CUMMINS ENGINE COMPANY
CORPORATE HEADQUARTERS
COLUMBUS, INDIANA

Kevin E. Thompson
College of Architecture and Planning
Ball State University · Muncie, Indiana
Thesis 1980

Studio Critic, Sonny Palmer
IT IS IN THE EXPERIENCES OF TODAY... THAT WE LEARN TO COPE WITH THE CHALLENGES OF TOMORROW.

And what an experience the last year has been! Columbus, Indiana being my hometown, I am quite familiar with the Cummins Engine Company and their commitment to excellence not only in the manufacture of the company’s product--diesel engines, but also in their desire to make Columbus the very best community of its size in this country for its employees to live and work in.

I chose as an exciting thesis challenge to design a new corporate headquarters for Cummins. The actual design for such a facility is currently in the hands of the firm--Kevin Roche/John Dinkeloo and Associates of Hamden, Connecticut. This same firm also designed two existing buildings, a bank and a post office, adjacent to the headquarters site. The site chosen by Cummins consists of two parcels of land, each three blocks long, located in downtown Columbus. One three block area will be used for the creation of the actual headquarters and a proposed downtown park; the other for corporate employees parking. It was hoped by company officials that placing the headquarters in the downtown area would further revitalize habits of downtown use by employees--including living, shopping and eating.
One of the design criterias for the new building includes incorporation of an existing building--an old cereal mill--into the final design solution. The mill, being saved for nostalgic reasons, was part of an original complex of machine shops used to put together the first Cummins diesels. In order to maintain the scale of the other downtown buildings, the design program called for a low rise office structure with approximately 200,000+ square feet. The building will accommodate 1,000 full time employees. Mainly the company's top executives and their support staffs. A design decision was made to make use of an open plan office system providing enclosed offices for the company's top executives only (Vice President level and up).

Energy conservation was a key issue. An effort was made to provide natural light and views of the outside for employees in the open office area and cafeteria while at the same time providing measures to guard against solar glare and heat build-up. Use of the giant atrium as a passive heat recycling source was also planned.

In addition to providing for office needs, the building contains several corporate support functions including a museum, auditorium, cafeteria/private dining, and an indoor recreation center. A special effort was made in developing the landscape for the site into a small downtown park/plaza area for outdoor recreation and as a place for providing a psychological break from the office. In addition to allowing for public use of the park, a provision was made in the program for possible night time use by the public of the auditorium, museum and cafeteria areas for special meetings, receptions or performances.

I believe the final design solution definitely helps to establish a strong corporate image for Cummins. For in dealing with a company that is the world's largest independent manufacturer of diesel engines, the emphasis lies not only on the national and international market experiences of today, but also on the challenges which yet await us all tomorrow.

[Signature]
Acknowledgements

THESIS CRITICS

Sonny Palmer
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Jack Wyman

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Dean Rundell

CUMMINS ENGINE COMPANY

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Ann Smith
Bruce Adams
J. Irwin Miller

JOHN DEERE and COMPANY

Dan, Janet, Tom and Kim from
Visitor's Services

COLLEAGUES

Scott Truex
Maureen Westrick
Heather Faulding
Miguel Enguidanos III
Mark Prange
Dave Cole
Dan Phillips
Mark Demerly

TYPIST and friend

Vickie Chumbley

Special thanks go to my Mom and
Dad for their love, financial support
and patience and most importantly
to God, from whom all things come,
including an architectural degree at
last!
Contents

Spirit of the Project 1
Client, Identity, History & Philosophy 3
Program and Information Structuring 21
Site Analysis 39
Building Type Analysis 52
Concept Alternatives and Schematics 68
New Concept 84
Design Development 101
Landscape Studies 139
Special Studies 152
Final Presentation 165
Summary 179
Evaluation 181
Bibliography 189
"Architecture is a personal, enjoyable necessary experience."
William Pena

"First we shape our buildings--then our buildings shape us."
Winston Churchill

"Like any work of art, a building must be dominated by a strong simple concept."
Eero Saarinen

"The total environment is more important than the single building."
Eero Saarinen

"Total design as it appears to me is nothing more or less than a process of relating everything to everything."
George Nelson

"The creative process...includes taking a lot of disconnected pieces and finding a way of putting them together."
George Nelson

"The problem with ideas, though, is that they evaporate if you don't use them."
George Nelson
"And I think you begin by trying to become human again."
George Nelson

"Excellence of physical facilities... plants, machinery, warehouses and offices contributes importantly to excellence in other areas... Excellence of appearance, attractiveness and ease of functioning of facilities not only promote better performance by the people who use or work in them but also provide valuable evidence of the standards of excellence the company intends to meet."
William Hewitt

"The building will serve as an additional inspiration to all of us: to be bold, ingenious and creative."
William Hewitt

"The men and women who work here will give it life and warmth."
Henry Dreyfuss

"What you find, by and large, is that offices where people like what they're doing are sloppier than offices where people don't like what they're doing."
George Nelson

"This gradually developed into the notion that people's happiness in a work space relates directly to the degree of control they have over their environment."
George Nelson

"The lesson in this is that the designers of buildings and the designers of work spaces inside should get together at an earlier stage."
George Nelson

"I see office design becoming more and more an interdisciplinary affair, accomplished by professional teams whose members might include psychologists, graphic designers and computer specialists, as well as architects and interior and product designers."
George Nelson
Client Identity, History & Philosophy
Cummins at a Glance

Cummins Engine Company was founded in 1919 at Columbus, Indiana, as an effort to refine, produce and market the "oil engine" developed by Dr. Rudolph Diesel in Germany.

Columbus banker and businessman William G. Irwin's chauffeur, Clessie Cummins, saw in the rough stationary engine the possibility of powering trucks and automobiles, of putting the diesel on wheels.

The first years were difficult ones and the company had grown to only 60 employees when Irwin asked his nephew, J. Irwin Miller—only a year out of college—to join the firm. Miller accepted, and during his years with Cummins has guided the company to its current position of preeminence in the industry.

Cummins Engine Company produces a wide variety of heavy-duty, four-cycle diesel engines, ranging from 150 to 1,600 horsepower. Today, Cummins is the world's largest independent manufacturer of diesel engines.

Operational Data

Employees Worldwide ...................... 23,300
Manufacturing/Assembly Locations
  in Seven Countries .................... 24
Area and Regional Offices Worldwide  .......... 27
Parts Distribution Centers and Warehouses
  Worldwide (In Addition to
  Manufacturing/Assembly Locations) ....... 6
Distributor and Branch Locations
  Worldwide ..................................... 400
  Countries .................................. 4,000

Financial Data

Net Sales .................................. $1.52 billion
Net Earnings ................................ $64.4 million
Total Assets ................................ $971 million
Common Stock Shareholders .............. 7,100
Return on Sales ............................ 4.2%
Return on Shareholders' Equity .......... 15.8%
Share of U.S. Heavy-Duty Diesel-
  Powered Truck Market .................. 41.6%
Cummins Engine Company has been producing diesel engines in Columbus since 1919 when the company was founded. One of the company's earliest machine shops was in part of the Cerealine complex which will be restored as part of the headquarters building. Today, Cummins is the leading producer of high horsepower diesel engines for on-highway trucks and the full range of industrial applications, including construction, mining, logging, agriculture, marine, bus and generator set equipment. Cummins engines range from 150 to 1,600 horsepower in in-line and Vee configurations. Cummins has pioneered much of what is standard today in the industry—lighter weight engines, supercharging, turbocharging and pressure-timed fuel injection. Cummins produced the first marine diesel and the first diesel in the Indianapolis 500.

Cummins is the leader in the U.S. heavy-duty on-highway truck market, where it commands nearly a 50 percent share. Every major U.S. truck manufacturer offers Cummins engines as standard or optional equipment. A large number of engines are also sold for the construction, mining, marine and agricultural industries.

More than 22,000 persons are employed at Cummins' facilities in the U.S., the United Kingdom, India, Japan, Brazil and Mexico. In the Columbus area, 11,000 of these employees are involved in the manufacture of components and assembly of engines. Local facilities include Columbus Engine Plant, Walesboro Components Plant, Seymour Turbocharger Plant, and Cummins Industrial Center (Seymour).
Cummins has a commitment to Columbus, and to striving for the best technical, manufacturing and office facilities in the industry. This commitment now manifests itself in construction of an office complex in downtown Columbus, in keeping with the architectural character of the community and Cummins' own commitment to help strengthen the vitality of downtown Columbus.

A new corporate headquarters in downtown Columbus is part of Cummins' effort to assist the community in improving the central business area. The structure, in effect, will be an extension of the modern architecture found elsewhere in the central city. It will extend, too, the vitality and economic stability which is already an integral part of downtown Columbus.

Land being developed for the headquarters building was acquired earlier by Cummins.

Cummins, cognizant of the desirability of preserving key elements of the community's heritage, alongside new structures and community progress, is including part of the historic Cerealine complex as an integral part of its new building.
In recent years, Cummins has pursued a three-fold program of development in Columbus: 1) strengthening the technical product development capability upon which Cummins' future depends, 2) adding manufacturing capability to meet expanding worldwide automotive and industrial markets, and 3) providing more space to house administrative and other service functions.

The first of these phases involved construction of the Cummins Technical Center in 1967 at a cost of $22 million. This reflects Cummins' commitment to produce quality diesel engines through advanced research and engineering. Engineers and scientists in this new facility have developed a number of technical improvements, including the new high-powered "K" engine and the fuel-efficient Big Cam engine. Work done at the Technical center has enabled Cummins to meet increasingly-stringent emission controls mandated by the federal government and to improve diesel fuel economy.

Cummins' next development phase involved increasing manufacturing capacity and was highlighted by construction of the Walesboro Components Plant in 1973 at a cost of $21 million. That project, along with major renovation work done on the Columbus Engine Plant and other facilities, has enabled Cummins to greatly expand its automotive and industrial operations. The company's Columbus-area manufacturing capacity has more than doubled in the past decade.

The current phase of the program centers on construction of a new corporate headquarters which will provide convenient work space in a central location.
CUMMINS ENGINE
CORPORATE
HEADQUARTERS

Behind the Irwin Union Bank and Trust and next to the Roche-Dinkeloo Post Office is a swatch of Columbus for which the architects have proposed a new Cummins Engine headquarters. Right now the corporate offices are lodged in a renovated 19th Century building, once the town’s best hotel. On the 15 acre site, which backed onto the town’s railroad tracks, they have conceived of a 167,000 sq. ft. (per floor) two-story building that would actually wrap around two existing structures: one, a four-story old mill building, turned on a diagonal, would be renovated as a conference and dining hall; the other, a former railroad freight shed, would be remodeled as a large auditorium (photos, top, left and right).

The basic parti of the new headquarters calls for the main office floor to occupy the second level, while conference rooms, toilets, and so forth would be placed on the interior of the ground floor. At the periphery of this street level, spaces could be subdivided and rented as retail shops, the architects maintain, to integrate the office building into the town’s fabric, and further help revitalize downtown.

Parking was placed at the rear of the building, on the other side of a street, but accessible via a second level pedestrian bridge (plan, left).

The most interesting part of the proposed scheme again is the use of glass—in this case, a glass roof created by a series of ridge and furrow pitches with a deep overhang at the roof’s periphery. A glass roof was desirable to the architects, increasing the use of natural light so that artificial light could be task-oriented.

Site Plan

This is one of Kevin Roche’s early design schemes for Cummins new headquarters.
To cut glare and heat gain, they propose installing either opaque glass or translucent panels in the south-facing pitches of the roof; clear glass would be used for the north-facing pitches. Baffles attached to the structural grid of interior columns (section, left) would be lined with mirror-like surfaces on both sides to reflect the sky which is visible through the clear glass north pitches of the roof. The scheme has intrigued Miller, and it is currently being analyzed for heat and air conditioning loads. Nevertheless, responding to natural light, the scheme would appear energy-conscious—and was so even before the current crisis took architecture by surprise. Sensitive to Columbus' social, economic as well as physical scale, it combines corporate, community and commercial life—and does so in a way that strengthens the identity of both existing streets and, as noted, two existing old structures. With a rambling two-story scale, and the subtle repetition of pitched-roof elements, the Cummins headquarters would exhibit the sureness and serenity of a contemporary Katsura.
Again an office landscape system appears in their scheme, this time with work stations based on four desks around a column. Roche-Dinkeloo has spent a good deal of time researching and planning these, as the actual size mock-up shows (photo, above).

The arrangement, as now organized, would create four-person modular work areas, separated by 57½-inch-high wood partitions. As in their schemes, the interiors of the partitions would be carpeted to match the floors. As the mosaic pattern (above, right) indicates, each work area could have a different color carpet to personalize the individual work spaces.

Desks are grouped around the structural columns (model photo, top), with corners beveled to accommodate wiring for phones and electricity. The fluorescent light fixture is designed to diffuse light upward as well as downward.
Basically this is the current design solution for the new Cummins headquarters. It was presented to the company shareholders in 1978. A few further changes have been made including the use of the existing cereal mill as a corporate cafeteria originally scheduled to be an auditorium.
The building will be in keeping with the low profile of the central city.Externally, it will be consistent with a current trend toward more solid walls and minimal use of glass, with both the walls and glass being well-insulated to conserve energy. Windows will be one-foot horizontal strips of glass. Additional natural lighting will be provided through skylights. Vertical window walls will be installed on most northern exposures of the building.

The building will be an extension of the architectural design found in the central city.

For example, the colonnade effect of the post office will be continued in two-story round columns with a square parapet.

The park-like effect prevailing throughout much of the central city will also be found on the site, with the building shape forming a central green area. Focal point of this area will be part of the Cerezaile complex, which will be an integral part of the Cummins building. Walkways will encircle both structures.

A park-like theme will be carried through the ivy on the columns and planting pockets atop the parapet, which will continue around the building.
Main entrance to the building will be located at the corner of Fifth and Jackson streets. Inside, an effort will be made to provide a pleasant and efficient work atmosphere geared to the needs of employees. Modular offices and work areas will create an environment providing privacy and noise control. Details of the interior layout have not yet been developed.

The structure will be designed to accommodate 1,000 persons, with staged occupancy. Staff in the building will include employees from several Cummins facilities in Columbus, including some presently working at the General Office Building on National Road. That facility will continue to serve as an office building after the downtown project is completed. It has not yet been determined what groups will occupy each facility.

Parking will be available in a two-level structure to be located across Brown Street. The two structures will be connected by tunnels under Brown Street.
- **Size:** 200,000 square foot office building and 350,000 square foot parking structure
- **Employees:** Approximately 1,000
- **Location:** Six-block site bounded by Fifth, Eighth, Jackson and Lindsey Streets
- **Cost:** $23 million, including construction, site development & furnishing both structures
- **Timetable:** Construction to start in early 1979, occupancy in 1981
- **Construction:** Concrete and glass
- **Architect:** Kevin Roche John Dinkeloo and Associates, Hamden, Connecticut
## Component Manufacturing

<table>
<thead>
<tr>
<th>Component Manufacturing</th>
<th>Production</th>
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<tbody>
<tr>
<td>Atlas Crankshaft</td>
<td>Crankshafts and engine components</td>
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<tr>
<td>Fostoria, Ohio</td>
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<tr>
<td>Diesel ReCon</td>
<td>Re-conditioned engines and components</td>
</tr>
<tr>
<td>Chicago, Illinois</td>
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<tr>
<td>Los Angeles, California</td>
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<td>Memphis, Tennessee</td>
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<tr>
<td>Fleetguard</td>
<td>Engine filters</td>
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<td>Cookeville, Tennessee</td>
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<td>Seymour Turbocharger Plant</td>
<td>Turbochargers</td>
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<td>Seymour, Indiana</td>
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<td>Wadesboro Components Plant</td>
<td>Engine components</td>
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<td>Columbus, Indiana</td>
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<td>Darlington Components Plant</td>
<td>Engine components</td>
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<td>Darlington, England</td>
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<td>Holset</td>
<td>Turbochargers and engine components</td>
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<td>Halifax, England</td>
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<td>Huddersfield, England</td>
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<tr>
<td>Peterlee Components Plant</td>
<td>Engine components</td>
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<td>Peterlee, England</td>
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## Parts Distribution

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<thead>
<tr>
<th>Parts Distribution</th>
<th>International Sales Offices</th>
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<tr>
<td>Columbus, Indiana</td>
<td>Columbus, Indiana</td>
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<tr>
<td>Hailea, Florida</td>
<td>Mirim, Florida</td>
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<td>Gross Gerau, Germany</td>
<td>Abidjan, Ivory Coast</td>
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<td>Lyon, France</td>
<td>Athens, Greece</td>
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<td>Ringwood, Australia</td>
<td>Bogota, Colombia</td>
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<td>Singapore</td>
<td>Brussels, Belgium</td>
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<td>Caracas, Venezuela</td>
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<td>Genoa, Italy</td>
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<td>Gross Gerau, Germany</td>
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<td>Johannesburg, South Africa</td>
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<td>Lyon, France</td>
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<td>Manila, The Philippines</td>
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<td>Mexico City, Mexico</td>
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<td>Nairobi, Kenya</td>
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<td>New Malden, England</td>
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<td>Ringwood, Australia</td>
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<td>San Juan, Philippines</td>
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<td>Sao Paulo, Brazil</td>
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<td>Tokyo, Japan</td>
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## Research and Engineering

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<tr>
<th>Cummins Technical Center</th>
<th>European Technical Center</th>
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<tr>
<td>Columbus, Indiana</td>
<td>Essen, Germany</td>
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<tr>
<th>Engine Manufacturing</th>
<th>Models</th>
<th>H.P. Range</th>
<th>Primary Application</th>
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<tbody>
<tr>
<td>Columbus Engine Plant</td>
<td>NH</td>
<td>190-420</td>
<td>Trucks and industrial</td>
</tr>
<tr>
<td>Columbus, Indiana</td>
<td>V-903</td>
<td>240-450</td>
<td>Trucks and agricultural</td>
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<td></td>
<td>V12</td>
<td>525-600</td>
<td>Generator sets and mining</td>
</tr>
<tr>
<td>Charleston Engine Plant</td>
<td>K6</td>
<td>450-600</td>
<td>Trucks and industrial</td>
</tr>
<tr>
<td>Charleston, S. Carolina</td>
<td>NH</td>
<td>190-420</td>
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<tr>
<td>Jamestown Engine Plant</td>
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<td>Trucks and industrial</td>
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<td>Jamestown, New York</td>
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<tr>
<td>Darlington Engine Plant</td>
<td>Small</td>
<td>145-250</td>
<td>Trucks, buses and industrial</td>
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<tr>
<td>Darlington, England</td>
<td>Vee</td>
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<tr>
<td>Daventry Engine Plant</td>
<td>KV12</td>
<td>900-1200</td>
<td>Generator sets and industrial</td>
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<tr>
<td>Daventry, England</td>
<td>KV16</td>
<td>1600</td>
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<td>Shotts Engine Plant</td>
<td>NH</td>
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<td>Shotts, Scotland</td>
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<td>CAEfi-Cummins (Joint Venture)</td>
<td>NH</td>
<td>190-420</td>
<td>Industrial</td>
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<td>Sao Paulo, Brazil</td>
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<td>Diesel Nacional</td>
<td>NH</td>
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<td>Trucks and buses</td>
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<td>Komatsu (Licensee)</td>
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<td>Industrial</td>
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<tr>
<td>Davao, Japan</td>
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## Industrial Center

<table>
<thead>
<tr>
<th>Cummins Industrial Center</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seymour, Indiana</td>
<td>Final assembly, testing and shipping of engines to industrial customers worldwide</td>
</tr>
</tbody>
</table>

North American Division Sales Offices

- Atlanta, Georgia
- Dallas, Texas
- Englewood, Colorado
- Oak Brook, Illinois
- San Francisco, California
- Westport, Connecticut
- Massasauga, Ont., Canada
Directors

Henry B. Schacht  Chairman of the Board and Chief Executive Officer of Cummins
James A. Henderson  President and Chief Operating Officer of Cummins
C. Raymond Bull  Executive Vice President of Cummins
James B. Fisk  Former Chairman of the Board, Bell Telephone Laboratories, Inc.
Hanna H. Gray  President, the University of Chicago
John T. Hackett  Executive Vice President and Chief Financial Officer of Cummins
Sir William R. Hawthorne  Professor and Master of Churchill College, University of Cambridge, England
Henry L. Hillman  President, The Hillman Company, diversified operations and investments
J. Irwin Miller  Chairman of the Executive and Finance Committee of Cummins
Paul L. Miller  The First Boston Corporation, investment bankers and securities dealer
George W. Newlin  President, Irwin Management Company, Inc., investment management
Donald S. Perkins  Chairman of the Board of Directors, Jewel Companies, Inc., diversified retailing
William O. Ruckelshaus  Senior Vice President, Weyerhaeuser Company, diversified timber operation
William W. Scranton  Former U.S. Ambassador to the United Nations
Richard B. Stoner  Vice Chairman of the Board of Cummins
Franklin A. Thomas  President, The Ford Foundation

Growth Rate
Sales

Growth Rate
1944-1970 17.2%
1960-1970 19.3%
1954-1970 14.6%
Officers

Henry B. Schacht
Chairman and Chief Executive Officer
James A. Henderson
President and Chief Operating Officer
John T. Hackett
Executive Vice President and Chief Financial Officer
Richard B. Stoner
Vice Chairman of the Board
C. Raymond Boll
Executive Vice President
E. Harold Davis
Vice President—Planning and Control
Marion C. Dietrich
Executive Vice President
Thomas W. Head
Vice President and General Manager—Affiliated Enterprises
Ted L. Marston
Vice President—Corporate Action
William D. Schwab
Vice President—Research and Engineering
W. Patrick Snyder
Vice President and General Manager—Worldwide Operations
Henry W. Abts
Vice President—Administration and Secretary
Richard R. Allison
Vice President—Domestic Operations
P. Jack Apple
Vice President—North American Divisions
Delmar Barnes
Vice President—Tax Administration
Robert E. Brooker, Jr.
Vice President—Americas
R. Benjamin Bush
Vice President—Business Development
Robert S. Campbell
Vice President—International Businesses
Walter Divan
Vice President—Columbus Operations
James J. Farrar
Vice President—North American Industrial
Howard J. Graninger
Vice President—Automotive Major Accounts
Samuel W. Hart
Vice President—Product Performance
Harold B. Higgins
Vice President—Human Resources
Laurence R. Hoagland, Jr.
Vice President—Treasurer
Robert E. Hoffmeister
Vice President—Central Engineering
S. A. Johnson
Vice President—North American Business
Philip E. Jones
Vice President—Engine Projects
Paul R. Kahlenbeck
Vice President—North American Distributor Business
Leo M. Kralitz
General Counsel
H. Karl Kuehner
Vice President—Technology
Fred W. Link, Jr.
Vice President—Program Management
Fred J. Loeloff
Vice President—Automotive OEM Sales
W. T. Lyn
Vice President—Research
Luther J. Nussbaum
Vice President—Parts and Service Businesses
Robert A. Orben
Vice President—Controller
Herschel E. O'Shaughnessy
Vice President—Advertising and Sales Promotion
Joseph Patrick
Vice President—International Operations
David E. Patterson
Vice President—Supply
Astrame E. Savage
Vice President—Corporate Auditing
Harrison A. Smithson, Jr.
Vice President—Operations Planning and Support
John P. Stanton
Vice President—Component Companies
Thomas H. Vickers
Vice President—Technical Operations
J. Irwin Miller
Chairman of the Executive and Finance Committee
Company Town
Cummins Engine Draws Praise for the Benefits
It Brings Columbus, Ind.

Finn Hires Top Architects
For Local Buildings, Aids Parks and Social Projects

An Unusual Corporate Chief
By Harlan B. Styer
Managing Editor, Columbus (Ind.) Republic

Many articles have been written about J. Irwin Miller, the man behind Cummins Engine Company's success story.
J. Irwin Miller, Chairman of the Board, Cummins Engine Company, Inc.

"Why should an industrial company, organized for profit, think it a good and right thing to take a million dollars, and more, of that profit and give it to this community in the form of this golf course and club house? Why, instead, isn't Cummins, the largest taxpayer in the county, spending the same energy to try to get its taxes reduced, the cost of education cut, the cost of city government cut, less money spent on streets and utilities and schools?"

"This answer is that we would like to see the community come to be not the cheapest community in America, but the very best community of its size in the country. We would like to see it become the city in which the smartest, the ablest, the best young families anywhere would like to live... a community that is open in every single respect to persons of every race, color and opinion; that makes them feel welcome and at home here... a community which will offer their children the best education available anywhere... a community of strong, outspoken churches, of genuine cultural interests, exciting opportunities for recreation... a community whose citizens are themselves well paid and who will not tolerate poverty for others, or slums in their midst.

"No such community can be built without citizens determined to make their community best; without city government which works boldly—ahead of its problems, and not always struggling to catch up; and without money sufficient to get the job done.

"So Cummins is not for cheap education, or inadequate, poorly-paid government, or second-rate facilities or low taxes just for the sake of low taxes. Our concern is to help get the most for our dollar, to help build this community into the best in the nation. And we are happy to pay our share, whether in work, or in taxes, or in gifts like this one."
Cummins was listed recently on a commemorative poster saluting top examples of industrial design.
Program, Information Structuring
Chairman and Chief Executive Officer
President and Chief Operating Officer
Executive Vice President and Chief Financial Officer
Vice Chairman of the Board
Executive Vice Presidents
Vice Presidents
General Counsel
Executive Assistants
Middle Management
Support Staff
<table>
<thead>
<tr>
<th>SPACE</th>
<th>USER</th>
<th>SPACE ACTIVITY</th>
<th>SQ. FT.</th>
<th>FURNITURE/EQUIP.</th>
<th>COMMENTS</th>
</tr>
</thead>
</table>
| recreation room     | employee | *employee physical activities  
*work out  
*exercise  
*group classes                  | 1,440   | *exercise equipment  
*mats  
*mirrors possibly                  | *isolation from office work area  
*close to showers and squash courts and outdoor entry               |
| showers             | employee | *showers/lockers and dressing rooms for employee use                        | 624     | showers  
-toilets  
sinks  
-lockers  
-benches                  | *located relative to squash courts, recreation room and outdoor entry       |
| squash courts       | employee | *three regulation courts - dimensions obtained from graphic standards      | 1,980   | squash paddle and ball                                               | *designed in accordance to national standards  
*no natural light                                  |
| files/storage       | employee | *inactive files  
*storage space                         | 18,555  | *shelves for files  
*boxes for storage             | *large area needed  
*security required to guard files from "visitors"               |
| underground tunnel and elevator core | employee | *needed to bring employees from parking lot into office building         | 5,975   |                                                                        | *located relative to reception areas  
*security needed to keep visitors from unauthorized areas               |
<table>
<thead>
<tr>
<th>SPACE</th>
<th>USER</th>
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</tr>
</thead>
<tbody>
<tr>
<td>dry storage refrigerated storage and garbage, trash room</td>
<td>employee</td>
<td>*storage space for food needed in cafeteria *area for confinement of kitchen and food waste and paper/trash waste</td>
<td>795</td>
<td>*food lockers *refrigerators *trash bins</td>
<td>*located relative to service tunnel and service elevator and kitchen</td>
</tr>
<tr>
<td>service tunnel</td>
<td>employee</td>
<td>*needed to bring supplies into building and take waste materials out of building</td>
<td>1,875</td>
<td>forklift</td>
<td>*located in conjunction with service core elevator and storage spaces for kitchen</td>
</tr>
<tr>
<td>museum storage</td>
<td>employee</td>
<td>*storage space for inactive items used for display in the corporate museum</td>
<td>3,935</td>
<td>storage boxes, containers</td>
<td>*located relative to corporate museum</td>
</tr>
<tr>
<td>outdoor employee entrance area from parking lot</td>
<td>employee</td>
<td>*space where employee enters underground tunnel from parking lot to building</td>
<td>1,350</td>
<td>benches for waiting</td>
<td>*located at the parking lot area relative to employee entrance tunnel *security needed to keep visitors from unauthorized areas</td>
</tr>
<tr>
<td>private dining areas</td>
<td>employee/guest</td>
<td>*enclosed areas for private gatherings, meetings and/or presentations during meal time especially</td>
<td>1,080</td>
<td>*tables, chairs *blackboard *photo screen *phone</td>
<td>*located relative to cafeteria *privacy is a factor</td>
</tr>
<tr>
<td>SPACE</td>
<td>USER</td>
<td>SPACE ACTIVITY</td>
<td>SQ. FT.</td>
<td>FURNITURE/EQUIP.</td>
<td>COMMENTS</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>employee lounge</td>
<td>employee</td>
<td>*vending machine area open at all times unlike main cafeteria</td>
<td>360</td>
<td>*vending machines</td>
<td>*located relative to cafeteria</td>
</tr>
<tr>
<td></td>
<td>guest</td>
<td></td>
<td></td>
<td>*a few tables and chairs</td>
<td>*open at all times</td>
</tr>
<tr>
<td>reception area and conference area</td>
<td>employee</td>
<td>*area serves as employee entry to building and</td>
<td>6,675</td>
<td>*receptionist desk and chair</td>
<td>*located relative to employee entrances</td>
</tr>
<tr>
<td></td>
<td>guest</td>
<td>*location of restrooms, drinking fountain and private conference rooms</td>
<td></td>
<td>*occasional chairs for guests</td>
<td>*security needed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*conference table and chairs</td>
<td>*receptionist is in charge of booking conference rooms</td>
</tr>
<tr>
<td>kitchen dishwashing serving line area</td>
<td>employee</td>
<td>*area where food is prepared/served and trays are returned for dishwashing</td>
<td>3,465</td>
<td>*institutional kitchen and dishwashing equipment/storage</td>
<td>*located apart from open office area</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*serving counters</td>
<td>*relative to service storage area and cafeteria</td>
</tr>
<tr>
<td></td>
<td>guest</td>
<td></td>
<td>6,300</td>
<td>*cash register(s)</td>
<td></td>
</tr>
<tr>
<td>cafeteria</td>
<td>employee</td>
<td>seating space for 350 (allowing 18 sq. ft./person)</td>
<td></td>
<td>*tables and chairs</td>
<td>*zoned for possible night use for special events</td>
</tr>
<tr>
<td></td>
<td>guest</td>
<td></td>
<td></td>
<td>*plants</td>
<td>*natural light, view and access to outdoor terrace dining area</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*graphics</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*music</td>
<td></td>
</tr>
<tr>
<td>auditorium</td>
<td>employee</td>
<td>*meeting space for 100 people</td>
<td>1,980</td>
<td>*chairs</td>
<td>*located relative to visitor entry and reception</td>
</tr>
<tr>
<td>includes rear screen projection facilities</td>
<td>guest</td>
<td>*visitor, guest, employee presentations</td>
<td></td>
<td>*blackboard</td>
<td>*zoned for possible public night use</td>
</tr>
<tr>
<td></td>
<td>visitor</td>
<td></td>
<td></td>
<td>*audio visual/sound equipment</td>
<td>*control of light</td>
</tr>
<tr>
<td>SPACE</td>
<td>USER</td>
<td>SPACE ACTIVITY</td>
<td>SQ. FT.</td>
<td>FURNITURE/EQUIP.</td>
<td>COMMENTS</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| main reception area       | employee        | *space to receive visitors/employees  
*provides security  
*sets tone of office "IMAGE"  
*waiting area: receptionist greets guest and either directs him/her to proper area or informs guest to wait for proper company official to arrive | 1,095   | *receptionist desk and chair  
*occasional chairs for guests and waiting area  
*phone | *located in center of building as a focal point  
*location of main day/night security guard station  
*location of night use entrance to building |
| executive offices for vice presidents | employee | *unlike the open office area, company executives are given enclosed offices to perform their daily duties | 14,400  | *executive desk and chair  
*guest chairs  
*conference table and chairs  
*bookcase/files  
*phone | *located relative to executive secretary  
*quiet environment  
*softer light than open office area  
*natural light |
| executive secretary      | employee        | *performs secretarial tasks for company executive | 6,480   | *secretarial desk and chair  
*possibly guest chairs  
*active files  
*phone | *located relative to company executive  
*serves as receptionist for executive visitors  
*access to inactive files |

26
<table>
<thead>
<tr>
<th>SPACE</th>
<th>USER</th>
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</tr>
</thead>
</table>
| open office area | employee | *main daily task area for most of the corporate employees including typing, filing, phone correspondence, management decisions and meetings  
*every corporate employee may need to receive guests  
*possible computer tasks and hookups | 68,625 | *open office furniture  
*employee desk and chair  
*guest chairs  
*active files  
*wardrobe  
*typewriter  
*phone  
*small conference areas  
*computer hookup  
*processing machines  
*Xerox nearby  
*plants | *largest single space in building area broken down in size by use of open office furniture and plants  
*natural light  
*view of outside and access to outdoor plaza  
*access to main circulation and reception/restroom/conference area  
*separation from enclosed offices  
*noise problem requires careful acoustic, lighting, and HVAC treatment |
<table>
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<tr>
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<th>FURNITURE/EQUIP.</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>corporate museum</td>
<td>visitor</td>
<td>*serves as main visitor or reception area for those not familiar with the building *displays company history, image, products and goals</td>
<td>3,447</td>
<td>*display equipment</td>
<td>*located in existing old cereal mill *accessible on weekends to visitors when main building is closed *temperature, humidity controlled *access to museum storage</td>
</tr>
<tr>
<td>main visitor reception</td>
<td>guest</td>
<td></td>
<td></td>
<td>*special lighting</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*receptionist desk and chair</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*phone</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*visitor seating area</td>
<td></td>
</tr>
<tr>
<td>atrium</td>
<td>employee</td>
<td>*main circulation spine through building</td>
<td>14,648</td>
<td>*plants including large potted trees *seating *occasional displays</td>
<td>*unique feature *exterior access/egress *separates open from enclosed spaces *requires sun shading and temperature control, possible use as recycled heat source for rest of building</td>
</tr>
<tr>
<td></td>
<td>guest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>visitor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>outdoor executive terrace</td>
<td>employee</td>
<td>*private outdoor area accessible via the chairman of the board's office only *outdoor reception *sculpture area</td>
<td>1,080</td>
<td>*possibly a few outdoor tables and chairs *sculpture</td>
<td>*located relative to chairman's office *covered yet open air *view of pool, plaza and lawn</td>
</tr>
<tr>
<td></td>
<td>guest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>office of the chairman of the board</td>
<td>employee</td>
<td>*top executive office in the corporation *conference, travel, reception, phone, &amp; management decisions</td>
<td>720</td>
<td>*executive desk and chair</td>
<td>*located relative to other top executives *limited access from public *access to terrace *softer lighting</td>
</tr>
<tr>
<td>chief executive officer</td>
<td></td>
<td></td>
<td></td>
<td>*guest chairs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*conference table</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*sofa, lamps</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*bookcase/files</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*phone</td>
<td></td>
</tr>
<tr>
<td>SPACE</td>
<td>USER</td>
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<td>FURNITURE/EQUIP.</td>
<td>COMMENTS</td>
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</tr>
<tr>
<td>office of the president</td>
<td>employee</td>
<td>*second in command</td>
<td>720</td>
<td>*executive desk and chair, guest chairs, conference table, bookcase/files, phone</td>
<td>*located relative to other top executives, limited access from public, softer lighting</td>
</tr>
<tr>
<td>chief operating officer</td>
<td>guest</td>
<td>*conference, travel, reception, phone, &amp; management decisions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>offices of vice chairman of the board</td>
<td>employee</td>
<td>*ranks higher than vice president</td>
<td>1,440</td>
<td>*executive desk and chair, guest chairs, conference table, bookcase/files, phone</td>
<td>*located relative to other top executives, limited access from public, softer lighting</td>
</tr>
<tr>
<td>executive vice presidents</td>
<td>guest</td>
<td>*conference, travel, reception, phone, &amp; management decisions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>private chef's kitchen</td>
<td>employee/private chef on payroll</td>
<td>*preparation of food for executives and special guests/occasions</td>
<td>210</td>
<td>*institutional kitchen equipment, dumbwaiter provides service between space and main kitchen/storage</td>
<td>*located relative to executive dining room, access to main kitchen/storage area below</td>
</tr>
<tr>
<td>executive dining room</td>
<td>employee/guest/board of directors</td>
<td>*provided for private dining/entertainment of top company executives and special guests</td>
<td>720</td>
<td>*elegant table, plush chairs, bar, art, music, phone</td>
<td>*located relative to executive offices, limited access from public, quiet, soft lighting, enclosed</td>
</tr>
<tr>
<td>SPACE</td>
<td>USER</td>
<td>SPACE ACTIVITY</td>
<td>SQ. FT.</td>
<td>FURNITURE/EQUIP.</td>
<td>COMMENTS</td>
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</tr>
<tr>
<td>office of general</td>
<td>employee</td>
<td>*reserved for company's attorney and the company law file collection</td>
<td>720</td>
<td>*executive desk and chair</td>
<td>*located relative to executive offices</td>
</tr>
<tr>
<td>counsel</td>
<td>guest</td>
<td></td>
<td></td>
<td>*guest chairs</td>
<td>*no public access</td>
</tr>
<tr>
<td>law library</td>
<td></td>
<td></td>
<td></td>
<td>*conference table</td>
<td>*quiet</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*bookcase/files</td>
<td>*enclosed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*phone</td>
<td>*temperature and humidity control for law records</td>
</tr>
<tr>
<td>executive lounge</td>
<td>employee</td>
<td>*primarily designed as a formal seating and soft conversation area for use by the board of directors, and top executives for guests and special occasions</td>
<td>1,290</td>
<td>*plush chairs</td>
<td>*located relative to boardroom and executive offices</td>
</tr>
<tr>
<td></td>
<td>guest</td>
<td></td>
<td></td>
<td>*sofas</td>
<td>*limited access from public</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*occasional tables</td>
<td>*quiet</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*lamps</td>
<td>*soft lighting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*bar</td>
<td>*located in existing old cereal mill</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*art</td>
<td>*soft music</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*phone</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*receptionist desk and chair for use as a security control when the boardroom is in use</td>
<td></td>
</tr>
<tr>
<td>board room</td>
<td>employee</td>
<td>*used by the board of directors and other top and company executives for meetings and special presentations</td>
<td>1,505</td>
<td>*board table</td>
<td>*located relative to executive lounge</td>
</tr>
<tr>
<td>includes rear screen projection facilities</td>
<td>guest</td>
<td></td>
<td></td>
<td>*plush chairs</td>
<td>*limited access</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*guest chairs</td>
<td>*located relative to executive offices</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*art</td>
<td>*quiet</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*bar</td>
<td>*special acoustical control for audio visual presentations/meetings</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*music</td>
<td>*temperature humidity control for art</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*audio visual</td>
<td>*special lighting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*phone</td>
<td>*located in existing old cereal mill</td>
</tr>
<tr>
<td>Space</td>
<td>sq. ft.</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Recreation Room</td>
<td>1440</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Showers</td>
<td>624</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Squash Courts</td>
<td>1980</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Files/Storage</td>
<td>18,555</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tunnels and Elevator Cores</td>
<td>5975</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry/Refrigerated Storage</td>
<td>795</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Tunnel</td>
<td>1875</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Museum Storage</td>
<td>3935</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Space</td>
<td>sq. ft.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Employee Entrance Area</td>
<td>1350</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Dining</td>
<td>1080</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee Lounge</td>
<td>360</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reception/Conference Area</td>
<td>6675</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitchen/Serving</td>
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### Space Summary - Mezzanine Level

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**Total Net Square Feet** 173,489

For this design, the factor/multiplier I used to get the total gross square footage was 80/20 (80% total net square feet/20% circulation, misc.)

**Total Gross Square Feet** 216,861
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<th>recreation room</th>
<th>showers</th>
<th>squash courts</th>
<th>files/storage</th>
<th>tunnel &amp; elevator</th>
<th>dry/refrig. stor.</th>
<th>service tunnel</th>
<th>museum storage</th>
<th>employee entry</th>
<th>private dining</th>
<th>recip./conf. area</th>
<th>kitchen/serving</th>
<th>cafeteria</th>
<th>auditorium</th>
<th>main reception</th>
<th>vice pres. off.</th>
<th>exec. secretary</th>
<th>open office area</th>
<th>conf.-mus.&amp;recp.</th>
<th>atrium</th>
<th>exec. terrace</th>
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<th>pres. &amp; s office</th>
<th>exec. v.p. off.</th>
<th>private kitchen</th>
<th>exec. dining</th>
<th>lawyer &amp; library</th>
<th>exec. lounge</th>
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     boss
    /   \
  /     \  executive committee
/       \
middle management
\        / upper management
   \    / the masses

```
to this:

The term "open office" is normally applied to any large office space in which staff of various levels of responsibility work together without dividing walls.

Private offices are, at least in theory, occupied by people who either have especially confidential business or who will be unduly distracted by noise, movement, or other disturbances elsewhere in the office.

from The Working Office

FUNCTION

The building will provide office space and related functions for approximately 1,000 full time employees.

IMAGE

The emphasis will be on the word "corporate", with enclosed office spaces, furnishings, and related support facilities (cafeteria, auditorium, museum, etc.) being on the upper end of the quality scale.

INTERIOR FLEXIBILITY

The vast majority of the building space will be zoned open office allowing for maximum flexibility in arranging the physical management set up.

INTERIOR CIRCULATION

An attempt will be made to allow for a main circulation axis that will provide a unique space for all employees to encounter while at the same time serving to connect various parts of the building.
BUILDING CORES

It is theorized that employee entrance areas, mechanical rooms, restrooms, conference areas, etc., will serve in some respect as building cores.

EXPANSION

The building will be planned to allow for approximately 200,000 sq. ft. and 1,000 corporate employees -- no expansion is planned.

ENERGY

Every effort will be utilized to incorporate "state of the art" energy conservation methods and materials including a look at passive solar capabilities. Restricted use of glass to allow for decreased air conditioning loads and careful building siting to allow protection against northwest winter winds is also planned. A look at active solar techniques is not planned.

SPECIAL CONDITIONS

The building will be in keeping with the present height pattern of other downtown Columbus buildings. i.e., a low rise office structure is planned, two or three stories, a one level main open office area is planned and allowances will be made for all necessary fire and safety exits as well as other building codes.

SECURITY

Provisions will be made for a 24 hour security guard station located in a central location providing security during office hours as well as at night when the building will be accessible to management officials if need be and zoned for possible public functions, meetings, receptions, performances, etc. Security will also be considered for the corporate employee and visitor parking lots.
IMAGE

The building will be designed in consideration of the already present outstanding examples of architecture in downtown Columbus. It is hoped that the final design solution will set precedence relative to other corporate office environments and will serve as a catalyst for Cummins ever growing corporate image.

ACCESS/EGRESS

A three block site in downtown CBD of Columbus was chosen accessible by a series of carefully planned one way and two way streets allowing autos to quickly enter or exit the site without a major traffic problem.

PARKING

Corporate employee parking for approximately 500 autos is planned for a three block site adjacent to the main building site. Arrangements will be made to buy a downtown city lot convenient to the corporate museum and visitor reception/plaza area for use as a visitor's parking area.

SERVICE

A receiving and trash/waste removal area will be provided probably in connection with the employee parking area for the arrival of office supplies and furniture/equipment as well as the removal of paper trash and food preparation waste.

LANDSCAPING

A prime element of the building program calls for an allowance of landscape space for the creation of "a downtown park" for use by employees as a retreat from the hectic office environment as well as use by the public. It will encompass: 1) selective plantings to blend with adjacent buildings landscape, 2) outdoor circulation paths directing employees to downtown amenities, i.e., stores, restaurants, banks, etc., 3) strong consideration of water and sculpture as a device for psychological relief.
The story of architecture in Columbus began generations ago when the foundation for a quality community, including buildings, was laid by farsighted city leaders in the mid-nineteenth century.

One building stands out—the Bartholomew County Courthouse, which dominates the city square. It has served the community well, with only minor alterations for 100 years. In many ways it sets the pattern for architecture in Columbus—solid masonry, handsome and graceful. It is in daily use by residents of the county.

Another venerable building, the City Hall, has served continuously as the seat of city government since 1895. Still sturdy, its Victorian character intact, City Hall is being studied for renovation. Several other older buildings have been renovated in the downtown area.

In 1964 downtown merchants cooperated in store front repainting and new signage for a “model block” between Fifth and Sixth Streets on Washington Street. This program was designed by Alexander Girard, an architect noted for his outstanding use of color. Since then many downtown area owners have followed the master plan to rejuvenate the typical Midwestern nineteenth century buildings.

Modern architecture began in Columbus with the First Christian Church, designed by Eliel Saarinen, dedicated in 1942. One of the earliest modern churches built in the United States, its simplicity and boldness have strongly influenced contemporary American church architecture. However, it was the need for new schools to accommodate population and industrial growth in the decade following World War II that provided the sustained thrust for the architectural program in Columbus. Only one new school had been constructed since 1929 for a population that had nearly doubled.

Cummins Engine Company, Inc., offered a unique proposal to the School Board. Cummins Engine Foundation would pay architectural fees for new schools, with the stipulation that distinguished national architects be selected as the designers. Criteria indicated the School Board would have independent control of the project, design and budget, including selection of the architect from a list of at least six proposed by a panel of leading architects.*

The School Board accepted the program and eleven schools have been constructed under this program, which later was to include other public buildings. A number of other buildings have been designed by noted architects without benefit of the Foundation plan, with building funds provided through contributions by congregations, bond issues, corporations, private funds, business and industry.

A redevelopment program for downtown Columbus, partially federally funded, provided a renewal for ten square blocks near the courthouse, with a two-block shopping and civic complex opening in the spring of 1974.

Columbus architecture has been the subject of feature articles in national and international publications, and each year thousands of people visit the city to view the buildings. In 1970, Columbus received the “Total Design” award from the National Society of Interior Design for exemplifying “environmental rebirth.”
The Resurgence of Downtown Columbus
By Paul Lehner, Vice President
Irwin Management Company, Inc.

"Columbus, Indiana, was clearly on the way down. Only a generation ago, its business area and residential neighborhoods were decaying, bored young people were leaving to find work elsewhere and the municipal future seemed all too bleak. Today Columbus (pop. 30,000) is a city transformed. Rising dramatically on a food plan between Indianapolis and Louisville, it has become a bustling, vital community, a showcase of contemporary architecture - and the envy of urban redevelopers everywhere."

That quote is not from a local Chamber of Commerce publication, but from the December 5, 1977, issue of Time Magazine, in a two-page color feature on Columbus, entitled "Showplace on the Prairie."

The statement is a little over dramatic, as Columbus hasn't solved all its problems. It isn't an ideal community - yet. And it certainly isn't satisfied with its progress, but it is a town that cares about itself and where it's going. That makes it special. Columbus' architectural program has attracted national, even international, attention and has been a major factor in making Columbus special.

First, some background to the evolution of Columbus in the last 20 years: Columbus has a strong industrial and agricultural base, and is the headquarters of Cincinnati Engine Company, Arvin Industries, and Cosco, Inc. It also has the world's largest donut mill. Sago, a major meat packer, Stanley, and one of the largest foundries in the Midwest, Colson.

The downtown is located at the Southwestern edge of the community on the east bank of the White River. In many ways it fits the image of a typical Midwestern community, complete with its tree-lined streets and historic Court House. Like many small towns around the country, it both benefitted and suffered from its rapid growth in the 1950s and 1960s.

The flood plains along the river at the west edge of downtown caused some of the difficulty by pushing the city's growth into sprawling suburban developments to the North and East.

With the growth came the traffic congestion. By the mid-1960s inadequate parking facilities, clogged arterial streets and frustrating traffic tie-ups caused by rail lines running through the central city had combined to turn shoppers away from the downtown to the wide open spaces and easy access of suburban shopping centers. Key businesses soon followed suit and the commercial heart of the community began to decay.

Because of its non-central location the very existence of downtown began to look doubtful. Penney's and Ward's both moved to outlying shopping areas and the Sears' lease downtown was running short.

The trend was clear to Columbus' business community, government leaders and other citizens, and they decided to take action to reverse it.

In 1966, Charles Elliott was hired as Redevelopment Director. He and his staff and consultants prepared a renewal plan and fund application for a major effort to rebuild one-quarter of the city's downtown.

While the problems the planners set out to solve weren't large, Columbus has many assets that promised to contribute to the success of the project:

- A strong and stable economy built on a diversified industrial base.
- The opening in the mid-1960s of I-65 west of the community improved the prospects for balanced development of the area across the river from the downtown.
- The city's size (30,000) placed it in the still-manageable realm below big-city status.
- Although many buildings in the renewal area had deteriorated badly, several of the major features of downtown Columbus, including the Court House and the shops along Washington Street, retained their historic and esthetic interest. Many of these could be preserved and renovated.

The most important asset was the people involved. Local businessmen, government and civic leaders were willing to invest the money, time and effort needed to get Columbus moving again.

Encouragement was the key word, and has become a tradition for the Columbus business community in the recent years.

With a general program for the area in mind and community support lined up, the redevelopment commission next tackled the problem of relocation and housing for the families to be displaced by changes in the downtown. The approval of Cambridge Square, a 70-unit rent supplement housing project on the city's east side, helped meet that requirement. Federal renewal funding was made available in April, 1968.

The city then commissioned Skidmore, Owings & Merrill to prepare a long-range development plan for downtown Columbus. Working with them were Barton-Archman, who prepared the traffic and parking proposals, and Sasaki-Dawson, landscape consultants.

Three major objectives were set for the project: (1) relocation out of the downtown of the Penn Central Railroad main line, its storage yard, its freight station and connecting spur; (2) construction of two one-way streets to become relocated State Road 46, and (3) development of a major retail shopping complex north of the Court House between Washington and Brown Streets.

41
The skidmore, owings & Merrill plan also called for: (1) construction of additional parking areas, (2) continuation of a riverfront park and recreation area, (3) extensive landscaping, (4) burying all utility lines, and (5) separation of storm and sanitary sewers in the downtown district.

Several cleared parcels in the project area were slated for sale to private developers, and the study included a land use plan to guide their development. Buildings with historical or architectural value were identified for preservation and restoration as either public or private facilities.

After two years of land acquisition and initial site improvement work, the renewal project moved into the construction and development phase in 1973. The Republic, the local newspaper, stepped up to commit to the first block of redevelopment land. A new federal post office building, the first in the country designed by privately financed architects, was opened in the redevelopment area in 1970.

All appeared to be going well when the program hit its first major setback with the bankruptcy of the Penn Central Railroad. Originally, the railroad wanted to be a cooperative effort between the city and the Penn Central, but when the company went into bankruptcy, procedures became much more complicated. Although the work was delayed, cooperation between the city, government, and the private sector of the community allowed a new plan to be used for the project. Eventually, the city was able to continue the existing Penn Central route. It provided new, reduced lines as compensation and sold the additional land it had obtained in the development consultant. The entire redevelopment effort secured at that point to be bogged down with no one willing to make the first commitment in a very complicated scenario. In a key meeting on May 10, 1970, all parties, including the redevelopment commission, the city, the State Highway Commission, the railroad, the Downtown Development Group, Sears and Irwin Management Company, agreed privately that they would make their commitments simultaneously and in public, with newspapers present. A lease with Sears was negotiated to make them the project's major generator. A few days later, we hit a second major setback when Sears changed its corporate mind and decided to do no projects of that size in the near future. After a few hectic days and trips to Chicago, we were able to convince Sears that our project was real, that our commitment was genuine, that Sears should participate, and that moved Sears had already publicly committed. Sears did get back on board, but we ended up with a weaker lease than we wanted.

A major boost to the whole effort came when the family of Irwin Miller, then Chairman of Cummins, agreed to donate 2 million dollars to the city to construct a 40,000 square foot civic mall structure between the new shopping center and the existing Washington Street stores. This Commons, as it later was named, was a key element in the downtown revitalization in the architect's view — it was the "People" space.

This commons was designed to be a "living hinge" between the new shopping center and the existing downtown area as well as a major magnet itself, drawing people downtown for reasons other than shopping. New uses are still being discovered for this very active and versatile space, this modern day American equivalent of the Italian piazzas. The architect's hope was that the rest of Washington Street would be further enhanced as a shopping corridor and tied as strongly as possible to the new shopping complex.

A total of three square blocks of parking area supports the center by providing space for approximately 800 cars. Those parking lots, along with a nearby 15-car municipal lot, are available to all shoppers in the downtown area.

The city and the Retirement Foundation found a way to preserve the historic waterworks building by turning it into a Senior Citizen Center after significant renovation work.

Several of the Washington Street businesses have refurbished the exteriors of their late 19th century buildings using
combinations of bright colors and white trim to accent the architectural features of the stores. This program actually started well before redevelopment. Some of the Washington Street structures have undergone major renovation projects that left their exterior appearance intact while expanding and improving their interior areas.

Overhanging signs have been phased out of the area, being replaced with flat signs that do not interfere with the view along the street.

For perspective, significant work took place downtown before redevelopment. In the public sector, Lincoln School was opened in 1967, Bartholomew County officials completed a $430,000 restoration and remodeling of the Courthouse building in 1969, and a new county library designed by I. M. Pei was built just east of the commercial district in 1969. In the private sector, early projects included Irwin Union Bank (1954), Model Block (1965), and Franklin Square (1969).

A great deal has happened since The Commons/Courthouse Center project in downtown Columbus. Studies have been undertaken to further strengthen the link between Washington Street and the new Complex. Mall proposals have been considered but thus far not accepted. New buildings have included a new savings and loan, a new bank, a major addition to an existing bank, and a visitors' center. A City Hall and Commons Headquarters Building and parking facilities are two large future projects.

Transportation has been recently upgraded with the acquisition of 8 new 17-passenger Mercedes-Benz buses. A people mover is in the works to link a major all-day parking area with downtown.

In retrospect, it seems to me there were four key commitments made toward the revitalization of downtown Columbus:

+ Downtown was worth saving.
+ Somehow the very viability of a community seems to be reflected in the health of its downtown. Columbus intends to stay healthy.
+ Washington Street, the existing core, was made a major part of the plan rather than being bypassed.
+ More than just retail activity was needed. Downtown had to become an exciting place for people activity again. The Commons addresses this and so does the housing activity which is taking place now.

The ideas and program were worth “seeing through” in spite of many obstacles.

Downtown Revitalization is a dynamic process. Ideas begot ideas, investments begot investments, and excitement begot more activity.

The federal programs, particularly Urban Renewal, helped. Programs can provide stimulus and assistance, but people see projects through to completion. There are no programs for moving bankrupt railroads or for convincing Sears to make just one exception to its corporate policy. With commitment at the local level and professionalism from the experts, there’s no stopping a determined community, a community that cares about itself.

COLUMBUS CITY STATISTICS

1976 Population: 35,000

Size: 15.52 Square Miles

Location: Southern Indiana

45 miles South of Indianapolis

69 miles North of Louisville

78 miles West of Cincinnati

36 miles East of Bloomington

Elevation: 656 Feet


January 27.4° F 14.3° F

May 73.5° F 51.0° F

July 82.3° F 65.0° F

September 78.3° F 54.5° F

Precipitation: Annual average rainfall ................................... 41.7"

Annual average snowfall ........................................... 15.5"

Annual number of sunshine days .................................. 198
Each year thousands of people visit Columbus, Indiana to view the buildings designed by world renowned architects.

Over thirty-five public and private buildings, each reflecting the creativity and ingenuity of the individual architect, provide the most concentrated collection of modern architecture in the world.

The list of contemporary architects, artists, designers, and sculptors reads like a Who's Who:

Eiel Saarinen; Eero Saarinen; Harry Weese; John Carl Warnecke; Norman Fletcher; John M. Johansen; Alexander Girard; Robert Trent Jones; Dan Kiley; Edward Larrabee Barnes; I. M. Pei; Gunnar Birkerts; Eliot Noyes; Venturi & Rauch; Fisher & Spilman; Bruce Adams; Kevin Roche; John Dinkeloo; Skidmore, Owings & Merrill; Hardy, Holzman & Pfeiffer; Mitchell-Giurgola Associates; Cesar Pelli; Gaudill, Rowlett, Scott; James Stewart Polshek; Henry Moore; Harris Barron; Constantiano Nivola, Jean Tinguely, Paul Rand; Ivan Chermayeff, Balthazar Korab.
Futuristic plans of downtown Columbus show proposed Cummins corporate headquarters site.

Soil type: Fox series fox loam
0 to 2 percent slope (Foa)
- moderately deep
- well drained
- nearly level
- moderately textured

Site

6" water line 2 turns into 8" water line between 7th & 8th St.

20" water line

12" cast iron gas line

Electric source: Transformers
Power supplied to existing old cereal mill

The transformers will be owned by Cummins Engine Co.

Existing old cereal mill

5" cast iron gas line
Building Type Analysis

1. IBM
   World Trade Americas
   Edward L. Barnes

2. Sun Oil Company
   Corporate Headquarters
   John Carl Warnecke

3. Johns Manville
   Corporate Headquarters
   The Architects Collaborative, Inc.

4. Weyerhaeuser
   Corporate Headquarters
   Skidmore, Owings and Merrill

5. General Foods
   Corporate Headquarters
   Kevin Roche/John Dinkeloo & Assoc.

6. John Deere West
   Corporate Headquarters
   Kevin Roche/John Dinkeloo & Assoc.
IBM
World Trade Americas
Mt. Pleasant, New York
Edward L. Barnes - Architect
Source: Architectural Record, January 1977

CONCEPT:

* geometric concept
* w-shaped floorplan

PROGRAM:

* low profile building limited to three stories
* quiet setting
* 1,000 employees
* close relationship between building and the outdoors
* open office landscaping
* few enclosed executive offices
* employee cafeteria
* employees enjoy view of outdoors
* security precautions

CIRCULATION:

* employees enter through the center of the w-shaped floorplan
* office circulation lies along open office area along glass walled facade facing the artificial lake
STRUCTURE:

* 30' x 30' grid
* aluminum spandrel panels painted green to blend with landscape
* glass has siliconed butt joints set flush with panels

UNIQUE FEATURES:

* employees enter on middle level and only have to ascend or descend one level to their offices
* an artificial lake or moat surrounds the building on the open office side and serves as a second source of fire protection
* 800 plant boxes enhance interior landscape
* computerized HVAC and credit card security
  * HVAC units are located on first level beneath the parking lot to reduce visual clutter
  * air intakes and exhausts are in parking lots concealed by planting beds and trees
* graphics by Ivan Chermayeff and an international art collection further emphasizes the international reputation for the IBM corporation
Sun Oil Company
Corporate Headquarters
Radnor, Pennsylvania
John Carl Warnecke - Architect
Source: Interiors, February 1979

CONCEPT:

* geometric concept, but could also be classified as a court concept because of the enclosed galleria space

PROGRAM:

* main criteria for this building was that there be perimeter offices for all executives
* low density in people because only company executives are here
* top management on top floor
* executive offices on perimeter of building
  - executive assistants in inner offices
  - support staff in custom designed work areas
* library and cafeteria with view of open natural area
* secretaries and middle management experience site through glass windows of executive offices
* separate corporation management training center on lower level allows for flexible spaces
* visitors enter building and are guided to either middle management or executive reception areas
CIRCULATION:
* main circulation occurs in the main reception area and around the atrium/galleria space
* circulation also exists along inner corridors between perimeter executive offices and the executive assistant/support staff work areas

STRUCTURE:
* 30' x 30' grid
* structure follows contour of land
* poured in place concrete and sprandrel beams
* exposed exterior columns
* reflective glass

UNIQUE FEATURES:
* each upper level is stepped back creating an exciting processional entrance
* galleria - a five story open area is underneath an enormous skylight which emits natural light to the inner offices
* a view of the galleria is afforded visitors as they enter the headquarters
* a large custom sculpture adorns the main reception area
* all executive offices consist of custom casework suggesting logic and order
Johns Manville
Corporate Headquarters
outside Denver, Colorado
The Architects Collaborative - Architect
Source: AIA Journal, Mid-May, 1978

CONCEPT:

* geometric concept, consisting of two parallel rectangular wings separated by the main auto entrance road

PROGRAM:

* reflects strong corporate image
* company required that the building look good from the air since the majority of the corporate visitors come to the site by helicopter
* the building is designed as a definite man-made object - in contrast to nature
* program required an enormous amount of perimeter executive offices, however the architects modified the program believing that large floor areas would work better
* the architects designed the building as a bridge: "one drives to the bridge and works in the bridge."
* large public areas are housed on lower levels including conference and inhouse training spaces
* cafeteria has view of valley outside
CIRCULATION:

* vertical circulation through four stories via elevator cores
* individual level circulation exists along inner corridors between perimeter executive offices and the executive assistant/support staff work areas

STRUCTURE:

* 30' x 30' grid
* gleaming aluminum plate panels with clear finish

UNIQUE FEATURES:

* the entire building acts as a 1,000' long sculpture placed in the foothills of the mountains
* visitors penetrate building by driving auto through two wings of building
* roof parking
* reflecting pool
* the Johns-Manville people chose to have a limited design competition for their building
* the success of the built headquarters reflects the elegant clarity of the Architects Collaborative design proposal
Weyerhaeuser
Corporate Headquarters
Tacoma, Washington
Skidmore, Owings and Merrill - Architect

CONCEPT:
* geometric concept
* rectangular floor plan

PROGRAM:
* Weyerhaeuser is the first building in America to be designed specifically from the start for total office landscape system usage (the only enclosed offices exist on fifth floor where the top executive core is).
* Since Weyerhaeuser deals with forest management it is only fitting that the building be placed in a wooded "garden setting" with the outside acting as a supporting work of art
* parking on three levels on each end of the rectangular building

CIRCULATION:
* direct site circulation exists between each parking level and levels 1 - 3 of the building
* open office landscape system allows for maximum variety of circulation
* corridor circulation exists on special level fourth floor and on the fifth floor executive level
STRUCTURE:
* the building's structural foundation serves as a dam to create the site's ten acre artificial lake
* office levels consist of stepped concrete slabs outlined by continuous 12' x 8' non-bearing solar glass fixed panels

UNIQUE FEATURES:
* Weyerhaeuser offers an extraordinary insight into the function of built form as symbol
  - it is the most American effort to date at totally partition-free offices
* special fourth floor:
  1) serves as the main visitor reception level
  2) acts as a company town "main street" with special shops, cafeteria, lounges, etc., for employee use
* planted rooftop terraces
* HVAC - works on a heat recycle process
* a variety of interior landscape schemes add excitement to employee environment
* custom wood furniture designed by Knoll and Weyerhaeuser
* board room consists of individual chairs with parson tables
* a magnificent view of Mt. Ranier is had in the distance
General Foods  
Corporate Headquarters  
New York City  
Kevin Roche/John Dinkeloo & Associates,  
Architect  
Source: *Architectural Record*, Aug. 1979

CONCEPT:

* the building follows a somewhat bizarre and unique combination of geometric and court concepts along with Beaux Arts symmetry

PROGRAM:

* the program called for a building of strong corporate image for a company that presents itself as an important center of economic activity  
* the building is classically composed formal  
  it consists of an axial office structure with a strong central focus  
* design was restricted to a height limitation of eight stories (final design: floors 1 - 3 parking, 4 - 8 offices)  
* work stations of 10' x 15' and 15' x 15' modules  
* top two floors are perimeter offices with the executive offices surrounding the dome of the rotunda  
* the board room and visitor's elevator lobby are on the grand axis  
* separate employee and visitors entries
CIRCULATION:

* vertical circulation occurs at various elevator lobbies
* horizontal circulation on office levels exists along corridors between perimeter offices and support staff work areas

STRUCTURE:

* 30' x 30' grid
* windows primarily held to a 3' strip, double glazed silver reflective for energy conservation
* exterior building material consists of everyday, run of the mill, builder house white aluminum clapboards which help emphasize horizontality in the project
UNIQUE FEATURES:

* palace/castle like image
* interior courtyards are skylighted to allow natural light into work areas
* skylighted dining lounge located in rotunda
* balconies from upper office floors overlook the rotunda

* successive office floors are set back to create outdoor terraces
* formal stairway leads down from cafeteria to the entrance drive
* ceremonial entrance is created for the automobile on site leading up to a very impressive visitor's entry
* board room or "main nerve" of the corporation is on the building's grand axis
A Visit to John Deere West, Feb. 1, 1980

John Deere West
Corporate Headquarters
Moline, Illinois
Kevin Roche/John Dinkeloo and Associates,
Architect
Source: Interior Design, April, 1979

CONCEPT:

* geometric and court concepts--basically
two slightly shifted rectangular forms
with an interior garden

PROGRAM:

* the building is designed as an addition
to the already existing Deere corporate
Administration Building designed by
Eero Saarinen in 1964
* a need for additional corporate office
space was noted
* Deere and Company established three
basic programmatic requirements:
  1) provide functional efficient space
  2) provide a pleasant logically organ-
     ized corporate environment
  3) express in the architecture the
      character of the company

Architect Kevin Roche says:

"Because the problem is always
different - the design solution is
always different... we design with a
thought process that begins with the
site and the program and proceeds step
by step to the solution."

John Deere West has been hailed as a
modern corporate Versailles.
* open plan office system
* three levels linked structurally to the existing Administration Center by a glass enclosed bridge
* lower level accommodates cafeteria and service functions
* middle floor provides office space and serves as employee and visitor entrance level
* top level originally designed to be left vacant for expansion is now occupied
* huge sunken garden, located in center of building, allows office floors to overlook this unique feature

CIRCULATION:

* main circulation occurs at the middle level where a diagonal bridge serves to connect the two office wings separated by the garden area
* circulation also occurs around and through the garden itself

STRUCTURE:

* 30' x 30' grid
* use of Corten steel for the exposed interior structure as well as the exterior ornamental sunscreens links the new addition structurally to the existing Administration Center
During programmatic stages, Roche prepared a plant life plan dealing with the possibilities and maintenance of the proposed interior garden. Roche's contention was that contact with nature acts as a spur to the psychological well being of people.

UNIQUE FEATURES:

* no doubt the most unique feature of the building is the 17,000 sq. ft. indoor sunken garden
* the gambrel dome arched skylights over the garden rise 53' and give the impression of a giant greenhouse (reflective glass is used in the skylight to help cut down on some of the "sunload").
* reflective glass is also used throughout the addition on the railings of balconies and bridges to constantly reflect different images back to the observer
* spanning the garden is the diagonal bridge
* another feature is the "disco" cafeteria (custom glass tables and special lighting).
* cafeteria and the garden area are sometimes used nightly for special receptions
* the very use of Corten steel as the main building material suggests the company product: farm implements and equipment
* although the building exhibits an extensive and expensive art collection, corporate aesthetics forbids personal pictures, calendars, decorations, etc., from being hung in office units or work areas.
I began the first quarter of design with a close look at the site. I decided to go with the same downtown Columbus location that Cummins had chosen for the location of their actual new headquarters. The site is flat with the only existing structure being the five story cereal mill which was to be incorporated into the new design somehow. The mill is located roughly in the middle of the three block site at an approximately 30 degree angle to the already established downtown city grid network of perpendicular streets.

Almost all of my early concept sketches followed the 30 degree axis. I concentrated on placing the building on the south end of the site closest to the other existing downtown amenities and decided to use the existing mill for a special purpose (in this case, a corporate museum and a visitor's reception area). The forms experimented with throughout all of the first quarter of thesis were very rigid, very rectangular, and more or less your typical speculative office structure.

Eventually I started working with a standard office grid of 30' x 30' as a building pattern. The concept which emerged was basically a series of rectangular shapes made up of a set number of 30' x 30' bays. Vertical circulation was concentrated at nodes located where these various rectangles came together. Horizontal circulation was primarily a series of paths or corridors connecting these nodes. It became obvious as the concept developed that I was making use of a long central axis perpendicular to the existing cereal mill as a circulation element and a unique design feature. One side of this axis serves as an atrium designed to provide interior landscape as a visual break and aesthetic touch to the office environment.
The existing mill was located at an approximately 30 degree angle to the perpendicular downtown streets.

A sketch problem at the very beginning of the first quarter of thesis.
It's interesting to note that one of my very first sketches included a long circulation atrium; a unique feature that was also present in the final design presentation.
The early concept sketches followed the 30 degree axis of the existing mill and placed the building on the south end of the site closest to the other existing downtown amenities.
I started working with ways of arranging a standard office module of 30' square.
The concept which emerged was basically a series of rectangular shapes made up of a set number of 30' square modules which I later subdivided into 15' square bays. A long circulation axis ran through the center of the building. One side of this axis served as an atrium designed to provide interior landscape.
Vertical circulation was concentrated at nodes located where the various rectangles of 30' square modules came together.
Horizontal circulation was primarily a series of paths or corridors connecting the various vertical circulation nodes.
A preliminary mock up of the first quarter of thesis' presentation.
The site plan shows the final location of the building on the site for the first quarter of thesis. The existing mill is the structure on the far right accessible to the visitor parking area. Employee parking is located on a similar three block site adjacent to and west of the building site. Although little attention was given to landscaping during this design stage, the use of water as a landscape element was studied.
The footprint shows the rectangular parti of the new building.

The circulation diagram shows in gray paths where horizontal circulation exists. The circles note the location of vertical circulation nodes. An underground tunnel connected the existing mill with the new building.
This illustrates the use of the 30' x 30' office bay as a concept organizer.

As noted before, the gray areas are the circulation; and the white areas left over are general open office areas with the exception of the small areas S.E. of the long axis corridor being the atrium.
The floor plans were broken down as follows: LEVEL 1 consisted of the corporate museum, open office area, and interior landscape. LEVEL 2 was also open office. LEVEL 3 was a series of enclosed executive office spaces.
This drawing notes the relationship of the ground floor plan to the water. During this presentation the water acts as a "moat" surrounding the existing mill and running adjacent to and through the office building.

The program called for a low-rise structure so, in this case, the central office core rises three stories; the adjacent wings - two stories; and the existing mill - five stories.
At the end of the first quarter of thesis:

1) I had established the use of a 30' x 30' grid
2) I had felt some inclination for a strong central axis as a focal point
3) I had programmed the existing mill as a corporate museum and visitor reception area
4) I had been inclined to separate open from enclosed office areas
5) I had planned to gather vertical circulation units into building cores
6) I had somewhat studied the possibility of water as a landscape site element
New Concept

Being dissatisfied with the schematic design I had come up with during the first quarter of thesis, and knowing I could do better, I found myself reviewing a lot of magazines, books and publications looking for new ideas to rejuvenate my design thoughts. While scanning through a copy of "Dallasights," an A.I.A. publication on architecture in Dallas, Texas, I came across a site plan for the new Dallas City Hall by I.M. Pei and Partners, New York. The city hall itself occupies one block of a two block downtown site. The second and larger block is roughly divided diagonally in half—one half being a civic plaza area with a huge circular reflecting pool; the other half is a landscaped downtown park area. In concept, this second block resembles a large rectangle enclosing a circle and a triangle, with the triangle further enclosing a semi-circular area.

It was this project which gave me the idea to introduce more primary and geometric shapes into my design. Since my building site encompassed three city blocks and I needed less than half of that area to meet the building program requirements, I started playing around with the concept of dividing my site diagonally, placing the corporate headquarters on one half and the proposed downtown park on the other. Placing the headquarters in the northwest half of the site...
seemed to work best. This way the proposed park was close not only to the corporate employees but to the users of other downtown amenities as well. To help draw attention to the existing cereal mill and to call it out as a unique feature, I carved a semi-circular niche out of the "office triangle". And in order to establish some sort of order and organization to the new concept that was emerging, I subdivided the entire site into 30' x 30' modules. The building's overall dimensions then became multiples of the 30' modules established by the grid. An effort was made to try and intersect the various points of the semi-circular niche on the grid also.

Internally, the 30' module worked well for the open office area. My next step came in breaking up the large triangular floor plan into areas that would serve the program needs of the client. I knew that the largest space needed was that of the open office area so it seemed only logical to put that space at the largest end of the triangle, with the more enclosed needs at the smaller end.

Entry became a key issue. I had decided to keep the existing mill as a corporate museum and visitor's reception area. This meant that visitors would proceed through the existing mill and enter the new building at roughly the middle of the triangle. I decided to have the employee entry opposite the visitor's entry at the middle of the floor plan also. As further sketches developed it became obvious that the central hub of the building was also the center of the majority of the activity. I looked at plans of I. M. Pei's new East Building of the National Gallery of Art for ideas on how he divided large triangular areas. And I studied the idea of not just providing views of the exterior but possibly bringing the exterior landscape inside the building.

As a landscape move to tie the new building in with the plaza area I used bollards to extend the semi-circular shape around the mill into a full circle and introduced another circular niche into the landscape in the form of a reflecting pool. Experimenting with the idea of radiating a series of concentric circles off the center point of the existing mill, I envisioned a display of bright colored flags hanging from the ceiling of the open office area along these concentric paths as not only adding color but serving as a possible system for graphic signage.

I considered briefly the use of a sky-lighted roof over the entire building and the emphasis on horizontality in the facade treatment. This emphasis I thought would work nicely if either picked up in various horizontal bands of color or expressed materially on the exterior walls.
The site plan for the new Dallas City Hall (Dallas, Texas) inspired me to try a new concept for my design project.

I experimented with several ways of slicing the site diagonally, placing the office headquarters on one half and a proposed downtown park on the other.
I introduced more primary and geometric shapes into my design.
Locating the headquarters on the northwest half of the site seemed to work best.
In order to establish some sort of order, I subdivided the entire site off into 30' x 30' modules.

An effort was made to try and intersect the various points of the semi-circular niche on the grid also.
"Large floor areas facilitate good communication and good communication is one of the secrets of a successful business."

The Architects Collaborative in reference to a design concept for the Johns Manville corporate headquarters competition.

I divided the large triangular floor plan into areas that would serve the program requirements of the building.

Entry became a key issue.
As further sketches developed it became obvious that the central hub of the building was also the center of the majority of the activity.
The East Building of the National Gallery of Art designed by I. M. Pei and Partners, New York, makes use of a triangular floor plan.