The Virginia Avenue Center, an office-retail complex of approximately 750,000 square feet, is located in Indianapolis, Indiana. The design's emphasis is on the surrounding urban fabric as much as anything else. I chose to utilize this theme because I felt such has not been the case in the past, and Indianapolis has been worse because of it. In my attempt to coordinate my proposed thesis project with its surroundings, I became aware of the many issues involved with an urban project.

There are three issues paramount to the determination of my final design. The most prominent issue is that of responding to existing circulation patterns, both vehicular and pedestrian in nature; the second issue involves responding to existing buildings in good, sound condition along with their prominent outdoor spaces; and finally, responding to the heights of various surrounding buildings brings the design around full. It is these ideas that provide the essence to my architectural thesis.
I wish to offer thanks to my studio professors, Paul Laseau, Bob Kingsley, Sonny Palmer, and particularly Bob Koester, and to my faculty critic, Ken Carpenter, for their guidance and assistance on my final collegiate architectural design project.
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The center of the orthogonal grid of the city of Indianapolis is marked by a circular piece of land. It is here that Monument Circle is located. To reinforce this notion of a center, four diagonal streets are imposed on the grid. They are Massachusetts to the northeast, Indiana to the northwest, Kentucky to the southwest, and Virginia to the southeast. Leading to Monument Circle but not physically touching it, these four avenues represent a meaningful setting to the city of Indianapolis that should be responded to each time a building is constructed on or near one of them.

However, with the progress of recent times three of these avenues have been ignored. Massachusetts, Indiana, and Kentucky Avenues have literally been erased from the map. In their place, buildings have been erected, the Indiana National Bank Building, the American United Life Building, and the Hyatt Regency, respectively. Thus, Virginia Avenue is the last of a species; any proposed structure should respond to its function as a vehicular artery.
The city block, which measures approximately four-hundred feet square, is bounded by Washington Street (U.S. 40) on the north, Delaware Street on the east, Maryland Street on the south, and Pennsylvania Street on the west. Virginia Avenue bisects the block diagonally, cutting across it from the southeast to the northwest. Immediately surrounding the site are three distinct areas. The principal office center of Indianapolis is located just to the north, while the major downtown retail district is to the immediate west. Towards the south and east is the start of light industry and warehouses.

And unlike the other three structures on the other three avenues, this project should respond to the existing buildings on the site; the buildings in good condition should remain. This includes the States Life Building on the northeast corner and the Majestic and Jefferson Buildings on the west side of the site. The Jefferson Plaza, which has a very strong potential for being a focal point, should also remain and be enhanced by the design.
The proposed project is a 237,000 square foot speculative office-retail complex. The office portion consists of 400,000 square feet, and the retail area comprises approximately half of that or 200,000. These spaces, large and open, are relatively unplanned and are intended for public marketing. In addition, there is a 33,000 square foot delicatessen area complete with indoor and outdoor eating spaces. A parking garage with a capacity of 280 cars is also allotted for in the design. While the program is no doubt important, it is subservient to the site and, as such, must remain flexible.
LIST OF FINAL THESIS DRAWINGS

1) Area Map
2) First and Second Floor Plans
3) Third, Fourth, and Fifth Floor Plans
4) Sixth through Fourteenth Floor Plans
5) Elevations
6) Parking Axonometrics
7) Structural/Mechanical Axonometrics
8) Wall Section Perspective and Section Perspectives B-B and C-C
9) Section Perspective A-A
LIST OF FINAL THESIS MODEL PHOTOGRAPHS

1) Views (Low) Looking Southeast
   Looking Northwest

2) Views (Low) Looking East and West
   Looking North and South

3) Views (High) Looking East and West
   Looking North and South
Two structural grids are used on this project. One, either a 36 foot square bay or a 36 by 72 rectangular bay, responds to the diagonal street Virginia, and the other, a 25 foot square bay, responds to the four orthogonal streets bordering the site; both are orientated 90° to their respective streets. Where the grids meet a triangle is formed. This space becomes reserved for circulation within the project. (The structural system employed here is a combination of one-way and two-way reinforced concrete joists and slabs with reinforced concrete columns.)

Massing plays a very important role in this design in two ways. First, the existing Jefferson Plaza is "enclosed" by the building form. This is an attempt to give it definition, which it is currently lacking. Second, the massing reflects what is happening around the site. A high-rise element is positioned adjacent to an existing high-rise structure, such as that on the north boundary of the site. And accordingly, a low-rise element is positioned adjacent to an existing low-rise structure, such as that on the east and south boundaries of the site.

The design is stratified horizontally. The first five levels are given over to retail
functions, while levels six through fourteen accommodate office functions. Parking facilities are located on three levels below grade with access off of and egress onto Virginia Avenue. With the start of the sixth floor the building begins to step back in form. This allows for the creation of a covered (from the top) but yet open (from the side) pedestrian plaza. Views are opened up, particularly those to Jefferson Plaza, making the space seem much larger and more open than it actually is.

Both sides of Virginia Avenue are connected by a "first story walkway," which in turn forms other pedestrian plazas. The two sides are also joined together by the building itself in that the office levels span over the plazas. The street "proper" is depressed throughout the block, and in conjunction with the walkway and office saper, produces the southeastern entry point to the city of Indianapolis.
Detailed attention has been paid to certain key elements in this design. The main elevator banks are situated in such a way as to become part of the circulation. Parallel to the pedestrian traffic along Virginia, the recessed entry leads to a core of elevators and firestairs. A mechanical chase is also incorporated into this space. On the upper floors housing the office spaces a restroom core is located adjacent to the previously mentioned elevator core.

The "first story walkway" opens up to the States Life Building near the northeast corner of the site. This is in response to the entries on the south and west facades of the existing building and also the anticipated flow of people into the project from the parking lot directly to the east. In addition, it is possible that people could also use this as a link to the City-County Building, Market Square Arena, and the City Market, all of which are located to the northeast of my project. Likewise, this project "joins up" with the Jefferson and Majestic Buildings on the southwest corner.

This is done by establishing corridors connecting their cores to major retail spaces. By utilizing these ideas the project will not only work with itself, but with other buildings on the site and even the city as a whole.

Materials also attempt to tie the project and the three existing buildings together. Indiana
limestone, such as that used on the Jefferson, Majestic, and "States Life Building", is the choice for the exterior finish of the walls. It is also used for the paving of the plazas.

The mechanical levels are located near the middle strata, the sixth and seventh floors, of the building. The mechanical area on the sixth serves that floor and the five retail levels below, while the mechanical area on the seventh serves that floor and the seven office levels above. By utilizing four distinct mechanical rooms, duct shafts and duct runs are minimized, and different types of zoning are possible. (The system used is forced air heating and cooling with perimeter radiation as a back-up source.)

The exterior elevations represent quite a bit of study. The acute angle corners along with the uppermost floor, which will in all likelihood become the most prominent office spaces, have been emphasized by employing floor to ceiling glazing. The balance of the building's glazing is in the form of "strip" windows. Mechanical louvers and vents are expressed and where voids between them occur, a double strip of glazing is used. The glazing, light blue in color, is "solar" glazing. This, along with the exterior insulated roll-down shutters made possible by the window recesses, are intended to minimize unwanted solar gain in the summer. The color blue was chosen for three reasons. First, it sets away from the traditional smoked or black glass, which may have made the project appear as a rehabilitation. Second, it creates an easier transition to the blue sky above. And third and most important, it will hopefully help the Virginia Avenue Center achieve an identity all of its own.
The elevations near the southeast corner of the site are void of any glazing in response to an undesirable context. However, entries have been provided to accommodate future expansion of the downtown area in this direction. Corresponding to the two major colonades along Virginia Avenue, a smaller colonade has been designed along Washington Street. This also, and perhaps more importantly, responds to the existing colonade of the States Life Building. As such it creates a wider walkway to accommodate the masses of shoppers from the nearby retail district to the west.
CONCLUSION

It will never be known whether a design such as this would be beneficial or harmful to Virginia Avenue or the city of Indianapolis. But nonetheless, a project on this site will complete an imaginary "square of development" with respect to the Indiana National Bank Building, the American United Life Building, and the Hyatt Regency. As such its impact should be that of a viable urban landmark.
The following site analysis summary was of great importance to me.

1) The function of Virginia Avenue, that of vehicular circulation, should be preserved; it is unique. However, its current state of congestion, particularly at the two intersections, suggests that it be made one-way to the northwest.

2) The States Life, Majestic, and Jefferson Buildings and the Jefferson Plaza should remain; they are in excellent condition. Merchants National Bank, Railroadman's Savings and Loan, and three small retail shops, which are either abandoned or heavily deteriorated, should be demolished.

3) The heights of the surrounding buildings should be taken into account.

4) The office-retail complex should occupy both "sides" of Virginia Avenue for a full effect.

5) Good views are toward the northwest; bad views are toward the southeast.
The following programming requirements were used in designing this project. No specific client is intended to enter into the spaces of this building; it is a speculative project. As a result, the spaces are large and open. They may be subdivided into smaller spaces as the need arises.

**MAJOR SPACES**

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Square Feet</th>
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<tbody>
<tr>
<td>Office space</td>
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<tr>
<td>Retail space</td>
<td>200,000</td>
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<tr>
<td>Delicatessen space</td>
<td>23,000</td>
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<tr>
<td>Food Preparation space</td>
<td>10,000</td>
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<tr>
<td>Minor spaces</td>
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**MINOR SPACES**

<table>
<thead>
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<td>Mechanical space</td>
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<tr>
<td>Elevator/Fire Stair Core space</td>
<td>33,000</td>
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<tr>
<td>Restroom Core space</td>
<td>21,000</td>
</tr>
<tr>
<td>Retail Service/Storage space</td>
<td>10,000</td>
</tr>
</tbody>
</table>

**TOTAL**

737,000 square feet
Building Type Analysis

Actual projects studied for this thesis included the Galleria (New York), the Kalamazoo Center (Kalamazoo), Olympic Tower (New York), the Omni (Atlanta), and Water Tower Place (Chicago). Some of the decisions evolving from this study are listed below.

1) A multi-use facility occupies most of its site.

2) A central atrium (or plaza) is used off which the different spaces branch.

3) Circulation is a focal point.

4) A critical square footage of 500,000 or more is required.
My thesis project spanned a timetable of three quarters or nearly thirty weeks. Being such, it was only natural that it evolved through many changes. In the first scheme the building, unlike the final design which spans across the street, is separated into two distinct parts; one part is on each side of Virginia Avenue. Retail functions are located along Virginia, while the office spaces provide a backdrop with a plaza between the two. Connecting bridges provide links and give the complex a definite north-south orientation. Two grids are also employed here, but again unlike the final design, they are both turned $45^\circ$ to their respective streets.
The second scheme involves the same dual grid but now takes on a more decidedly northeast-southwest orientation, which is more of a response to Virginia Avenue. Again the retail section fronts Virginia and the offices are located toward the back, but this time the plazas have been omitted. This scheme also attempted to bring about a stadium effect of a sloping down to Virginia Avenue. While these two schemes lack much, their purpose of bringing about the third and final design was indispensable.
