for the ability to create a more detailed design and illustrate the desired concepts. Since both Zone One and Zone Three are intended to contain the same design elements and features, a small portion of Zone One was used as an example. For Zone Two, a select area was also used as an example to represent the zone.

The following pages contain the proposed drawings for Zone One, Zone Two, and Zone Three. Accompanying these drawings is text to help explain the design solution and concepts.
Zone One and Zone Three

The above image shows both Zones One and Three and the select area to be looked at in more detail. This particular segment is one in need of great improvement, but is also one that is representative of the conditions found within each of these two zones.

Going back to the analysis, here there is a situation of poor sidewalks, no street trees, minimal plantings, lack of a pedestrian scale, and minimal pedestrian features. A solution to these problems would simply be providing all of these features that the site is currently lacking. To accomplish this it was necessary to utilize the proposed right of way and implement the concepts of a great street as previously discussed.

The following images show the proposed master plan for this specific area, a proposed section, and a proposed perspective.
Proposed Master Plan For Zones One and Three
Section Representative of Zone One or Zone Three

Street Trees
Planted Median
Sidewalks
Street Lighting

Pedestrian Signage
Planting Buffers
Street Details

Proposed Street Right of Way: 92"
North on Tillotson From Gilbert
Zone Two

No Sidewalks
No Street Trees
Excessive Curb Cuts
Lack of Landscaping

Lack of Continuity
No Pedestrian Scale
Excessive Parking

Similar to Zone One and Zone Three, this image shows the select area to be looked at for Zone Two. This segment is within the commercial district and has some issues that differ from the medical districts.

Again, going back to the analysis, here there is a situation where there are no sidewalks, no street trees, excessive curb cuts, lack of landscaping, lack of continuity, no pedestrian scale, and excessive parking. Within the commercial district the concepts of minimizing curb cuts and continuity become very important. Currently there is an excess of vehicular entry and exit points which makes any sort of continuous movement throughout the site nearly impossible. The fact that there are no sidewalks in this district is also a major problem. Finding a solution will again require utilizing the proposed right of way of 100' and apply the concepts of the boulevard.

Following the ideas from Zones One and Three, the following images show the proposed master plan for this specific area, a proposed section, and a proposed perspective.
Section Representative of Zone Two

- Street Trees
- Turn Lane
- Continuous Sidewalks
- Street Lighting

- Pedestrian Signage
- Planting Buffers
- Street Details
- Reduced Curb Cuts

Proposed Street Right of Way: 92"
South on Tiltonson From Commercial Zone
Conclusion

Now that the drawings have been presented, it becomes clearer how through the implementation of the concepts of a boulevard the quality of life along a street can drastically improve. Simple design solutions such as street trees, sidewalks, and planted medians can greatly impact a place. More importantly, they can help to create a place.

This project provided an example of a potential solution for streetscape revitalization. As we become more aware of our environment and surroundings, designers are looking for new solutions and ideas. In this particular case, it was actually old concepts that helped to solve a current problem. Researching and spending the time to understand the historic boulevards and how they function was an important aspect of this project.

Looking back upon the initial goals, it was encouraging to see that all of the objectives were met. With a good imagination and the help of the final drawings, you can see how a street that is currently limited in its use can be redesigned and become an element that helps to unite the pedestrian, the vehicle, and the business. It is important to remember that regardless of the means of transportation, people observe a space most often while traveling through it. Our streets become the interlocking framework that people use to travel from one place to another. With this in mind, designers should work to create memorable paths and lasting images. Traveling on a street should be a pleasurable experience.

As landscape architecture continues to evolve, a project such as this is becoming an important aspect of the profession. Landscape architects are beginning to position themselves as key players in the design of our cities and streets. There is a greater understanding of the importance of our street systems and how the environment we live in impacts the quality of our lives. Interestingly enough, for this project it was history and past designs that provided inspiration. It is an understanding that design is a process and culmination of thoughts and ideas. Design is a direct response to our needs and desires. It is impossible to predict the future, but if quality design is an important factor, and if our designers are well educated, then the future shall continue to be enlightening.
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