FACILITY AUDIT REPORT
33 W. 11th Avenue
OHIO LEGAL CENTER
#193
SEPTEMBER 17, 1991

Prepared by:
The Ohio State University
Department of Physical Facilities
Division of Resource Management

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GENERAL BUILDING INFORMATION

OHIO LEGAL CENTER #193

BUILDING ADDRESS: 33 WEST 11TH AVENUE

GROSS SQ. FT.: 24,411

NET ASSIGNABLE SQ. FT.: 16,358

MECHANICAL/CUSTODIAL AREA SQ. FT.: 2,758

YEAR OF CONSTRUCTION: 1962

YEAR OF LAST RENOVATION: N/A

NUMBER OF STORIES/BASEMENT: THREE (3) WITH A FULL BASEMENT

AIR CONDITIONING (Percentage): 100

CURRENT USE: BUILDING IS VACANT, BUT IS DESIGNED TO BE AN OFFICE BUILDING

TYPE OF CONSTRUCTION: REINFORCED CONCRETE STRUCTURE

ESTIMATED REPLACEMENT COST: $2,353,000 *

BUILDING APPEARANCE: OUT OF DATE DECOR, BUT VERY FUNCTIONAL

HANDICAPPED ACCESSIBILITY: NONE, SOUTHEAST ENTRANCE DOOR IS AT GRADE LEVEL (NO STEPS), BUT DOOR DOES NOT HAVE AN AUTOMATIC OPENER.

INITIAL CONSTRUCTION QUALITY: GOOD

OVERALL BUILDING CONDITION: SATISFACTORY

NUMBER OF EXIT STAIRWAYS: TWO (2)

* Replacement Cost assigned January 1991 by The Office of Campus Planning and Space Utilization.

BUILDING SYSTEMS INFORMATION

OHIO LEGAL CENTER #193

HEATING:
Source GAS FIRED HOT WATER HEATING BOILER
Type Heating System RADIANT CEILING PANELS, FIN RADIATION, UNIT HEATERS
Steam (Line size, value location) NONE
Building Htg Water (line size, valve location) NONE

VENTILATION SYSTEM: HIGH VELOCITY DUAL DUCT SYSTEM

COOLING:
Bldg % 100 Chillers CARRIER RECIPROCATING CHILLER (75 TONS)
Window Units N/A Thru-the-wall N/A Direct exp. units N/A

HVAC CONTROL SYSTEM: POWERS PNEUMATIC SYSTEM

ELECTRIC: Source Size(KVA) Primary/Secondary Switchgear & Main Disc. (Rm)
1. COLUMBUS & SOUTHERN 3 PHASE, 4 WIRE, 120/208 VOLTS, 800 AMPS, RM 1M

PLUMBING:
Water (size, valve location) 2 1/2" WATER SERVICE SOUTHEAST BASEMENT CORNER
Gas (size, valve location) 4 INCH LINE, OUTSIDE AT THE SOUTHEAST CORNER
Domestic Hot Water (size, valve location) 1" LINE IN BASEMENT ROOM 1M
Compressed Air (size, location) AIR COMPRESSOR FOR CONTROLS IN RM 1M

SEWERS: Storm COMBINATION 8" LINE ON SOUTHSIDE OF THE BUILDING

METERS:
Gas (size, location) 4" LINE, SOUTHEAST CORNER OF THE BUILDING
Water (size, location) 2" LINE AND METER ON EAST BASEMENT WALL
Electric (size, location) SOUTH WALL OF THE BASEMENT IN ROOM 1M

ALARM SYSTEMS:
Fire Alarm YES Panel Location SOUTH BASEMENT WALL ROOM 1M
Fire Pump N/A Pump Location N/A
Sprinklers N/A Panel Location N/A
Other Alarms NONE

ELEVATORS:
Number ONE Type (passenger, freight) PASSENGER
Manufacturer WESTINGHOUSE Size 2000 LBS.

EMERGENCY GENERATOR: Size NONE Location N/A

KEY BOX LOCATION: ENTRY WAY OF THE NORTH (FRONT) ENTRANCE

ASBESTOS SURVEY (1986):
ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED IN THE HEAT EXCHANGER INSULATION AND INSULATION ON ELBOWS AND FITTINGS IN ROOM 1M.

OHIO LEGAL CENTER NARRATIVE

GENERAL

This Building Audit was conducted by Physical Facilities for the purpose of evaluating the present condition of the building for which Physical Facilities has a budgetary responsibility. This audit describes the current physical condition of the facility and identifies existing corrective maintenance and building component system replacement requirements.

It has been assumed that the program needs of the tenant departments are being met by the facility. In addition, this audit does not intend to assess the condition of this facility that is the budgetary responsibility of the tenant departments.

Audit objectives and methodology are described in greater detail in the "Building Audit Methodology" section of this report.

HISTORY

The construction of the Ohio Legal Center was completed in 1962. The office building was constructed for The Ohio Bar Association. The building has a full basement of 6515 square feet that was used for storage by The Ohio Bar Association. There is a landscaped courtyard with reflecting pool located off the main entrance and lobby.

The Ohio Bar Association moved out of the building earlier this year, and the building was acquired by The Ohio State University. The building is currently vacant. Some College of Law staff are being moved into the Ohio Legal Center. They will occupy part of the 3rd floor on a temporary basis. The basement is being remodeled to provide office and stockroom space for the new southeast area shop to be established in December, 1991.

PRIMARY SYSTEMS

The foundation, basement floor, and superstructure all appear to be in good condition. There are no signs of settlement or movement in the building foundation. The exterior closure, which consists of brick veneer, limestone panels, and aluminum window panels, shows no signs of structural problems. The exterior caulking is cracked and brittle and needs to be replaced. There is ivy growing on the east side of the building that should be removed.

The windows are aluminum single hung with spring balances. The windows all opened, and all of the balances were working. The windows are single glazed and a building improvement project is being proposed to replace these windows with a double glazed thermal break window. The entry doors are all aluminum with the exception of the steel double doors at the rear of the building that are steel. These doors need to be painted.

The roof on the Ohio Legal Center is the original one installed in 1962. While this roof is functioning satisfactorily, it has surpassed its useful expected life and will need to be replaced in the near future. A project has been proposed to replace this roof within the next five years.

SECONDARY SYSTEMS

The partitions, doors, walls, and ceilings are in good condition throughout the building. Several of the offices were recently painted. The corridors are a blue-grey glazed block that dates the decor of the building, but if cleaned would be in a like new condition.

The ceilings in the building are 12"x 12" metal pan ceiling tiles. The ceiling tiles, light fixtures, and registers are dirty and need to be cleaned. Other than being dirty, the ceilings throughout the building are in very good condition.

Composition floor tile has been installed in the corridors and office areas. The color of the tile cannot be matched, so replacement tiles are of a different color. Some of the offices on the 1st and 2nd floor have been carpeted, but the carpet is worn or damaged and needs to be replaced. The stairwells are constructed of metal framed stairs and terrazzo stair treads. The paint finish on the metal frame of the stairs is in fair condition.

SERVICE SYSTEMS

The major service systems at the Ohio Legal Center are 30 years old, but continue to function adequately. The elevator has a very good operating history. The cab does not have wheel chair access controls, but has both front and rear doors. There is no emergency telephone installed in the cab, so a project has been proposed to update this elevator.

The hot water heating system does a good job of heating the Ohio Legal Center. The plumbing for the domestic water system is operating adequately. The restroom fixtures were in good working order and no problems were observed. The basement has a sump pump and showed no signs of any moisture problems.

There is one (1) air handler system, a high velocity dual duct system, providing heating, cooling and ventilation to the building. The building is 100% air conditioned. The system components are 30 years old with the exception of the pneumatic controls that were installed in 1990.

No energy conservation changes have been incorporated in the Ohio Legal Center. A report was completed by Joseph Larabee in April, 1987 making certain recommendation for reducing energy costs, but none of these recommendations were adopted.

ELECTRICITY

The building is supplied with electricity by Columbus and Southern Electric Co. There is 800 amp electric service to the building. The utilization of the circuit breaker panels indicates that there is limited capacity to expand service in the building. A recent study to increase the reciprocating compressor from 75 to 100 horsepower noted that the building electrical service would have to be increased.

Building lighting is primarily fluorescent. The corridors, mechanical and storage rooms have incandescent lighting. These areas should be relamped with fluorescent fixtures to reduce building energy costs. All the lighting fixtures need to be cleaned.

The mechanical room in the basement has 9 different watt meter transducers for measuring electric usage. The transformer coils for these meters are sitting on the floor without any conduit protecting the wires. These coils should be removed or correctly installed.

SAFETY STANDARDS

The Ohio Legal Center is equipped with a manual fire alarm system. There are no hose cabinets of stand pipes in the building. There are portable fire extinguishers located on each floor. There are no emergency lights or lighted exit signs located in the building. These systems should be installed.

The Ohio Board of Regents Facilities Asbestos Inspection and Risk Assessment Program's report: Inventory of friable Asbestos-Containing Materials in Buildings of the Ohio State University (Main and Branch Campuses) and Recommendations for Corrective Action by PEI Associates, September 1986, located asbestos containing materials in the heat exchanger insulation and in the elbows & fittings insulation.

BUILDING PERIMETER

The sidewalks on 11th and along the parking area to the east are in good condition. The shrubs are overgrown and need to be trimmed back. The courtyard inside the fenced area has a reflective pool that needs to be repaired. This area needs to be improved by repairing the pool or filling it in so that plants could be grown in this area. The gravel walkways should be surfaced with concrete to provide access to the parking lot. A general trimming and clean-up of the shrubbery is needed.

The signage for the Ohio Legal Center is located on 11th Avenue and is engraved in the limestone front of the building. It would help identify the building better if an identification sign was added in front of the building on 11th Avenue.

A brick screen wall extends from the northeast corner of the building and extends to provide a circular screen for the flag pole located in the northeast corner of the property. The mortar joints and some brick have deteriorated and need to be repaired. A project has been proposed to repair this wall for $9,500. Consideration should be given to eliminating the wall and opening up the area to improve visibility and security in the area.

CONCLUSION

The Ohio Legal Center building systems are functioning very effectively for a building that is 30 years old. The HVAC system and the plumbing system are operating adequately. The current requests for improvements to the building are for the upgrading of the building to meet new safety requirements, comply with handicap access requirements, and to improve energy conservation.

The office walls are being painted and some of the vinyl floor tile is being replaced, but the major building systems are operating effectively. It appears that very few repairs or replacements have been made since the original equipment was installed in 1962.

The installation of Direct Digital Control (DDC) system and the replacement of incandescent lights would be the first priority improvements to be incorporate to

reduce energy costs.

Major building components that are expected to fail and need replaced in the next few years are the roof and the cooling system. Replacement of the cooling system will necessitate some upgrades to the electric service to the building.

PROPOSED MAINTENANCE PROJECTS
(R&R or CAPITAL FUNDED)

Ohio Legal Center #193

A. Corrective Maintenance Projects:

1. Install exit lights & emergency lights.....$25,000*

2. Remove Ivy from east side of the building and cutout & replace all sealants.(11,880 SF)..... 29,000
   Sub Total $54,000

B. Building Improvement Projects:

1. Repair reflective pool and walks around pool. Install new fence around the courtyard.....$15,400.

2. Repair brick screen wall at northeast corner of the building.....9,500*

3. Upgrade elevator to include wheelchair controls and emergency telephone.....35,000

4. Energy Conservation Modifications:
   (a) Replace incandescent lights with fluorescent fixtures.....15,000
   (b) Install DDC Controls to provide better temperature control and night setback.....24,000
   (c) Replace single glazed windows with insulated double glazed windows.....57,200

5. Replace electric service with new 1200 amp service, panel board and feeders.....12,775
   Sub Total $168,875

C. Building Component Replacements expected within the next 5 years:

1. Replace 8,344 SF of BUR roof.....$65,000*

2. Replace existing reciprocating chiller and air cooled cooled condensing unit with a new energy efficient unit.54,900
   Sub Total $119,900

Total Cost for all Projects = $342,775

* These projects are currently on our departmental project list as either proposed or funded projects.

MAINTENANCE PROJECTS
(Less than $5,000)

Ohio Legal Center #193

1. Paint steel doors at the rear of the building.

2. Glazed block corridor walls need to be washed.

3. Metal tile ceiling, light fixtures and registers need to be cleaned.

4. Install sign with address on 11th Avenue.

5. Trim shrubs and trees around the building and in the courtyard.

6. Remove the nine (9) Watt Meter Transducers that are improperly wired.

BUILDING EVALUATION SUMMARY

I. BUILDING INFORMATION

FAC # 193 FACILITY NAME: OHIO LEGAL CENTER
DATE: 8-28-91 INSPECTOR: RDL
YEAR CONSTRUCTED: 1962
GROSS SQ FT: 24,411 NET SQ FT: 16,358
REPLACEMENT COST $ 2,353,000 X 97% = 2,282,410 *

II. COMPONENT RATING

COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST **	BUILDING COMPONENT REPLACEMENT COST *	CONDITION VALUE MULTIPLIER FOR BLDG. COMPONENT	BUILDING COMPONENT CURRENT VALUE
Foundation	4.00	91,296	0.90	82,166
Columns and Beams	14.37	327,982	0.90	295,184
Exterior Walls	8.51	194,233	0.83	161,213
Windows & Doors	4.16	94,948	0.80	75,958
Roofing	2.74	62,538	0.50	31,269
Partitions & Drs.	8.90	203,134	0.84	170,633
Wall Finishes	2.71	61,853	0.63	38,967
Floor Finishes	6.18	141,053	0.57	80,400
Ceilings & Finish	7.34	167,529	0.71	118,946
Conveying	3.81	86,960	0.68	59,133
Plumbing	2.22	50,670	0.84	42,563
Heating	8.96	204,504	0.80	163,603
Cooling & Vent.	6.91	157,715	0.50	78,858
Elec. Ser. & Dist	1.36	31,041	0.80	24,833
Lighting & Power	10.98	250,609	0.61	152,871
Safety Standards	6.85	156,345	0.63	98,497
TOTALS	100.00	2,282,410	11.54	1,675,094

III. BUILDING RATING SUMMARY

Overall Building Rating = 73.4 %

* Replacement Cost assigned January 1991 by The Office of Campus Planning and Space Utilization deducting 3% for furnishings and fixed equipment allocation.

** Percent allocation of each building component is calculated from The Means Standard Construction Cost data for College Classroom Buildings.

FOUNDATIONS

FAC # 193 DATE 8-29-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Footings:	N/A	Sat	Att
Individual Footings & Piers	[X]	[ ]	[ ]
Continuous Footings POURED IN PLACE WITH FOUNDATION WALLS	[ ]	[X]	[ ]
Grade Beams	[X]	[ ]	[ ]
Piles	[X]	[ ]	[ ]
Caissons	[X]	[ ]	[ ]
b. Foundation Wall Materials:			
Steel	[X]	[ ]	[ ]
Concrete Cast-in-place FOUNDATION WALLS	[ ]	[X]	[ ]
Concrete Block	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Waterproofing and Underdrain:			
Coating	[X]	[ ]	[ ]
Membrane MASTIC PAPER SEALER ON OUTSIDE OF WALL	[ ]	[X]	[ ]
Board	[X]	[ ]	[ ]
Drain Tile PERFORATED DRAIN TILE TO SUMP PUMP	[ ]	[X]	[ ]
d. Slab on Grade (floor):			
Plain	[X]	[ ]	[ ]
Reinforced WIRE MESH	[ ]	[X]	[ ]
e. Special Substructures:			
	[X]	[ ]	[ ]

B. COMMENTS:

THERE ARE NO SIGNS OF SETTLEMENT OR SHIFTING IN THE FOUNDATION. THE BASEMENT WALLS DO NOT SHOW ANY CRACKS OR SIGNS OF MOISTURE.

C. COMPONENT RATING: (91,296) X (90.0%) = 82,166

Possible Value		Condition Value Multiplier		Component Value

COLUMNS AND BEAMS

FAC # 193 DATE 8-29-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Columns and Beams:	N/A	Sat	Att
Concrete-in-place THROUGH OUT THE BUILDING	[ ]	[X]	[ ]
Precast Concrete	[X]	[ ]	[ ]
Steel	[X]	[ ]	[ ]
Steel Fireproofing	[X]	[ ]	[ ]
Wood	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
b. Floors:			
Concrete Slab BASEMENT AND THE FLOOR FOR EACH STORY	[ ]	[X]	[ ]
Precast Slab	[X]	[ ]	[ ]
Metal Deck	[X]	[ ]	[ ]
Metal Deck w/concrete fill	[X]	[ ]	[ ]
Wood	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Roof System:			
Flat ALL THE ROOF AREAS ARE FLAT	[ ]	[X]	[ ]
Pitched	[X]	[ ]	[ ]
Concrete THE 3 STORY STRUCTURE ROOF DECK	[ ]	[X]	[ ]
Steel THE ONE STORY AREA AT THE ENTRANCE	[ ]	[X]	[ ]
Wood	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]

B. COMMENTS:

THE COLUMNS AND BEAMS DO NOT SHOW ANY SIGNS OF DETERIORATION.

C. COMPONENT RATING: (327,982) X (90.0%) = $295,184

Possible Value	Condition Value Multiplier	Component Value

EXTERIOR WALLS

FAC # 193 DATE 8-29-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Walls:	N/A	Sat	Att
Concrete	[X]	[ ]	[ ]
Masonry BRICK TO STONE JOINTS NEED RESEALED	[ ]	[ ]	[X]
Metal Siding	[X]	[ ]	[ ]
Wood Siding	[X]	[ ]	[ ]
Other ALUMINUM WALL PANELS BETWEEN WINDOWS	[ ]	[X]	[ ]
b. Finishes:			
Stucco	[X]	[ ]	[ ]
Paint	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]

B. COMMENTS:

IVY HAS GROWN ON THE EAST SIDE OF BUILDING THAT NEEDS TO BE REMOVED TO RESEAL STONE TO STONE AND BRICK TO STONE JOINTS. THE SCREEN WALLS AT THE NORTH EAST CORNER OF BUILDING ARE DETERIORATING AND COULD BE A SECURITY PROBLEM. WE WOULD RECOMMENDED THEY BE REMOVED RATHER THAN REPLACED OR REPAIRED.

C. COMPONENT RATING: (194,233) X (83.0%) = $161,213

Possible Value	Condition Value Multiplier	Component Value

EXTERIOR WINDOWS & DOORS

FAC # 193 DATE 8-29-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Windows type & number:	N/A	Sat	Att
Wood	[X]	[ ]	[ ]
Steel	[X]	[ ]	[ ]
Alum DOUBLE HUNG WINDOWS	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
b. Window glazing			
Single pane ALL WINDOWS (5,980 SF OF GLASS & PANELS)	[ ]	[X]	[ ]
Double pane	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Doors type & number:			
Wood	[X]	[ ]	[ ]
Steel DOUBLE DOORS AT THE SOUTH LOADING AREA	[ ]	[ ]	[X]
Alum ENTRY DOORS ON THE NORTH, SOUTH, AND EAST SIDE	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
d. Shading Devices:			
Types VENETIAN BLINDS AND DRAPERIES ARE USED	[ ]	[X]	[ ]

B. COMMENTS:

1. ALL THE WINDOWS THAT WERE OPENED AND CLOSED OPERATED CORRECTLY.
2. THE STEEL DOORS AT THE LOADING AREA ARE RUSTED AND NEED TO BE PAINTED.

C. COMPONENT RATING: (94,948) X (80.0%) = $75,958

Possible Value		Condition Value Multiplier		Component Value

ROOFING

FAC # 193 DATE 8-29-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Roof Covering:

Built-up	[X]	[ ]	[ ]
Built-up w/gravel A FEW AREAS SHOW SIGNS OF DETERIORATION	[ ]	[X]	[ ]
Asphalt Shingle	[X]	[ ]	[ ]
Copper	[X]	[ ]	[ ]
Glass (Skylight)	[X]	[ ]	[ ]
Slate	[X]	[ ]	[ ]
Spanish Tile	[X]	[ ]	[ ]
Metal	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]

b. Flashing:

Base & Counter HAS BEEN COVERED WITH MASTIC	[ ]	[X]	[ ]
Cap	[X]	[ ]	[ ]
Through Wall	[X]	[ ]	[ ]
Valley & Ridge	[X]	[ ]	[ ]

c. Gravel Stop & Edge Strips:

Type ALUMINUM AROUND THE EXTERIOR OF THE BUILDING	[ ]	[X]	[ ]

e. Drainage:

Gutters	[X]	[ ]	[ ]
Drains GOOD SLOPE TO ROOF DRAINS	[ ]	[X]	[ ]
Scuppers	[X]	[ ]	[ ]
Downspouts	[X]	[ ]	[ ]

f. Parapets:

Concrete	[X]	[ ]	[ ]
Brick	[X]	[ ]	[ ]
Block	[X]	[ ]	[ ]
Precast	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]

g. Insulation:

Type 2" OF RIGID INSULATION ON CONCRETE DECK	[ ]	[X]	[ ]

B. COMMENTS

1. THE ROOF COVER IS 30 YEARS OLD, BUT ONLY SHOWS SIGNS OF DETERIORATION AT A FEW SMALL AREAS. THERE ARE NO SIGNS OF ANY LEAKAGE ON THE INSIDE OF THE BUILDING. THERE IS 8,344 SQ. FT. OF ROOF AREA.
2. WE ARE RECOMMENDING THAT THIS ROOF COVER WILL NEED TO BE REPLACED IN THE NEXT 3 TO 6 YEARS.

C. COMPONENT RATING: (62,538) X (50.0%) = $31,269

Possible Value		Condition Value Multiplier		Component Value

PARTITIONS & DOORS

FAC # 193 DATE 8-29-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Partition Framing:	N/A	Sat	Att
Concrete Block BASEMENT PARTITION WALLS	[ ]	[X]	[ ]
Glazed Block WALLS OF CORRIDORS AND STAIRWELLS	[ ]	[X]	[ ]
Wood Stud	[X]	[ ]	[ ]
Metal Stud	[X]	[ ]	[ ]
Structural Tile	[X]	[ ]	[ ]
Rated	[X]	[ ]	[ ]
Other MARBLE AT LOBBY ENTRANCE AND AROUND FIREPLACE RM 101	[ ]	[X]	[ ]
b. Special partitions and Walls:			
Toilet PAINTED METAL PARTITIONS	[ ]	[X]	[ ]
Screen Walls	[X]	[ ]	[ ]
Gate	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Wall Material:			
Plaster WALLS BETWEEN CORRIDORS & OFFICES	[ ]	[X]	[ ]
Plaster Board	[X]	[ ]	[ ]
Glass	[X]	[ ]	[ ]
Plywood	[X]	[ ]	[ ]
Paneling LOCATED IN RM 101, 105, 106, AND 210	[ ]	[X]	[ ]
Trim & Wainscot	[X]	[ ]	[ ]
Tile/Glazed WALLS OF THE RESTROOMS	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
d. Interior Doors & Frames:			
Met Door/Met Frame	[X]	[ ]	[ ]
Wood Door/Wood Frame	[X]	[ ]	[ ]
Wood Door/Metal Frame OFFICE ENTRANCES	[ ]	[X]	[ ]
Glazing ENTRANCE DOORS FRONT AND SIDE	[ ]	[X]	[ ]
Roll Up	[X]	[ ]	[ ]
Sliding	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
e. Hardware:			
Door Closers ALL DOORS TO THE CORRIDORS	[ ]	[X]	[ ]
Lock Sets	[ ]	[X]	[ ]
Kick/Push Plates ALL DOORS FROM CORRIDORS	[ ]	[X]	[ ]
Thresholds	[X]	[ ]	[ ]
Panic Devices EXIT DOORS	[ ]	[X]	[ ]
Security & Detection	[X]	[ ]	[ ]
Automatic Openers	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]

B. COMMENTS:

CORRIDOR WALLS SHOULD BE WASHED.

C. COMPONENT RATING: (203,134) X (84.0%) = $170,633

Possible Value	Condition Value Multiplier	Component Value

WALL FINISHES

FAC # 193 DATE 8-29-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION	N/A	Sat	Att
a. Paint OFFICE WALLS RM 107, 117, 203, 204, 209-214, 304,	[ ]	[ ]	[X]
b. Wall Coating 310 AND 311.	[X]	[ ]	[ ]
c. Wall Coverings	[X]	[ ]	[ ]
d. Paneling			
Prefinished ROOMS 105, 106, 101, AND 205	[ ]	[X]	[ ]
Plank	[X]	[ ]	[ ]
e. Cork	[X]	[ ]	[ ]
f. Wallpaper	[X]	[ ]	[ ]
g. Ceramic Tile RESTROOMS	[ ]	[X]	[ ]
h. Trim & Wainscot	[X]	[ ]	[ ]
i. Decoration	[X]	[ ]	[ ]
j. Glass	[X]	[ ]	[ ]
k. Other	[X]	[ ]	[ ]

B. COMMENTS

OFFICE WALLS NEED PAINTED AND CORRIDORS CLEANED.

C. COMPONENT RATING: **(61,853) X (63.0%) = $38,967**

Possible Value		Condition Value		Component Value
		Multiplier		

FLOOR FINISHES

FAC # 193 DATE 8=30-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Carpet:			
Rolled RMS 101, 105-108, 115, 117, 209-214 NEEDS REPLACED	[ ]	[ ]	[X]
Tile	[X]	[ ]	[ ]
b. Composition:			
Epoxy	[X]	[ ]	[ ]
Synthetic	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Concrete Topping:			
Clear Sealant BASEMENT FLOOR	[ ]	[X]	[ ]
Abrasive	[X]	[ ]	[ ]
Epoxy	[X]	[ ]	[ ]
Aggregate	[X]	[ ]	[ ]
d. Resilient:			
Vinyl Tile RMS 109, 202-204, 301-304, 309-312	[ ]	[ ]	[X]
Linoleum	[X]	[ ]	[ ]
Vinyl	[X]	[ ]	[ ]
Rubber	[X]	[ ]	[ ]
Cork	[X]	[ ]	[ ]
e. Ceramic Tile CERAMIC MOSAIC TILE IN RESTROOMS	[ ]	[X]	[ ]
f. Masonry	[X]	[ ]	[ ]
g. Terrazzo MAIN LOBBY AND GROUND FLOOR OF SE STAIRWELL	[ ]	[X]	[ ]
h. Wood	[X]	[ ]	[ ]
i. Metal	[X]	[ ]	[ ]

B. COMMENTS

1. ALL CARPETED AREAS NEED TO HAVE THE CARPET REPLACED.
2. FLOOR TILE IN ROOM 311 NEEDS TO BE REPLACED.

C. COMPONENT RATING: (141,053) X (57.0%) = $80,400

Possible Value		Condition Value Multiplier		Component Value

CEILINGS AND FINISHES

FAC # 193 DATE 8-30-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. System Type:	N/A	Sat	Att
Exposed CONCRETE IN BASEMENT	[ ]	[X]	[ ]
Applied to Structure	[X]	[ ]	[ ]
Suspended	[ ]	[X]	[ ]
b. Materials:			
Drywall	[X]	[ ]	[ ]
Plaster UNDERSIDE OF STAIRS AND RMS 101 & 115	[ ]	[X]	[ ]
Mineral Fiber Board	[X]	[ ]	[ ]
Metal Pan ALL THE ROOMS EXCEPT THOSE MENTIONED ABOVE	[ ]	[ ]	[X]
Luminous Panels	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Finishes:			
Paint BOTH THE PLASTER AREAS AND METAL TILES HAVE PAINT	[ ]	[X]	[ ]
Mineral Fiber	[X]	[ ]	[ ]
Fabric	[X]	[ ]	[ ]
Prefinished	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
d. Openings & Inserts:			
Air Distribution	[ ]	[X]	[ ]
Lighting Fixtures	[ ]	[X]	[ ]
Access Panels	[X]	[ ]	[ ]
Skylights	[X]	[ ]	[ ]
Fire Protection	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]

B. COMMENTS:

THE METAL PAN CEILING TILE IS DIRTY AND NEEDS TO BE CLEANED THROUGHOUT THE BUILDING.

C. COMPONENT RATING: (167,529) X (71.0%) = $118,946

Possible Value		Condition Value Multiplier		Component Value

CONVEYING

FAC # 193 DATE 8-30-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Elevators:	N/A	Sat	Att
Number ONE (1)	[ ]	[X]	[ ]
Type PASSENGER	[ ]	[X]	[ ]
Speed 100 fpm	[ ]	[X]	[ ]
Capacity (lbs) 2,000 lbs.	[ ]	[X]	[ ]
Dimensions 4' X 5'	[ ]	[X]	[ ]
Door Operation:			
Center	[X]	[ ]	[ ]
To Side ELEVATOR HAS FRONT AND REAR DOORS	[ ]	[X]	[ ]
b. Lifts and Hoists:			
Number	[X]	[ ]	[ ]
Type	[X]	[ ]	[ ]
c. Moving Stairs and Walks:			
Number	[X]	[ ]	[ ]
Type	[X]	[ ]	[ ]
d. Conveyors:			
Number	[X]	[ ]	[ ]
Type	[X]	[ ]	[ ]
e. Pneumatic Tubes:			
Number	[X]	[ ]	[ ]
Type	[X]	[ ]	[ ]

B. COMMENTS:

ELEVATOR NEEDS TO BE UPGRADED WITH HANDICAP CONTROLS AND EMERGENCY TELEPHONE COMMUNICATIONS.

C. COMPONENT RATING: **(86,960) X (68.0%) = $59,133**

Possible Value		Condition Value Multiplier		Component Value

MECHANICAL/PLUMBING

FAC # 193 DATE 9-3-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Services Available:	N/A	Sat	Att
Cold Water COPPER LINES	[ ]	[X]	[ ]
Hot Water COPPER LINES	[ ]	[X]	[ ]
Acid Waste	[X]	[ ]	[ ]
Oxygen	[X]	[ ]	[ ]
Natural Gas LOCATED IN THE MECHANICAL ROOM 1M ONLY	[ ]	[X]	[ ]
Vacuum	[X]	[ ]	[ ]
Distilled Water	[X]	[ ]	[ ]
Compressed Air COMPRESSOR LOCATED IN THE BASEMENT	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
b. Piping & Fittings:			
Cast Iron WASTE DRAIN LINES	[ ]	[X]	[ ]
Copper Tubing WATER SUPPLY LINES	[ ]	[X]	[ ]
Plastic	[X]	[ ]	[ ]
Steel GAS SUPPLY LINES	[ ]	[X]	[ ]
Glass	[X]	[ ]	[ ]
c. Water Heaters:			
Electric	[X]	[ ]	[ ]
Gas NEW HEATER INSTALLED IN 1989	[ ]	[X]	[ ]
Oil	[X]	[ ]	[ ]
Steam Converter	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
d. Drainage:			
Storm Drains	[ ]	[X]	[ ]
Sanitary Drainage	[ ]	[X]	[ ]
Combined Storm/San.	[X]	[ ]	[ ]
Floor Drains	[ ]	[X]	[ ]
e. Fixtures:			
Water Closets 10 LOCATED IN RESTROOMS	[ ]	[X]	[ ]
Urinals 3 FIXTURES, ONE ON EACH FLOOR	[ ]	[X]	[ ]
Lavatories 7 FIXTURES IN THE BUILDING	[ ]	[X]	[ ]
Showers	[X]	[ ]	[ ]
Kitchen Sinks 1 LOCATED IN ROOM 109	[ ]	[X]	[ ]
Service Sinks 4 LOCATIONS, ONE ON EACH FLOOR	[ ]	[X]	[ ]
Drinking Fountains	[X]	[ ]	[ ]
Electric Water Coolers 3 FIXTURES, ONE ON EACH FLOOR	[ ]	[X]	[ ]
f. Sprinkler Systems:			
Wet	[X]	[ ]	[ ]
Dry	[X]	[ ]	[ ]
Water Storage/Supply	[X]	[ ]	[ ]
g. Standpipe Systems:			
Wet	[X]	[ ]	[ ]
Dry	[X]	[ ]	[ ]
Valves	[X]	[ ]	[ ]
Hose Cabinets	[X]	[ ]	[ ]

B. COMMENTS:

NO DEFICIENCIES WERE OBSERVED WITH THE PLUMBING SYSTEM.

C. COMPONENT RATING: (50,670) X (84.0%) = $42,563

Possible Value | Condition Value Multiplier | Component Value

MECHANICAL/HEATING

FAC # 193 DATE: 9-3-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Heat Source:	N/A	Sat	Att
Central Plant Steam	[X]	[ ]	[ ]
Central Plant Hot Water	[X]	[ ]	[ ]
Boilers: Type WEIL-MCLAIN INSTALLED IN 1988	[ ]	[X]	[ ]
Size BG 688 W-S	[ ]	[X]	[ ]
Furnace: Type	[X]	[ ]	[ ]
Size	[X]	[ ]	[ ]
Heat Pump: Type	[X]	[ ]	[ ]
Size	[X]	[ ]	[ ]
Burners: gas	[X]	[ ]	[ ]
oil	[X]	[ ]	[ ]
b. System Type:			
Steam	[X]	[ ]	[ ]
Hot Water NEW GAS FIRED HOT WATER TANK INSTALLED IN 1988	[ ]	[X]	[ ]
Air	[X]	[ ]	[ ]
Electric	[X]	[ ]	[ ]
Solar	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Space Equipment:			
Radiators	[X]	[ ]	[ ]
Convectors	[X]	[ ]	[ ]
Finned Tube LOCATED IN HOT DECK OF VENTILATION SYSTEM	[ ]	[X]	[ ]
Baseboard	[X]	[ ]	[ ]
2-Pipe Fan Coil STAIRWELLS HAVE UNITS AT ENTRANCES	[ ]	[X]	[ ]
Unit Ventilators	[X]	[ ]	[ ]
Multizone	[X]	[ ]	[ ]
Double Duct OFFICE AREAS HAVE A HIGH VELOCITY DUAL DUCT	[ ]	[ ]	[X]
Terminal Reheat	[X]	[ ]	[ ]
Other CEILING HAS RADIANT HOT WATER HEATING PANELS	[ ]	[X]	[ ]
d. Control Type:			
Pneu POWERS PNEUMATIC CONTROLS	[ ]	[ ]	[X]
Electric	[X]	[ ]	[ ]
Electronic	[X]	[ ]	[ ]
DDC	[X]	[ ]	[ ]
Manual Valves	[X]	[ ]	[ ]

B. COMMENTS:

NO DEFICIENCIES WERE OBSERVED IN HEATING SYSTEM. THERE HAVE NOT BEEN ANY ENERGY CONSERVATION MODIFICATIONS MADE TO THIS BUILDING. A PROJECT IS PROPOSED TO INCORPORATE DDC CONTROLS AND REPLACE INCANDESCENT LIGHTS WITH FLUORESCENT FIXTURES.

C. COMPONENT RATING: **(204,504) X (80.0%) = $163,603**

Possible Value		Condition Value Multiplier		Component Value

COOLING & VENTILATING

FAC # 193 DATE: 9-3-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. System:			
Type HIGH VELOCITY DUAL DUCT WITH A DX COOLING COIL	[ ]	[ ]	[X]
Capacity APPROX. 75 TONS	[ ]	[ ]	[X]
b. Chillers:			
Centrifugal	[X]	[ ]	[ ]
Reciprocating ACME, MODEL #5H89-338	[ ]	[ ]	[X]
Absorption	[X]	[ ]	[ ]
c. Cooling Towers:			
Type	[X]	[ ]	[ ]
Capacity	[X]	[ ]	[ ]
d. Condensers: AIR CONDENSER, BUFFALO FORGE #60L 17950	[ ]	[ ]	[X]
e. Space Equipment:			
Direct Expansion -			
Window units	[X]	[ ]	[ ]
Thru-the-wall	[X]	[ ]	[ ]
Single zone	[X]	[ ]	[ ]
Single zone con. vol	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
Air/Water -			
2-pipe fan coil	[X]	[ ]	[ ]
Unit ventilators	[X]	[ ]	[ ]
Terminal Reheat	[X]	[ ]	[ ]
Variable volume	[X]	[ ]	[ ]
Dual Duct	[X]	[ ]	[ ]
f. Special Systems:			
Type DRAFT FAN FOR FIREPLACE IN 101	[ ]	[X]	[ ]
Capacity	[X]	[ ]	[ ]
g. Control Systems:			
Pneu POWERS SYSTEM	[ ]	[X]	[ ]
Electric	[X]	[ ]	[ ]
Electronic	[X]	[ ]	[ ]
h. Fans:			
Exhaust FOUR (4) FANS	[ ]	[X]	[ ]
Recirculating TWO (2) FANS	[ ]	[X]	[ ]

B. COMMENTS:

THE RECIPROCATING COMPRESSOR IS CURRENTLY BEING REPAIRED. A NEW DISCONNECT BREAKER AND FAN BELT PULLEYS ARE BEING INSTALLED.

C. COMPONENT RATING: **(157,715)** X **(50.0%)** = **$78,858**

Possible Value | Condition Value Multiplier | Component Value

ELECTRICAL/SERVICE & DISTRIBUTION

FAC # 193 DATE: 9-3-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a)Service:

Substation COLUMBUS & SOUTHERN ELECTRIC
Primary Voltage
Transformer:

Manufacture	Type	KVA	Secondary Voltages
N/A	N/A	N/A	3 PHASE, 120/208 VOLTS

(b)Distribution System:

Panelboard (type) Federal Pacific (F.O. P15011)
Voltage 120/208 Volts, 3 Phase, 4 Wire
Amperage 800 AMPS
Conduit n/a
Conductor n/a
Wire (type) Copper
Armored Cable n/a
Other n/a

(c)Emergency System:

General or (type & capacity) NONE

B. COMMENTS:

ELECTRIC SERVICE IS CLOSE TO BEING FULLY UTILIZED. NEW SERVICE WILL HAVE TO BE RUN IF R&R PROJECT TO INCREASE CHILLER HORSE POWER IS FUNDED.

C. COMPONENT RATING: (31,041) X (80.0%) = $24,833

Possible Value		Condition Value	Multiplier	Component Value

ELECTRICAL/LIGHTING & POWER

FAC # 193 DATE: 9-3-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

a. Lighting (lamp type):	N/A	Sat	Att
Fluor USED IN OFFICE AREAS (FIXTURES ARE DIRTY)	[ ]	[ ]	[X]
Incand USED IN CORRIDORS & RMS. 101 & 115	[ ]	[X]	[ ]
HID	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
b. Receptacles & Switches			
Type & Capacity STANDARD GROUNDED RECEPTACLES	[ ]	[X]	[ ]
c. Special:			
Baseboard Heat	[X]	[ ]	[ ]
Lightning Protection	[X]	[ ]	[ ]
Communication & Alarm	[X]	[ ]	[ ]
Data Systems	[X]	[ ]	[ ]

B. COMMENTS:

1. THE INCANDESCENT LIGHTS SHOULD BE REPLACED WITH FLUORESCENT FIXTURES TO CONSERVE ENERGY.
2. THE FLUORESCENT FIXTURES IN THE OFFICE AREAS NEED TO BE CLEANED.

C. COMPONENT RATING: (250,609) X (61.0%) = $152,871

Possible Value	Condition Value Multiplier	Component Value

SAFETY STANDARDS

FAC # 193 DATE: 9-3-91 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a)Exits:

Stair Construction:	N/A	SAT	ATT
concrete	[X]	[ ]	[ ]
steel STEEL FRAME, TILE TREADS	[ ]	[X]	[ ]
wood	[X]	[ ]	[ ]

Number of exits TWO (2) STAIRWELL EXITS

(b)Fire Rating:

Construction Type: I X II ___ III ___ IV ___ V ___ VI

Building Height: 36 FEET 3 STORIES

(c)Extinguishing Systems:

Portable	[ ]	[X]	[ ]
Standpipe	[X]	[ ]	[ ]
Hose Cabinets	[X]	[ ]	[ ]
Sprinklers	[X]	[ ]	[ ]
Suppression	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]

(d)Detection & Alarm Systems:

Manual Alarm	[ ]	[X]	[ ]
Annunciator	[X]	[ ]	[ ]
Smoke Detectors	[X]	[ ]	[ ]

(e)Lighting Systems:

Exit Signs	[ ]	[X]	[ ]
Exit Lighting	[X]	[ ]	[ ]
Emergency Lighting	[X]	[ ]	[ ]
Emergency Generator	[X]	[ ]	[ ]

B. COMMENTS:

BUILDING DOES NOT COMPLY WITH CURRENT SAFETY CODE. EMERGENCY LIGHTS AND POWER SYSTEMS NEED TO BE ADDED.

C. COMPONENT RATING: **(156,345) X (63.0%) = $98,497**

Possible Value	Condition Value	Multiplier	Component Value

BUILDING PERIMETER EVALUATION

FAC # 193 DATE: 9-3-91 INSPECTOR: 9-1-91

A. SYSTEM DESCRIPTION

1. Structural Access:	N/A	Sat	Att
Driveway LOCATED ON EAST AND SOUTH SIDES OF THE BUILDING	[ ]	[X]	[ ]
Loading Dock NONE, DELIVERY DOOR AT REAR	[X]	[ ]	[ ]
Sidewalks			
Front ALONG 11TH AVENUE	[ ]	[X]	[ ]
Side NEXT TO PARKING AREA	[ ]	[X]	[ ]
Rear DOUBLE DOORS FOR DELIVERIES	[ ]	[X]	[ ]
Steps			
Front MARBLE AT FRONT DOOR	[ ]	[X]	[ ]
Side	[X]	[ ]	[ ]
Rear	[X]	[ ]	[ ]
Handicap Ramp NONE AVAILABLE	[ ]	[ ]	[X]

2. Lawn and Landscaping:			
Lawn VERY DRY WITH SOME WEEDS	[ ]	[X]	[ ]
Shrubs OVERGROWN, NEED TO BE TRIMMED	[ ]	[ ]	[X]
Trees NEED TO BE PRUNED, SOME BRANCHES OVERHANG ROOF	[ ]	[ ]	[X]
Undesirable Insect NONE OBSERVED	[ ]	[X]	[ ]
Bedding Material MULCH	[ ]	[X]	[ ]
Watering System	[X]	[ ]	[ ]

3. General Site Information:			
Signage OHIO LEGAL NAME IS ENGRAVED IN BUILDING FRONT	[ ]	[ ]	[X]
Address Identification NONE	[ ]	[ ]	[X]
Security Lights NONE	[ ]	[ ]	[X]
Street Lights ON 11TH AVENUE	[ ]	[X]	[ ]
Drainage	[ ]	[X]	[ ]
Storm Drains	[ ]	[X]	[ ]

B. COMMENTS:

1. THE CHAIN LINK FENCE AROUND THE COURTYARD NEEDS TO BE REPLACED.
2. THE REFLECTIVE POOL IN THE COURT YARD NEEDS THE CERAMIC TILE REPAIRED AND REPLACED. THE WALKS IN THE COURT YARD ARE GRAVEL.

The Ohio State University
Department of Physical Facilities
BUILDING AUDIT METHODOLOGY

1. BUILDING AUDIT PROGRAM OBJECTIVE

To provide a building-by-building inventory, including maintenance deficiencies that currently exist, for the 172 OSU buildings that the Department of Physical Facilities is budgetarily responsible. These audits will be used to establish repair and renovation projects, budget cost estimates for these projects, and overall levels of required maintenance funding.

2. BUILDING AUDIT APPROACH

A five-step procedure is used to meet the program objectives:

1. Collect Historical and Inventory Data on each building.
2. Interview Building Occupants.
3. Perform a Building Inspection.
4. Complete Building Evaluation Forms.
5. Issue Written Report.

3. DATA ORGANIZATION

The data collected is stored by hard copy with field notes in a building file established for each building. The report data is being stored in a database program that allows retrieval of specific data as it is needed. The "Building Evaluation" forms contain ratings for the condition of each building component and a description of any deficiencies for those components. The "Building Information" sheets provide data on the utilities to the buildings and the type of systems in each building.

4. COST ESTIMATES

Costs are for budgeting purposes only and are based on The Means Standard Construction Cost data, auditor experience, industry sources and OSU project cost data. Costs are reported current to the year of the audit. The building component values assigned in the "Building Evaluation" forms are not cost estimates. These values are calculated from the replacement cost provided by The Office of Campus Planning and Space Utilization for each OSU building. This building replacement cost is allocated to each building component to provide an estimated value for each component. Project cost estimates will exceed the building component values in most situations because of tear-out, handling and site limitations that occur in building component replacement projects.

5. DATA USAGE

Repair and Renovation Projects: provided to assist in the budgeting process for the Department of Physical Facilities.

Building Evaluation: provided to give a numerical rating for each building on campus quantifying its percentage of deficiency.

6. LIMITATIONS

(1) All inspections are visual and do not include physical tests, instrumentation or metering measurements, sampling, or monitoring.

(2) Only random typical offices or laboratories are entered. Typical spaces are deemed to be representative of average conditions throughout each building.

(3) The scope of the analysis does not include complete OSHA, energy, or physical impaired access study. Buildings and components are inspected for condition and general safety requirements rather than specialized code conformance.

(4) It is assumed that the buildings inspected were approved by the State of Ohio Division of Factory and Building Inspection at the time of construction. The recommendations listed in the reports are not an attempt to bring these existing buildings up to present day code standards. Rather, the intent is to eliminate obvious problems and to upgrade the buildings in a reasonable manner in regard to occupant safety.

(5) Cost estimates are in current year dollars and include contractor mark-ups, construction administration costs, and architectural/engineering costs where applicable. Escalation factors must be applied for future work. Combining of projects should serve to decrease costs. These estimates are strictly for purposes of budgeting, and final pricing will be required when the specific scope of work for the project is defined.

(6) The building inspections are defined to include the following:

(a) Includes general repainting and redecorating, wholesale replacement of building and system components. Ongoing maintenance, replacement and renovation projects are not included.

(b) Includes exterior building walls and attached items.

(c) Includes the first step up at all entries. Ramps outside the buildings are included; the steps and walks up to the ramps are not included.

(d) Blinds, drapes, light bulbs, and movable furniture are not included.

(e) Fixed equipment inside the buildings that is installed and maintained by a specific academic department or using agency is not included.

(f) Utility lines supplying the buildings are not included.

(g) The program needs of the using department are assumed to be satisfied. No consideration has been given to anticipate any changes in current occupant space needs.

ABBREVIATIONS

ATT.....ATTENTION NEEDED
BLDG.....BUILDING
BUR.....BUILT UP ROOF
DD.....DUAL DUCT AIR HANDLING SYSTEM
DDHV.....DUAL DUCT HIGH VELOCITY
DHWR.....DOMESTIC HOT WATER RETURN
DHWS.....DOMESTIC HOT WATER SUPPLY
DX.....DIRECT EXPANSION AIR CONDITIONER
FPM.....FEET PER MINUTE
HID.....HIGH INTENSITY DISCHARGE LIGHT
HVAC.....HEATING, VENTILATING AND
AIR CONDITIONING SYSTEM
KV.....KILOVOLTS
KVA.....KILOVOLTS AMPS
KW.....KILOWATTS
LC.....LIQUID COOLED
MZ.....MULTIZONE AIR HANDLING SYSTEM
N/A.....NOT APPLICABLE
PSI.....POUNDS PER SQUARE INCH
RM.....ROOM
SAT.....SATISFACTORY
SR.....STEAM RETURN LINE
SS.....STEAM SUPPLY LINE
TR.....TERMINAL REHEAT AIR HANDLING SYSTEM
V.....VOLTS
VAV.....VARIABLE AIR VOLUME SYSTEM

APPENDIX

Building Floor Plans
C-1 Building Space Assignments

Worksheet

CALCULATION OF BUILDING COMPONENT PERCENTAGE OF TOTAL COST

OHIO LEGAL CENTER #193 **DATE: 9-5-91**

MEANS SQUARE FOOT COSTS

BUILDING SYSTEM	CLASS	LAB.	OFFICE	SUBJECT	% TOTAL
Foundations	2.85	8.61	2.14	2.14	3.99
Columns and Beams	7.70	4.73	6.33	7.70	14.37
Exterior Walls	1.63	2.94	4.56	4.56	8.51
Ext. Windows & Drs.	2.23	2.28	1.29	2.23	4.16
Roofing	1.47	3.01	0.97	1.47	2.74
Partitions & Doors	4.77	5.87	3.76	4.77	8.90
Wall Finishes	1.46	2.96	1.45	1.45	2.71
Floor Finishes	2.76	3.31	4.28	3.31	6.18
Ceilings & Finish	3.93	3.93	3.93	3.93	7.34
Conveying	0.92	0.00	2.04	2.04	3.81
Plumbing	4.54	12.10	1.19	1.19	2.22
Heating	4.80	4.80	4.80	4.80	8.96
Cooling & Vent.	5.51	5.51	3.70	3.70	6.91
Elec. Ser. & Dist.	0.95	0.56	0.73	0.73	1.36
Lighting & Power	6.39	5.50	5.88	5.88	10.98
Safety Standards	3.67	2.66	0.31	3.67	6.85
TOTAL	55.58	68.77	47.36	53.57	99.99

Worksheet

CALCULATION OF THE CONDITION VALUE MULTIPLIER

Ohio Legal Center #193 **DATE: 9-5-91**

	Expect Life	Age	Age Condition Value*	Perf Rate	Performance Condition Value**	Component Condition Value
Foundation	100	30	0.23	1.00	0.67	0.90
Column & Beams	100	30	0.23	1.00	0.67	0.90
Exterior Walls	75	30	0.20	0.95	0.63	0.83
Windows & Doors	60	30	0.17	0.95	0.63	0.80
Roofs	30	30	0.00	0.75	0.50	0.50
Partitions	60	30	0.17	1.00	0.67	0.84
Wall Finishes	15	30	0.00	0.95	0.63	0.63
Floor Finishes	60	30	0.17	0.60	0.40	0.57
Ceiling & Finish	40	30	0.08	0.95	0.63	0.71
Conveying	40	30	0.08	0.90	0.60	0.68
Plumbing	60	30	0.17	1.00	0.67	0.84
Heating	50	30	0.13	1.00	0.67	0.80
Cooling & Vent.	30	30	0.00	0.75	0.50	0.50
Electric Serv.	50	30	0.13	1.00	0.67	0.80
Lighting & Power	40	30	0.08	0.80	0.53	0.61
Safety Standards	25	30	0.00	0.95	0.63	0.63

* The age condition value is column (C-B) x 33.33%.
** The performance condition value is column E x 67.77%.