5-1983

The South Carolina Industrial Development Building Columbia, S.C.

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Clemson University

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A terminal project submitted to the faculty of the college of Architecture, Clemson University in partial fulfillment for the degree of Masters of Architecture.

Approved:

[Signatures redacted]

Committee Chairman

Committee Member

Committee Member

Committee Member

Head, Department of Architectural Studies

Dean, College of Architecture

THE SOUTH CAROLINA INDUSTRIAL DEVELOPMENT BUILDING COLUMBIA, S.C.

SPRING '83

DEVELOPMENT

BILD

COLTUIIA, S.C.
I would like to express my deepest appreciation to the following:

My family, friends, fellow students, The College of Architecture, my committee, Mr. Steve Hooks (The Governor's Office), Mr. John Hankinson, (S.C.D.B.), Mr. Peterson (S.C.B.T. & C.E.) and Mrs. Lightle (G.S.A.).
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Over since the war between the states, South Carolina has
needed to diversify its economic base. This
would be from a mainly agricultural
industry, commerce and agriculture.

This commitment became more evident after WWII when the
State Development Board (S.C.D.B.) was formed. Later
the state created the State Board for Technical and
Comprehensive Education (S.C.T. & C.E.) to provide
technical education. Most recently the state formed
The South Carolina Research Authority (S.C.R.A.) to
administer research parks.

The state would like to bring these "sister agencies"
together under "one roof" to enhance their relationship
and to enhance their image of the state's commitment to
industrial development. This facility, due to its
relationship with the Governor's office and the legislature,
should be located near the State Capitol Complex in
Columbia, S.C.
INTRODUCTION

Ever since the war between the states, South Carolina has seen the need to diversify its economic base. This diversification would be from a mainly agricultural society to one of industry, commerce and agriculture. This commitment became more evident after WWII when the State Development Board (S.C.D.B.) was formed. Later the state created the State Board for Technical and Comprehensive Education (S.C.B.T. & C.E.) to provide technical education. Most recently the state formed The South Carolina Research Authority (S.C.R.A.) to administer research parks.

The state would like to bring these "sister agencies" together under "one roof" to enhance their relationship and to enhance their image of the state's commitment to industrial development. This facility, due to its relationship with the Governor's office and the legislature, should be located near the State Capitol Complex in Columbia, S.C.
Columbia is centrally located in the state approximately halfway between South Carolina's other two major cities, Charleston on the coast and Greenville in the foothills of the Blue Ridge Mountains. This is a hilly area which has a clay soil and some rock. The vegetation is a mixture of deciduous and pine trees. Directly to the south of Columbia is the sandhill region which millions of years ago was the coastline. It is mostly covered with pines.

The Columbia area has several rivers and streams, notably the Congaree River. The man-made Santee-Cooper Reservoir is to the south of the city.

In 1786 the state legislature ordered a town to be laid out near Friday's Ferry on the Congaree River, in order to place the state government in a central location in the state. This town would become the state capital replacing Charleston, which had been the capital since 1756. The name Columbia was chosen in 1790, the same year the first meeting of the legislature was held there. Columbia was planned as a capital city, before Washington, D.C., was planned as our nation's capital.
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In 1786 the state legislature ordered a town to be laid out near Friday's Ferry on the Congaree River, in order to place the state government in a central location in the state. This town would become the state capitol replacing Charleston, which had been the capitol since 1756. The name Columbia was chosen in 1790, the same year the first meeting of the legislature was held there. Columbia was planned as a capitol city before Washington, D.C. was planned as our nations capitol. Columbia was almost completely destroyed by Federal Troops in February 1865.
during the War Between the States. It suffered greatly under the reconstruction period and couldn't make noticeable improvement until after that period.

The city was incorporated in 1854. Local government was by: Chosen commissioners, aldermen, elected commissioners (1910-1950) and most recently by council-manager system (1980- ).

The city houses six colleges and universities:
The University of South Carolina chartered 1801; Columbia College for Women (1854); Columbia Bible College (1823); Lutheran Theological Southern Seminary (1911); and two predominantly black schools: Benedict College (1850) and Allen University (1880).

Today Columbia is a growing city with major highways, Railways and an airport. Because it is the center of state government it has also become an industrial and educational center. Also, a large military camp, Fort Jackson, is located nearby. Today Columbia is the largest city in South Carolina with a population of
The State House is, of course, a prominent building in the city whose primary architect was Major John H. Blount. The design of the Greek Revival style has been prominently featured.

The building is in the Roman-Corinthian style made mostly of local granite and some marble. It is said to have been inspired by the Boston Customhouse and the Tennessee State House.

The building consists of a west wing for the Senate and a west wing or hall for the House of Representatives, separated by a main lobby with a rotunda above. It is situated atop of a hill which is easier seen and a view.
The State House is, of course, a predominant building in the city whose primary architect was Major John R. Niernsee. The building is of a Roman-Corinthian style made mostly of local granite and some marble. It is said to have been inspired by the Charleston Customshouse and the Tennessee State House.

Work began in 1855 and was reportedly within a year of completion by the time the war began. When General Sherman shelled Columbia on February 16, 1865, minor damage was done to the building but much of the building material was demolished. After the war construction was resumed, in 1869 the roof was completed and the building occupied. By the end of the century the north and south porticos, dome and steps were finished.

The building consists of an east wing for the senate and a west wing, or hall for the House of Representatives separated by a main lobby with a rotunda above. It is situated on top of a hill which in earlier days had a good view of the Congaree River and pinehills beyond to the south.
In 1942 the state organized The Preparedness for Peace Commission to recommend a program for development to aid the state in its transition from wartime to peacetime economy. The commission proposed the creation of a state agency to plan and develop South Carolina. In 1945 The Department of Research, Planning and Development was created. The agency was to coordinate development plans, advertise the state and to introduce the state to potential industrial clients. In 1954 the legislature changed the name of the agency to the South Carolina Development Board.
Due to the lack of industrial jobs and technical training there was an out-migration of young people from South Carolina in the 1960's. The then Governor Hollings created a joint legislative committee which recommended the creation of the Advisory Committee for Technical Training. The committee was to design a training program responsive to the needs of industries. First, by temporary special schools, later by 13 permanent technical schools. The first TEC school opened in Greenville in 1962. By 1973 the system of 13 schools was established. In 1972 the general assembly abolished the Advisory Committee for Technical Training and established the State Board for Technical and Comprehensive Education. Also in that year TEC schools began to offer 1st and 2nd year college parallel courses.
With the desire to promote research and development, the state is presently creating the South Carolina Research Authority (S.C.R.A.) to administer three proposed research parks in the state. Formation of this agency is still presently unfinished but it should be operational within a couple of years.
The climate in Columbia is a hot-bulid one with about the same number of 90° days as below 60° days. The summer is very hot and humid. The fall and spring are enjoyable. The winter is mild and snow seldom occurs. Columbia receives an ample amount of rain, except for occasional drought in the summer. The number of clear, partly-cloudy and cloudy days are about equal. Therefore, cloudy or partly-cloudy days are very common in Columbia. The number of heating degree days is slightly more than the number of cooling degree days. Therefore, heating and cooling of buildings are of equal concern. Columbia is located about 34°N latitude for solar calculations.

SETTING
The climate in Columbia is a hot-humid one with about the same number of +90°F days as below 32°F days. The summer is very hot and humid. The fall and spring are enjoyable. The winter is mild and snow seldom occurs. Columbia receives an ample amount of rain, except for an occasional draught in the summers. The number of clear, partly-cloudy and cloudy days are about equal. Therefore, cloudy or partly-cloudy days are very common in Columbia. The number of heating degree days is slightly more than the number of cooling degree days. Therefore, heating and cooling of buildings are of equal concern. Columbia is located about 34°N latitude for solar calculations.
The state has presented three potential sites for this project, all mostly state-owned at the present time.

Site one and two are located across from each other on South Main Street directly south of the existing Capitol Complex and bounded by Pendleton Street to the north and College Avenue to the south. These lots occupy about one-half a block and are on the main (formal) axis of the State House. Because of their location, other state buildings with larger space requirements and of a more typical nature should be located here.

Site three although smaller, 3/4 acres, has a more unique relationship with The State House. This relationship is important and will be expounded upon later. Its size is more suitable for this project. Also, this block has been planned for state expansion. Because this is not a typical state office building for a typical state agency, the prepared building deserves this unique site.
SITE LOCATION
The site of the proposed office building was the birthplace of General Maxcy Gregg. General Gregg was a Confederate officer, leader of the Southern Rights Movement and member of the committee which framed the Ordinance of Secession. This information can be found on a historical marker on the site. The two existing buildings were built c. 1921 for the R.L. Bryant Printing Co. These buildings are of a heavy timber construction and brick veneer with some minor limestone details. These buildings were bought by the state in 1969. The 20,000ft² buildings currently housed overflow of 5 state agencies. The buildings were analyzed by the state in 1975 and judged to be structurally sound but of no architectural or historical significance.
The site is located on the southeast corner of the intersection of Sager Streets. Sunter Street
contains a major thoroughfare that connects
the site with the University of South Carolina. The west side of Sunter Street is
the Capitol House, State Office
buildings and veterans homes, and provide excellent views.
Sunter Street also contains the South Carolina State Capitol and has
added value to the site. Two parking lots to the east which
are presently being used for condominiums. To the south
is the Columbia Alive Co. Auditorium, and further beyond a
gas station. Although this block has a highly diverse
landscape, it has only minor buildings and has been planned
for state office expansion.

Other movement systems include pedestrian and bus.
Pedestrian movement is almost entirely along Sunter Street,
The site is located on the southeast corner of the intersection of Senate and Sumter Streets. Sumter Street runs north-south and is a major thoroughfare that connects the central business district with The University of South Carolina. On the opposite (west) side of Sumter Street is the Capitol Complex with The State House, State Office Buildings and lush grounds, which provide excellent views. Senate Street which runs east-west, has landscaped medians and is moderately traveled. Across Senate Street is the location of Trinity Church which is on the National Register of Historic Buildings and is of Gothic Style. The church also has lush grounds including a cemetery to the north of the church. The site has parking lots to the east which are presently being zoned for condominiums. To the south is The Columbia Stage Co. Auditorium, and further beyond a gas station. Although this block has a highly diverse landuse, it has only minor buildings and has been planned for state office expansion.

Other movement systems include pedestrian and bus. Pedestrian movement is almost entirely along Sumter Street which connects the University, The State Capitol Complex.
and the central business district. Also there is a covered bus stop located on Sumter Street in front of the site.

On the site itself there exist two buildings C.1920's of heavy timber construction and brick veneer. Two buildings have been connected, and together have about 20,000 sq.ft. Although the buildings are of no architectural or Historical significance, they are structurally sound. The buildings are presently being used by several state agencies as overflow space. The buildings have had most of their windows bricked up.
MOVEMENT
The study of similar building types can be helpful in understanding the design problems. Examination and study was made of medium-rise office buildings, governmental and private, and then of buildings using day-lighting and energy-conscious strategies.

A good example of a state office building is the State of Illinois Center, Chicago, designed by Helmut John of C.F. Murphy Associates. It "attempts to bring together diverse elements of technology and image." The form's footprint is a warped trapezoid that steps up 3 times and ends as a quarter of a circle. Thus two of the sides are not vertical but sloped curves to make this transition. The entire form is pierced by a cylindrical atrium which rises above the building to form a "modern dome." The form is produced to give monumentality and relief to the overall effect of tall vertical buildings. Jahn also uses 10 varieties of glass to produce an interior through exterior. The energy consumption of this building is small for cooling due to people and office equipment. The Velux windows found were to double glass the atrium and to sent the atrium...
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The energy consumption of this building is mainly for cooling due to people and office equipment. The best changes found were to double glaze the atrium with reflective glass and to vent the atrium.
State of Illinois Center
Next are two state office buildings for the state of California. The first was designed by the office of the state architect, Sim Van Der Ryn. The 267,000 ft$^2$ building in Sacramento uses many energy-efficient features. The key design feature is a central atrium which "integrates climatic and human concerns into the design. Automatic skylight shading and passive heating and cooling systems further enhance "The energy efficiency". The other state office building, also in Sacramento, has 240,000 ft$^2$ with additional 40 to 50 housing units to be added later. This project was used as a competition which resulted in three awarded designs. First place was designed by Benham-Blair and Affiliates. This scheme has below and above ground offices. The below grade offices are lit by light courts. The above grade offices are protected by a "solar-slab" which is an array of concentrating collectors. With these and other solutions the building only uses about half the number of BTU's per square foot prescribed for federal office buildings. The second place design was by Baker, Banta, Cutri and ELS Design Group. This design stresses architectural rather than technological solutions. With skylit courtyards, double-glazed sawtooth-
California State Office Building
Terraced courtyard with retractable skylight.

California Office Bldg. Competition
ed east and west windows and massive materials, the building becomes very energy efficient. A well designed lighting system which uses flexible task/ambient lighting also greatly reduces energy consumption. A computer analysis shows that the building will use only 1/5 the energy of a standard office building. The third place design of Davis, Teeters, Ambrosino, Lum, Hoshi, Bryan and Bafjanac stresses architectural rather than technological solutions. This building stresses natural lighting, thermal storage, shading, ventilation and an efficient mechanical system. This building also has a courtyard. It is divided into 48 ft. x 48 ft. bays lit from both sides and each having its own environmental controls. The only non-architectural element used is a rock bed located below the building. Air is blown through the rock either for cooling or heating.

One of the most innovative office building designs is the TVA (Tennessee Valley Authority) building in Chattanooga, Tennessee. The building was designed by a team of architects: CRS; The Architects Collaborative, Inc.; Van Der Ryn/Calthorpe and Partners; and the TVA Architectural
Design Branch along with many consultants including William Lam Associates for lighting. From the beginning daylighting was seen as a major design determinate, because in many cases lighting can account for as much as 80% of the energy load of an office building. The Chattanooga climate is colder in the winter than Columbia" but about equal in the summer, both are hot and humid. A study showed that a linear form, with long south and north elevations would be best. Although this form has more skin heat gain and heat loss, these factors are offset by lighting savings of about 30%. The ratio of sides is about 5 to 1. Although this ratio creates higher loads than a ratio of 2.8 to 1, it is less than that of a square. It was decided that a courtyard would be a good tool to introduce light to the interior and that it should have operable shading devices to provide for weather variations especially in the fall and spring. Also, through analysis it was discovered that an open court would consume 23% more energy than a double-glazed covered court. For daylighting to be useful it must be controlled! In this case overhangs and lightshelves are used on the south side, mirrored light shelves on the court and north sides, minimal north glass, almost no east
Typical building section illustrates the differential form responses to daylight. The north facade is sloped to minimize shadows. The atrium has louvers to control light and heat according to office requirements.

T.V.A. Building
or west glass and system of operable louvers on the exterior of the courtyard skylight. The louvers can admit winter sun, diffuse summer sun and close to form a thermal seal at night. The louvers also are mirrored to direct winter sun onto the court side mirrored light shelves. It was found that with mirrored light shelves and twelve foot ceilings an increase of 200 to 300% of daylight penetration compared to a typical eight foot ceiling office with clear glass. After analyzing a study model it was found that: The summer morning diffused sky presents the worst lighting conditions even an overcast winter sky is better; Benefits of passive solar heating are minimal; and that clerestory glass produces most of the light, while view glass only provides light for nearby work areas.

With the need for governmental buildings to set an example as energy-conscious designs it is appropriate that in this office building the use of daylighting, as a major design tool should be employed to achieve the most energy-efficient solution.
Direct – bad

Direct – good

DAYLIGHTING
Bounce

Height
Filter

Intergrate

Following are special requirements of the Highland
Zoning Ordinance for high rise (above 35 ft.)
Structures:

- Minimum lot area
- Minimum front setback
- Required front yard
- Required rear yard
- Maximum lot coverage

Maximum Height - no building can project through an
imaginary plane passing inward from lot lines at a
total of two feet in height for every one foot

Off - Street parking spaces shall be provided in each space
for every 200 ft² of gross floor area.

The city of Oakland, California Standard Building Code.
The following are special requirements of the Richland County Zoning Ordinance for high rise (above 35 ft.) Structures:

- Minimum Lot area: 1 acre
- Minimum Lot width: 150 ft.
- Required front yard: 25 ft.
- Required side yard: 25 ft.
- Required rear yard: 25 ft.
- Maximum lot coverage: 25%

Maximum Height - no building can project through an imaginary planes leaning inward from lot lines at a ratio of two feet in height for every one foot horizontal distance.

Off - Street parking requirements specify one space for every 300 ft$^2$ of gross floor area.

The city of Columbia follows the Standard Building Code.
Due to the unique relationships between the South Carolina Development Board (S.C.D.B.), The State Board for Technical and Comprehensive Education (S.B.T. & C.E.) and The South Carolina Research Authority (S.C.R.A.) the state wishes to have these agencies together in one state office building. The building will provide the following major types of spaces:

- offices, conference rooms, waiting rooms,
- auditorium(s), break areas, a lobby with an exhibit area, computer room(s) and needed parking facilities.

The building will also have speculative office space to be leased in order to produce revenue to pay for the building.

It will also have a public restaurant for employees within the building and the general public.
Due to the unique relationships between The South Carolina Development Board (S.C.D.R.), The State Board for Technical and Comprehensive Education (S.B.T. & C.E.) and The South Carolina Research Authority (S.C.R.A.), the state wishes to have these agencies together in one state office building. The building will provide the following major types of spaces:

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The building will also have speculative office space to be leased, in order to produce revenue to pay for the building. It will also have a public restaurant for employees within the building and the general public.
The South Carolina Development Board's (S.C.D.B.) main objectives are:

1. To conserve, restore and develop the natural, physical, human, social, economic and productive resources of the state.
2. To promote a system of transportation for the state.
3. To promote public interest in the development of the state in areas such as industry, agriculture and commerce.
4. To assist the development of existing state and interstate trade.
5. To assist in ensuring stability in employment.
6. To advance the general welfare of the people.

The S.C.D.B. consists of nineteen board members, one from each of the sixteen judicial circuits and three at-large members, appointed by the Governor and approved by the Senate. The board's major concern is to attract manufacturing industries to the state. The board informs companies of the business possibilities in South Carolina by: National Advertising (Fortune, Forbes and Business Week magazines), referral from other businesses, direct
contact and by a professional reputation. The board tries to convince businesses to move to South Carolina by informing them of both business and general information of South Carolina. To further the purpose of economic diversification the board targets non-textile and non-agricultural businesses. A major selling point for the board is that it gives complete confidentiality to prospective industries. In fact, sometimes the board deals with representatives of un-named industries. While informing a prospect of the general advantages of the state, the board also boast of its two sister agencies the S.B.T. & C.E., which provides technical education and a system of special industrial training schools, and the S.C.R.A., which will administer three research parks in the state. Then the board will introduce the prospect to these agencies if their services are needed. The next step is to provide the client with possible industrial sites through-out the state. The final sale in locating comes from the local community. The board will then inform the prospect of all agencies it should contact for the site development. At some point in time the prospect will probably meet with the Governor. Because of these functions, an office location near the Capitol Complex is necessary, area accounts for its present location in the
S.C.D.B. (Development)
The state Board for Technical and Comprehensive Education (S.B.T. & C.E.) administers several educational programs including: The system of Technical or "TEC" colleges, The Special Schools program and the Manpower program. The board administers the system of 13 TEC schools and their commissioners. These schools, which offer associate degrees in such areas of electronics, mechanics, computer science and other technical fields, received national acclaim for pioneering the field of state-wide technical education. The board is always happy to inform prospective industries of the programs offered at these TEC schools which provide a technically skilled work force. The Special Schools are temporary training centers created to produce skilled workers for a specific industry's need. These schools have produced 3,545 skilled workers as of June 1980 for such companies as: Burlington Industries, DuPont, GAF Corp., Lockheed, Michelin, Rockwell International and many others. Both the TEC and Special Schools programs have a close relationship with the S.C.D.B. and in the future with the S.C.R.A. Interagency, department-level, meetings between these groups would probably occur daily.
SOUTH CAROLINA STATE BOARD FOR TECHNICAL AND COMPREHENSIVE EDUCATION

EXECUTIVE DIRECTOR
- Office of Planning
- Office of Personnel
- Office of Finance
- Office of Facilities
- Office of Technology

DIVISION OF MANAGEMENT
- Administration
- Fiscal Services
- Research

DIVISION OF INSTRUCTION
- Associate Exec. Dir.
- Special Projects
- Curriculum Instruction
- Student Services
- Continuing Education

DIVISION OF INDUSTRIAL ECONOMIC DEV
- Associate Exec. Dir.
- Special Academies
- Training Consultants
- Industrial Training

18 TECHNICAL COLLEGES

AREA COMMISSION
- President

S.B.T. & C.E. (Education)
FUNCTION OF S.C.R.A.

Department administers classroom training for the ETA program for the unemployed and disadvantaged. The S.B.T. & C.F. also provides standards and administration for continuing education programs and the S.C. Fire Academy. The board consist of eight representatives of the congressional districts and superintendent of Education and the director of S.C.D.B.

The South Carolina Research Authority (S.C.R.A.) is charged to promote the development of high technology industries in the state. It will do this by providing the following:

1. A professional and business Research Association for both the private and public sections.

2. A Research Resource Inventory, A computer data base of research information.

3. Contracts for universities and colleges to do research work for the public and private sectors.

4. Action soliciting the location of high technology plants in the state.

5. Three research parks so that private industry can share facilities with state colleges to further research and development.
6. Research grants.
7. Recruitment of prominent researchers for state and private colleges.
8. Assistance in securing legislation to aid research.

Of the above mentioned the major thrust will be on the development and administration of the research parks and the solicitation of high-tech industries. Similar to the S.C.D.B., the S.C.R.A. director would meet with prospective industries and then take them to meet with the Governor. The director would also inform the prospect of the services offered by the S.C.D.B., S.B.T. & C.E. and other state agencies. The S.C.R.A. is governed by a Board of Trustees composed of:

2. The Governor, House Speaker, President of the Senate.
3. Chairman of S.C.D.B.
   Chairman of Commission of Higher Education.
   Chairman of S.B.T. & C.E.
4. And Eleven business representatives.
S.C.R.A. (Research)
The North Carolina Development Building should be aligned with the following major design criteria:

- Design as a progressive step consistent with industrial development.
- Daylighting and energy-efficient design.
- Urban context.
- Relationship to the Capital Complex.
- View to the Capital Complex.
- Relationship of the three agencies.
The South Carolina Development Building should be designed with the following as major design criteria:

* Image as a progressive state committed to industrial development.
* Daylighting and energy-conscious design.
* Urban context
* Relationship to the Capitol Complex
* Views to the Capitol Complex
* Relationship of the three agencies.

<table>
<thead>
<tr>
<th>Conference Room</th>
<th>100 ft²</th>
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<tbody>
<tr>
<td>200 ft²</td>
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<tr>
<td>250 ft²</td>
<td></td>
</tr>
<tr>
<td>300 ft²</td>
<td></td>
</tr>
<tr>
<td>Kitchenette</td>
<td>100 ft²</td>
</tr>
<tr>
<td>Receptionist</td>
<td>300 ft²</td>
</tr>
<tr>
<td>Storage Room</td>
<td>400 ft²</td>
</tr>
<tr>
<td>File Room</td>
<td>500 ft²</td>
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<tr>
<td>Equipment Room</td>
<td>200 ft²</td>
</tr>
<tr>
<td>Photo Lab</td>
<td>500 ft²</td>
</tr>
<tr>
<td>Lounge</td>
<td>150 ft²</td>
</tr>
<tr>
<td>Other</td>
<td>600 ft²</td>
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<tr>
<td>Total</td>
<td>10,000 ft²</td>
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### S.C.D.B.:

#### 60 employees

<table>
<thead>
<tr>
<th>Offices:</th>
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<tbody>
<tr>
<td>Director</td>
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<td>400 ft²</td>
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<tr>
<td>Sec.</td>
<td></td>
<td>100 ft²</td>
</tr>
<tr>
<td>Deputy Director</td>
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<td>300 ft²</td>
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<tr>
<td>Sec.</td>
<td></td>
<td>100 ft²</td>
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<tr>
<td>6 Dept. Heads</td>
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<td>1200 ft²</td>
</tr>
<tr>
<td>50 work stations</td>
<td></td>
<td>5000 ft²</td>
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| Library           |   | 450 ft² |

<table>
<thead>
<tr>
<th>Conference Rooms:</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1 @ 800</td>
<td></td>
<td>800 ft²</td>
</tr>
<tr>
<td>2 @ 400</td>
<td></td>
<td>800 ft²</td>
</tr>
<tr>
<td>2 @ 300</td>
<td></td>
<td>600 ft²</td>
</tr>
</tbody>
</table>

| Kitchenette      |   | 100 ft² |
| Receptionist     |   | 300 ft² |
| Storage          |   | 400 ft² |
| File Room        |   | 500 ft² |
| Equipment Room   |   | 200 ft² |
| Photo Lab        |   | 400 ft² |
| Lounge           |   | 150 ft² |
| Other            |   | 6000 ft² |

<p>| Total            |   | 18000 ft² |</p>
<table>
<thead>
<tr>
<th>Office Type</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>400 ft²</td>
</tr>
<tr>
<td>Waiting Room</td>
<td>100 ft²</td>
</tr>
<tr>
<td>3 Sec.</td>
<td>300 ft²</td>
</tr>
<tr>
<td>3 Asst. Director</td>
<td>600 ft²</td>
</tr>
<tr>
<td>3 Sec.</td>
<td>300 ft²</td>
</tr>
<tr>
<td>25 supervisors</td>
<td>2500 ft²</td>
</tr>
<tr>
<td>65 work stations</td>
<td>6500 ft²</td>
</tr>
<tr>
<td>Library</td>
<td>300 ft²</td>
</tr>
<tr>
<td>Conference Rooms</td>
<td></td>
</tr>
<tr>
<td>1 @ 450 ft²</td>
<td>450 ft²</td>
</tr>
<tr>
<td>2 @ 200 ft²</td>
<td>400 ft²</td>
</tr>
<tr>
<td>File Rooms</td>
<td>400 ft²</td>
</tr>
<tr>
<td>Storage</td>
<td>1000 ft²</td>
</tr>
<tr>
<td>Equipment Rooms</td>
<td>300 ft²</td>
</tr>
<tr>
<td>Computer Room</td>
<td>400 ft²</td>
</tr>
<tr>
<td>Mail Room</td>
<td>100 ft²</td>
</tr>
<tr>
<td>A/V. Room</td>
<td>200 ft²</td>
</tr>
<tr>
<td>Press Room</td>
<td>1000 ft²</td>
</tr>
<tr>
<td>Lounge</td>
<td>150 ft²</td>
</tr>
<tr>
<td>Other</td>
<td>10000 ft²</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>25000 ft²</td>
</tr>
</tbody>
</table>
**S.C.R.A.**

**8-10 employees.**

<table>
<thead>
<tr>
<th>Offices</th>
<th>400 ft²</th>
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</thead>
<tbody>
<tr>
<td>Director</td>
<td></td>
</tr>
<tr>
<td>3 Sec</td>
<td>300 ft²</td>
</tr>
<tr>
<td>Asst. Director</td>
<td>200 ft²</td>
</tr>
<tr>
<td>Sec</td>
<td>100 ft²</td>
</tr>
<tr>
<td>Real Estate Developer</td>
<td>200 ft²</td>
</tr>
<tr>
<td>Sec.</td>
<td>100 ft²</td>
</tr>
<tr>
<td>Receptionist</td>
<td>300 ft²</td>
</tr>
<tr>
<td>Conference Room</td>
<td>400 ft²</td>
</tr>
<tr>
<td>Kitchenette</td>
<td>100 ft²</td>
</tr>
<tr>
<td>File Room</td>
<td>300 ft²</td>
</tr>
<tr>
<td>Storage</td>
<td>300 ft²</td>
</tr>
<tr>
<td>Equipment Room</td>
<td>100 ft²</td>
</tr>
<tr>
<td>Other</td>
<td>1200 ft²</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4000 ft²</td>
</tr>
</tbody>
</table>
### Total Spatial Needs:

<table>
<thead>
<tr>
<th>Space</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.C.D.B.</td>
<td>18,000 ft²</td>
</tr>
<tr>
<td>S.B.T. &amp; C.E.</td>
<td>25,000 ft²</td>
</tr>
<tr>
<td>S.C.R.A.</td>
<td>4,000 ft²</td>
</tr>
<tr>
<td>Lobby/Exhibition</td>
<td>2,000 ft²</td>
</tr>
<tr>
<td>Computer Room</td>
<td>1,000 ft²</td>
</tr>
<tr>
<td>Auditorium (150 people)</td>
<td>1,200 ft²</td>
</tr>
<tr>
<td>Library</td>
<td>3,000 ft²</td>
</tr>
<tr>
<td>Restaurant</td>
<td>5,000 ft²</td>
</tr>
<tr>
<td>Speculative Office</td>
<td>50,000 ft²</td>
</tr>
<tr>
<td>Mechanical Equipment Room</td>
<td>3,500 ft²</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>110,000 ft²</strong></td>
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</tbody>
</table>

**Parking**

<table>
<thead>
<tr>
<th>Spaces</th>
<th>250 spaces</th>
</tr>
</thead>
</table>

---

46
SECTION AA

SECTION BB

SECTIONS
STRUCTURE - AGENCY LEVELS

MECHANICAL - AGENCY LEVELS

STRUCTURE - SPECULATIVE LEVELS

MECHANICAL - SPECULATIVE LEVELS

STRUCTURAL & MECHANICAL
WALL SECTIONS


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