THE CREATION OF AN EDGE:

BARRIERS & EDGES

AND THEIR INFLUENCES IN THE URBAN FABRIC

ARCHITECTURAL THESIS:
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ABSTRACT

In today's world of urban revitalization, there becomes a need for architects to understand the needs and problems of today's cities, in order to play a positive role in their growth and development. One of these problems that cities face, is the restriction of growth, movement, and city cohesiveness by barriers, both man-made and natural, such as rivers, topography, railroads, roads, and canals. With the transformation of boundaries that are in the form of a barrier to that of an edge, a positive affect on the urban environment may be seen.

The communities of West Lafayette and Lafayette are currently divided by the Wabash River with neither city addressing the river to much degree. With the relocation of the railway lines to the river edge, an even stronger barrier is created between the city fabric and the river. The purpose for my project is to create a stronger link between W. Lafayette and Lafayette through a riverfront anchor that reflects the separate but together image of the Greater Lafayette Community. Through this anchor I am attempting to reduce the influence of the relocated rail lines and the river as a barrier. As a premise for my decisions, I feel that both the river and the railroad should be respected and enhanced through the interaction and transition from the city. While respecting the existing and proposed urban context, I am also attempting to introduce Urban Awareness of the river-city relationship.
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INTRODUCTION
In today's world of urban revitalization there becomes a need for architects to understand the needs and problems of today's cities, in order to play a positive role in the growth and development. Some cities have shared prosperous years of growth and vitality, where other cities have been strangled by their surroundings and lack of city identity. Each of these cities respond to similar problems and future hurdles. One of these problems that cities face, is the restriction of growth, movement, and city cohesiveness by barriers, both man-made and natural. The natural barriers--such as rivers, parks and topography--result in the separation of communities and neighborhoods. This could result in the stagnation or deterioration of one or both sides of a barrier. Man-made barriers such as railroads, roads, and canals may also result in community and neighborhood deterioration. These barriers restrict urban growth, inhibit movement and community interrelationships.

My study has been focused on the issues of barriers and their relationships and impact on a city, including possible methods of changing them into edges. With the study of boundaries there are several forms that may be looked at (physical, economical and social). The particular form, I
am interested in, is the physical boundaries and their effects on an urban environment. For my research I chose to investigate the river and railways as boundaries, and their effects as edges, because of their frequency in the urban context.

For an urban context I chose West Lafayette and Lafayette, due to their strong historic and present ties to the Wabash River and to each other. In addition to the strong ties, the planned relocation of three rail lines along the Lafayette bank of the Wabash, offers greater problems of connection to these given communities. With each city on a different side of the Wabash River, the river should play an important role in the Greater Lafayette community. As it presently stands, neither city makes an attempt to embrace the beautiful and powerful Wabash. With the addition of the railway on the riverbanks, the ties between the cities could be severed to an even greater degree. Why do these elements impact on the environment as they do.

To understand the full impact and problem of barriers and some methods of conversion into edges, you must be aware of the definition, role and impact of a particular boundary. Another important step in the transformation of a boundary, is the ability to understand the physical role between barrier and edge, through type, perception, connection and vocabulary of boundary. With the comprehension of the impact and problems of barriers, the next step is to understand the objectives, and possible approaches to the creation of an edge.
ONE-AWARENESS

*DEFINITION
*ROLE
*IMPACT
AWARENESS

What is a boundary? What makes a boundary function in the urban environment? These are just a few questions that you may need to ask yourself, when looking at the problems of barriers and edges in the environment. To become aware of the exact nature of a boundary or set of boundaries, you must first understand the definitions of barrier and edge as well as the role and impact of a perceived boundary.

DEFINITION

With the transformation of boundaries that are in the form of a barrier to that of an edge, a positive affect on the urban environment may be seen. These affects can be seen both visually, physically and as a catalyst for growth. The name "BOUNDARY" indicates or fixes a limit, or extent; and confines or encloses, certain areas of the urban environment. This definition of boundary denotes a group of elements in the urban fabric such as rivers, roads, berms, hills, and buildings. There are two sub-groups of boundaries, barriers and edges. A "BARRIER" within the urban environment, is described as any obstruction, or hindrance of approach or contact with itself or an opposite side. On the other hand an "EDGE", means a separation or
line, while maintaining a strong context and relationships with all of its sides. The change from barrier to edge does not result from the elimination of the boundary, but from the transformation of the connections and perceptions of the boundary.

There are varying degrees of success that can be described by the word "edge." The stronger the edge, the more it satisfies the need of the surrounding context, through positive connections, perceptions, visual relations, and activities. With the completion of the desired relationships an edge will act as a transition between both the sides and the urban context, an edge can be created. An edge is not the blend of two sides making them one, but the glue holding and relating the sides to each other through context and images.

ROLE

When looking at a boundary and its positive and negative aspects, as a barrier or edge, you must also find out what the role of a particular boundary may play in an urban environment. When transforming a boundary into an edge, a question arises on whether the role of a boundary should change or just be enhanced or clarified? To answer this question the identification of its role must be made. There are three apparent roles that evolved through my research and design process. These roles are of identification, of border, and of organizer.

IDENTIFIER

As as identifier, a boundary can act in two ways. The first role that a boundary plays, is when the boundary itself has such a strong identity that
nearby areas take on its identity or imagery. This can be good if the boundary is classified as an edge. If a barrier exists, it might be hazardous to the area due to a negative identity or just a plain lack of identity. This can be seen in places like deserted factory areas, un-kept parks, and interstate highways. Another way a boundary ensues a role of identifier, is when it provides a clear distinction between one identifiable area and another. This could be in a simple form of a road or more complex like a building or park.

BORDER

In conjunction with a boundary working as an identifier, it can also perform the role of border. When working as a border it may act as a physical separator between zones or areas, by walls, buildings, railroads, etc... This can be seen in West Lafayette where the levee shopping area becomes separated and identifiable due to the elevation drop as you move towards the river (Fig. 1). In addition a boundary may also work as a physical link between zones by the use of bridges, buildings, plazas, etc... At times it is possible for a boundary to play both separator and link. This type of complexity may add interest and excitement to the surrounding context.

ORGANIZER

When a boundary assumes the role of organizer, it becomes an influence on growth patterns for a larger area. This influence could be city wide or just a few city blocks. Its effects could be detrimental by restricting growth or connection, or it could enhance movement and relationships between certain areas. The Wabash river and river valley play an important role in both West Lafayette and Lafayette. In both cities the edges of the river valley (ridges on both sides of the river) has been an organizer of
growth and movement systems. The river ends up acting as the bond that tie
the two cities together, and a restrictor of growth in other ways. (Fig. 2)

**IMPACT**

The amount of impact of a boundary depends on two major factors. The first of these factors is the boundaries size, the second factor is dependent on whether the boundary acts as a barrier or edge. An example of this is the larger impact of a river than that of one set of railroad tracks. In addition to the factors if impact, there are two main methods of impact in which a boundary may play a role. The first method of impact is economic, with the second being physical. Economically the creation of an edge out of a boundary can act as a catalyst for further development. On the other hand a barrier could create a deterrent to economic investment and growth. As a physical impact, an edge may mean simple beatification or more important, the use of a specific area that has been previously avoided. The impact could even extend beyond the immediate are as an aesthetic goal or achievement.
TWO-ANALYSIS

*TYPES AND VOCABULARY
*RIVER AS BOUNDARY
*EXISTING BOUNDARIES
The main question is why does the natural form of a river develop into a barrier in a community or city. With the study of barrier and edge conditions, I feel there is one major category to study, Barrier Typology. This category was developed to help me understand the role of barriers and edges. The study of Barrier Typology reflects the need to understand if their are different types and impacts of barriers on a city.

**Typology**

When looking at a specific boundary such as a river, there is a need to understand its basic relationships to a city as a barrier or as an edge. In addition to this study, a comparison of impacts and shapes of other general forms of barriers is desired, to see if there are related impacts both positive and negative. This study will expose similar influences of a boundary as well as similar expressions. At a later date this information might be useful in understanding or developing a new relationship or impact of a boundary.
By reducing as variety of boundary forms, such as, rivers, open space, hills, oceans, lakes, roads, etc..., To a simple visual expression, five categories became evident. Some boundaries expressed impacts and forms from more than one category. This shows that one boundary can react and influence a city in a variety of ways. In addition to the ability of one barrier to act in two ways, barriers and edges may also work in a series. This means that two or more boundaries may have a much stronger positive or negative impact by their close proximity and and the length they run together. These five categories are, Two Sided Linear Barrier, One Sided Linear Barrier, Area, Distance, and Vertical Separation.

TWO SIDED LINEAR BARRIERS.

This category is the most common shape of barrier or edge. Because of its variety of form and wide spread expression, it can be easily seen throughout any city fabric weather it is old or new. This is true because this type of boundary has acted as a city organizer and limiter, for example a city wall or a river peninsula. At the same time this form of boundary has acted as a stimuli or an artery for growth and movement throughout history, through roads and rivers. Through each influence the impact on the city fabric is still evident today in both old and new cities. This shape of barriers (Fig. 3.) can be seen in rivers, rail lines, streets, highways, walls, berms, streams and parks. Due to this variety of form, this category of barriers also has a variety of impacts both as a barrier and an edge. The negative impacts include acting as a divider, impeding transportation, and restricting growth and form of a city. On the other hand this same shape as an edge, may act as an organizer, a city orienter, and an artery of people and activity for a city. A major negative impact from this type of barrier is evident when several barriers and boundaries run parallel to each other. This becomes
evident through several roads or highways running together, increasing the
distance that needs to be crossed. At that point the impact and separation of
the two sides becomes stronger and harder to counteract.

ONE SIDED LINEAR BARRIERS.
The linear shape and expression can be seen in forms such as oceans,
lakes, large rivers, hills and valleys (Fig. 4.). This formation or shape creates
strong negative and positive reactions with a city. As an edge for a city it can
act as a city organizer, or a constant visual orienter. In addition to these
uses it may develop into the main artery of a city, with urban fabric on one
side and boundary on the other. This shape of boundary may also act as a
barrier. Some of the effects includes the restriction of crossing or bridging
and impedes and focuses growth. Another effect of this form of boundary
would be the city turning away from the edge and focusing away from the
river. These effects are caused by a lack of respect to a boundary condition.

AREA
The classification "Area" (Fig. 5.) can be reflected in the form of a lake
or harbor. It can be defined as some area, be it hill, water or open space
where the urban fabric surrounds the form to a large degree. The space is
not a space that can easily crossed, but is a space that is traveled around on
the perimeter. Some of the benefits of this type of boundary is the ability of a
city to use its form as a focal point or catalyst. The main expression of this
boundary as an edge is the ability to experience the area from several points
of view, and achieving a different view from every new location around its
perimeter. The main negative effect of this boundary is the possibility of it
acting as giant void, and effecting its surroundings as well. Over all this form
offers many different interactions between it and the city. These include the
cities ability to surround the boundary, to reach into or experience and view it from within the area itself.

DISTANCE.

This form of barrier is just as psychological as it is physical. Psychologically this barrier makes you ask the question of yourself "is it worth it?", thus hindering the process and desire to approach the site. It can be described in both the vertical dimension or the horizontal dimension. This form can be described as a relationship of distance to goal, and strength of impression (Fig. 6.). This category relates strongly in both impact and form with the other three categories. The main negative point of this type of boundary is that if the goal is not strong enough or visible enough the distance will not be crossed. In a city fabric this relationship becomes very important to both pedestrian and vehicular traffic. This boundary appearing as an edge would not appear as a distance to be crossed, but as a path to be followed. The perception would be a sense of following a set of small goals leading to the final destination. This experience of path may be achieved both physically and visually.

VERTICAL SEPARATION.

This last form of boundary is only expressed with the third dimension where as the others may not be (Fig. 7.). Some of the expressions of this form can be seen in berms, hills, walls, cliffs, and buildings. Depending on height and location, it may act as a stronger visual barrier than physical barrier, or the reverse. In the form of a berm or building, visual relationships to the other side may be limited where the physical relation is still there. As a barrier this form may impede growth and movement, restrict views, and will act as a separator. As an edge the vertical separation may act as a
position of overview, transition between areas, and as a city organizer or orien-ter.

THE RIVER AS A BOUNDARY.

The river falls into the classification of a "Two sided Linear boundary, affects a city in different ways than similar shaped boundaries, such as man-made boundaries like roads, rail lines and highways. A river can be seen as a live and expressive edge, revealing its own power and force, as well as beauty (Fig. 8). As a barrier a river is a permanent feature, that may fight growth and organization of a city. It may even suppress growth and vitality. With a continuous changing path, a city must contain a river and its power. Respect must be paid to its form and power with attention paid to the flood plains as well as its banks.

In comparison with a man-made boundary such as a road, which may be changed or re-routed if the need arises, a river can not. A road, being just a horizontal strip for movement develops its impact through its width and traffic pattern. The road has now replaced the river as the artery of the city. Where the city used to sprout along the river it now develops along the linear path of the road. The road is now acting as the life form of the city and its organization. Besides the simple possibilities of travel, that a road can offer, the river can offer an assortment of entertainment, travel, green-space, and even a historical relationship as an edge. As an edge a river should create a mental perception or individual identity that both reads by itself and as an addition to the city fabric. It is very important that this perceived edge keep a strong tie and relationship to the urban fabric.
EXISTING BOUNDARIES

Lafayette for years has had to encounter barriers as separators and dividers. These Barriers have been evident through two sets of rail lines running through the downtown in two separate locations. One track runs on 5th street and the other runs diagonally along 9th street. Because of these tracks, many areas of the city have been isolated from traffic or contact with other parts of the city (Fig. 9). With the proposed relocation of the railroad tracks to the bank of the Wabash on the Lafayette side, the city interior cohesiveness becomes stronger, and a weak association with the river gets weaker. The present association is one of gravel parking lots and backs of warehouses.

On the West Lafayette side of the Wabash an attempt is made to contact the river and create an edge. This is done by the development of a small park along the levee that the community only uses on a few occasions. This small link is the only place in the Greater Lafayette Community that you may approach the river directly. The Wabash itself provides a strong barrier of separation between both cities. Because of varying strengths and levels through the seasons, areas directly north of Lafayette and south of West Lafayette are left undeveloped as a flood plain (Fig. 10). There are only one or two locations where you can make visual or physical contact with the river besides the three highway bridges.
THREE-APPROACHES

*EDGE TYPES-
  VOCABULARY
*PERCEPTION
*LAFAYETTE
  PERCEPTIONS
*CONNECTIONS
A strong vocabulary is essential when transforming a barrier to edge. The parts to this vocabulary include the knowledge of Edge Types and Vocabulary, Connections and Perceptions. With the understanding of the vocabulary, an assemblance of ideas can become a more fluent reality. These studies do not represent all possible solutions, but are presented as elements or relationships that are frequent in the surroundings.

**EDGE TYPES-VOCABULARY**

When looking at connections the vocabulary of the edge can be seen through section and plan form. Both forms represent different relationships to a river form. In plan the form of interrelation between land and edge becomes evident, while in section the transition between urban environment and the river.
PLAN VOCABULARY

In plan there are five main ways to relate to a river as an edge (Fig. 11.). This can be done by bridging the edge, meeting the edge, placed into the edge, or through integration by reaching into, or enveloping the river. These methods of contact allow for a stronger and more varied vocabulary to be used along a city edge. In the case of Penn's Landing in Philadelphia, it both meets the edge and reaches into the Delaware River, creating a connection between land and water. The variation of the river edge creates a variety of spaces and uses for the water front.

SECTION VOCABULARY

When looking at connections through sections at the variations of an urban edge like a river, you understand the need for transition and variation. To look at the edge condition of a river and a city, I developed and analyzed ten edge conditions in section (Fig. 12.). This is but a small sample of possible conditions. Through these ten edge conditions, the attempt was made to explore the balance between the urban fabric and the river, and transitions and use of the river bank.

The criteria I used to evaluate the ten river connections can be seen on the matrix provided. In general the criteria can be sub-divided into four basic categories; Physical Relation, Visual Impact, and Image and City/River Relationships. The study was not to develop a correct answer, but to explore the possibilities and to understand the benefits and liabilities. In a development a mixture of any one of the connections and others, may be used together. In the variation of these ten edge conditions the distinction of two groupings becomes evident. Of the ten I developed, they either fall into a group I call "Transitional Connection" or "Urban Connection"
PERCEPTION.

For a boundary to be an edge, the perception of that boundary is important. Here you may find out the exact impact of a particular river or boundary in the urban fabric. There are two important aspects when looking at perception. The first is the image that the edge portrays and the other is the perception of the edge from the urban fabric.

IMAGE.

The affect of a river as an edge and not as a barrier, revolves almost directly on the images that are portrayed. If the image is not clear or contextual the affect of a river as an edge will be reduced. This aspect of image can itself be broken down into three sub classes.

RIVER AND CITY IMAGE- The interaction of city and river becomes most important when looking at image. In the context of a strong urban fabric the natural image of a river is going to clash with the hard image of the city (Fig. 13). With the continual force of the river, does the city respect the river and its banks or try and dominate its form. With the natural image and the urban image of the river there are a couple of ways to create a transition between the two. The first is done by creating a variety of images along the river, second, the creation of a transitional element between city and river.

IMAGE OF THE SIDES.- Some places a river may flow between two communities or neighborhoods. As an edge the river will need to relate to both sides without losing their separate identities. Because of the different identities different images must be presented; the edge must not dilute the social and community differences between each side.
CITY PERCEPTIONS.

Perception from within the city fabric of the edge is just as important as the perceived image. Through perception of a city edge, such as a river, implies a sense of territory for the urban fabric. From within the urban fabric a perceived edge may act as a physical object to orient oneself in a city. In addition to acting as an orienter, it may act like a visual magnet, attracting people to the city's river or edges. The surrounding image provides information about the boundary and its edge condition.

LAFAYETTE PERCEPTIONS

From its conception Lafayette has always been an important point for the surrounding region. Today it still maintains that significance and importance. The city itself maintains a strong 19th century architecture and vocabulary. As one enters the downtown along main street, the courthouse appears as the strong focal point for the community. The Courthouse itself lies two blocks from the banks of the Wabash (Fig. 14). From the courthouse the perception of the surrounding fabric, is that of a mid-sized city, not of a river city. It is from this point as a pedestrian or driver, you obtain the first hint of any change in the city fabric. It is the next block down where the expression of the river appears. At this point the view of the main street bridge and the three blocks of gravel parking become evident (Fig. 15). A thin line of trees jammed between the parking lots and the river become the only hint of the river beyond. When one crosses the highway bridge you may only now become fully aware of the size and beauty of the Wabash river, and then you are on the other side of the river with parking and low budget retail shops.
CONNECTIONS.

The river as a separator is just as important as a connector. Separations provide an opportunity of turning boundaries into bridges and separations into connections. There are two types of connections, physical and non-physical. Each of these two connections refer to the awareness of the quality of life. A physical connection can be seen as pathways, streets, rivers, courts, rooftops, and tunnels; man-made objects that occur, and the network they form. The ideal situation of connections, would be to build a network that works together not as competing elements or dominate over its context. This idea becomes especially evident when a river and city meet on the river bank. To study this I developed a list of ten simple connections between a city and river.

The connection between city and edge is the most important point of the city-river interaction. It is the connection with the edge that creates the image or the perception from within the city. At the same time a connection with the river may create a sense of path, destination, gateway and arrival. The actual connection between city and river along its bank and the relationships that are possible, can be divided into physical, and visual connections.

PHYSICAL CONNECTIONS

Physical city-river contacts can be exiting and full of variations. There are not only literal connections but also variations of physical relations with both the city and the river. Each new physical relation adds a new level of physical depth to a connection. This variety allows a number of different
experiences in contact with the edge or river. Some of the different physical relationships include:

- Being on one side or the other.
- From a location within the boundary.
- Moving over the boundary.
- Moving under the boundary.

It becomes the experience of contact or movement that provides a connection between the city and river. With the surrounding context and site, which type of connection can you experience? In addition to the direction of the physical relationship, there is also the idea of physical path and the idea of destination. With the possible restrictions of the river form the path to it and along its sides becomes important. With a strong connection there is usually a physical draw to the location. This physical magnetism can be created through activity or by creating a path or gateway like St. Louis. In addition this draw can be created by the focusing the city upon the river through a promenade or main street along its edge.

**VISUAL CONNECTIONS**

The variation of physical relationships produces or provides a context for a number of visual interrelations. It is the visual image of the river or edge that is experienced first. In reality the visual influence is very important to the connections. This influence can act as a visual attraction from within the city or other side of edge. With a strong visual orientation the sense of path and destination can be provided. In addition to the visual relation from within the city, there are also strong visual relations to the edge condition itself. These visual relationships include:
-Looking across the boundary (Fig. 16).
-Looking from the side to the boundary (Fig. 17).
-Looking along the length of the boundary (Fig. 18).
-Looking from the boundary to either side (Fig. 19).

The strength and success of the edge depends on its visual impact as well as its physical impact. Both should provide accessibility to the edge, to enhance the possible activities and functions, as well as maintaining a strong interaction with the urban environment.
FOUR-OBJECTIVES

* CONNECTION
* TRANSITION
* PERCEPTION
Through the expression of a river development, I strove to create the notion of transition, connection and perceptions of a city and river. Each objective was set with the final goal in mind of the embracing of Lafayette and West Lafayette to the river and to each other. For me, the early realization of these objectives as well as a full grasp of the important elements, allowed for a more direct route to appear in the project development. Some of the elements, such as context, types and vocabulary of boundaries, and their role and impact, were very influential in the decision making process. The objectives of the transition, connection, and perception, became very evident in the needs of Lafayette and West Lafayette.

**Connection**

At the onset, when looking at Lafayette and West Lafayette, I saw the idea of connection was very strong. As a progression through the project, it became more and more important. By the use of the word connection, I am talking about the creation of a link or pathway to or across a boundary, barrier or edge. In addition to these functions a connection may perform as
the media for creating an edge out of a boundary or barrier. This influence is important through both physical and visual relationships.

In Lafayette and West Lafayette there are three main connections that are needed in the community. These are the connection of Lafayette to the Wabash River; the connection of West Lafayette to the Wabash River; and the connection between Lafayette and West Lafayette. The methods I used to create these connections include, a sense of destination, a sense of pathway, and a sense of activity. Each of these methods work together when they are present. The most important of the three methods is the sense of activity. Without this, the other two tools will be wasted. The creation of activity both physical and visual will attract and keep people interested. In the case of the Wabash River, you have a natural attraction that just needs to be used and emphasized. The other two methods become very interdependent with each other. The need arises to create a pathway whether it is formal or suggested, to both bring people to the connection and to lead them through the site. To do the later, a strong sense of destination or arrival needs to be evident as a magnet for people.

With these methods the idea of both physical and visual contact with the river needs to be made. The greater number of variations offered as contact, may increase the interest of the relationship. To be able to visually relate to things like water or the river bank, is very important.

My approach to the site in Lafayette was to create two anchors of activity, one on either side of the river, and to create a focal point using the main street bridge on the river itself (Fig. 20). The two anchors themselves were the attempt to connect each city to the river. The bridge's purpose was to perform as the focal link between the two cities and the river. On the
Lafayette bank of the river the creation of a five block mixed development, is to provide the connection to the river through changes in massing, scale, openness and activity (Fig. 21). The West Lafayette anchor was developed through the emphasizing of the existing retail and park or recreational area. This was done by allowing the spacial relationships of the Lafayette bank to influence the West Lafayette side of the river.

**TRANSITION**

In addition to the need for connections in the Greater Lafayette Community, I felt that an abrupt physical contact to the river would undermine the attempt to create an edge. The development of transitional elements in a city will allow the influence of the river to reach further into the city fabric. With this increased influence the connection becomes stronger and easier to perceive. The use of transitional elements, serves the purpose of creating transitional relationships to the city fabric by adjustments in scale, openness, and massing. The reflected change from river corridor to city will increase the perceptions of the river from a distance (Fig. 22).

In Lafayette my transition between city grid and the river corridor occurs in three main locations. These locations are the Hotel site, the Market Square, and the Transportation Museum. In each of these locations the language of city grid and river influence is slightly different. The Hotel reflects the grid with its base and relationship to a nearby bank tower, and reflects the rivers influence by its massing and orientation of its hotel rooms. In contrast the Market Square clearly reflects the city grid to the east and south, but reflects a river influence in its remaining facades. This site
becomes the key in the transition from city to river edge. The Transportation Museum, respects the grid of the city but breaks down in massing and scale as it comes in contact with the river corridor. Each location itself creates its own expression, but they help create the message of transition and connection to an edge.

**PERCEPTION**

A main difference between barrier and edge is how it is perceived. The successful nature of barrier can only be analyzed with its perception in the environment. The existing problem in Lafayette was the poor quality of the perception of the river from the city fabric. In the creation of an edge along the river, the idea or perception becomes very strong. By the use of the term perception, I am talking about the expression of an edge through visual connection, legibility, and relationship between river and city fabric.

My Attempt at increasing the perception in Lafayette, was to let the courthouse maintain its prominence through a series of perceived spaces to a connection with the river. From the courthouse square the perception of activity and attraction, was created along the rivers edge. Elements as the railway bridge pier act as elements to draw attention and activity to the river edge (Fig. 23). With the perception of each element a cohesive and legible creation of an edge will be evident.
CONCLUSION
This paper is an exploration of the role and affect barriers and edges have on our city. Its purpose is to make the reader aware of some of the ideas and concerns that need to be looked at when dealing with city edges. It may almost be used as a checklist of responses or ideas. There are other important factors when dealing with urban edges that the reader should be aware of. When you are changing a boundary into an edge, you should be aware of the programmatic, political, and contextual relationships to the site.

Barriers and edges with their form and shape play an important role in the life of our cities. Each shape offers both negative and positive expression on our city. Almost every city has to deal with boundaries and barriers, in their form, perception and connection with that boundary. Some of these boundaries have stronger impacts than others on a city. The river as an element has dominated the fabric and life of cities for centuries. When that city turns its back on its river or lets its river corridor deteriorate, it is hurting itself as much as the river. The creation or transformation of that same river into an edge, will create an image and attitude of advancement in the people of the surrounding communities. Whether it is an active edge or a passive one, the difference in its creation will still be a benefit. In the case of the Greater Lafayette Area, it could offer a rebirth to the downtown. Each city should embrace the river thus embracing what lays across. Because of a boundaries impact, when it is developed into an edge, it may become a catalyst of growth and development.
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APPENDIX A.

* RIVER ORGANIZATION
* BRIDGE
* WABASH HISTORIC PLAZA
* MARKET SQUARE
* HOTEL
RIVER ORGANIZATION

As a plan to make the creation of an edge easier and stronger, I developed an overall river organization. The results of this study helped to determine the primary influences that effected each part of the project. With this development, the programmatic and schematic relationships were determined and used. As an overall concept the intent was to increase the perception of the river edge, by letting the courthouse act as the point of emission for the river area. From this concept, an idea of controlling and focalizing perceived space and energy, would be a guiding factor in its growth.
BRIDGE

The main function of the bridge was for it to be the active link between Lafayette, West Lafayette and the river. At the same time the bridge would take on a focal role, for the river valley. In addition, the bridge through its form would help direct energy and attention up the stream. This element would be the jewel of the Wabash valley.
The Wabash Historic Plaza provides the main connection between Lafayette and the Wabash River. Here the respect and emphasis of the relocated railway lines with the addition of a usable edge, creates a strong balance. Using pedestrian tunnels to access the river from the sunken Historic Plaza, a river boardwalk becomes possible. This plaza also must provide easy pedestrian access across the tracks to the bridge structure. This was done by creating a focal termination to main street, and by becoming a visual element from within the city.
WABASH HISTORIC PLAZA

PERSPECTIVE - MAINSTREET

PLAZA SECTION

SCALE 1"=20'-0"

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HOTEL

The programmatic idea behind the hotel/conference center, is the need to provide a southern rim and link for the river development. As a rim, it is to enclose the river space to the south, and to provide an anchor on the Lafayette side of the river for the bridge. In a massing study, I wanted the hotel to both reflect the city and the river. In addition a strong relationship needed to be made to the railroad tracks and the bank tower. The hotel become a space definer for the river development.
HOTEL
MARKET PLAZA

The Market Plaza became a key site in the transition from city grid to that of the river. This site was required to maintain strong street facades along main street and second street. In addition to this the plaza needed to allow strong visual and physical connections to the courthouse. Due to these considerations the market became open in its interior and rigid along two sides. The flow of space and pathway was to be created from the courthouse through the site to the Wabash Historic Plaza and the Transportation Museum.
APPENDIX B.

WATERFRONT DEVELOPMENTS

*HARBOR PLACE
*SOUTH STREET
*SEAPORT
*QUINCEY MARKET
HARBOR PLACE