

FACILITY AUDIT REPORT
GRAVES HALL, Bldg 277
DECEMBER 1, 1992

Prepared by:
James P. Hertenstein
Division of Resource Management
Department of Physical Facilities
The Ohio State University

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GENERAL BUILDING INFORMATION

GRAVES HALL #277

BUILDING ADDRESS: 333 WEST 10TH AVENUE

GROSS SQ. FT.: 224,932

NET ASSIGNABLE SQ. FT.: 118,831

MECHANICAL/CUSTODIAL AREA SQ. FT.: 33,133

YEAR OF CONSTRUCTION: 1969

YEAR OF LAST RENOVATION: NONE

NUMBER OF STORIES/BASEMENT: 6 FLOORS AND BASEMENT

AIR CONDITIONING (Percentage): 95

CURRENT USE: LABORATORIES AND OFFICES FOR THE COLLEGE OF MEDICINE

TYPE OF CONSTRUCTION: REINFORCED CONCRETE FRAME WITH MASONRY VENEER

ESTIMATED REPLACEMENT COST: \$32,160,000 *

WHEELCHAIR ACCESSIBILITY: NORTH ENTRANCE IS EQUIPPED WITH AUTOMATIC DOOR OPENER.
BUILDING IS ACCESSIBLE FROM SEVERAL BUILDINGS IN THE AREA VIA PEDESTRIAN
TUNNELS. ALL FLOORS ARE ACCESSIBLE FROM THE BUILDING ELEVATORS.

OVERALL BUILDING CONDITION: SATISFACTORY**

NUMBER OF EXIT STAIRWAYS: FOUR

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

** Office of Campus Planning and Space Utilization C-1 Report Condition Code.

BUILDING SYSTEMS INFORMATION

GRAVES HALL #277

HEATING:

Source UNIVERSITY POWER PLANT

Type Heating System HOT WATER

Steam (Line size, valve location) 8" SUPPLY AND 4" RETURN, RM B112M

Building Htg Water (line size, valve location) LOCAL STEAM CONVERTERS, B112M

VENTILATION SYSTEM:

4 DUAL DUCT HIGH VELOCITY/VARIABLE AIR VOLUME, 1 TERMINAL REHEAT SYSTEM

COOLING: Bldg % 95 Chillers 1-ABSORBER, 1-ELEC. CENT., 1- ELEC. RECIP

HVAC CONTROL SYSTEM: JOHNSON PNEUMATIC CONTROL SYSTEM

ELECTRIC: Source Size(KVA) Primary/Secondary Switchgear & Main Disc. (Rm)

1.BUCKEYE (101/302) 1500 13,200/(480/277) PENTHOUSE

2.BUCKEYE (101/302) 1500 13,200/(480/277) B112A

3.BUCKEYE (101/302) 750 13,200/(480/277) PENTHOUSE

4.BUCKEYE (101/302) 300 13,200/(208/120) PENTHOUSE

PLUMBING:

Water (size, valve location) 6", B112M

Gas (size, valve location) 6", W059

Domestic Hot Water (size, valve location) LOCAL CONVERTER, PENTHOUSE

Compressed Air (size, location) LOCAL COMPRESSORS FOR LABS AND CONTROLS

SEWERS: Storm 4 @ 6", 1 @ 8" Sanitary 4 @ 6"

METERS:

Gas (size, location) 6", W059

Water (size, location) 6", B112M

Electric (location) LOCATED WITH TRANSFORMERS LISTED ABOVE

ALARM SYSTEMS:

Fire Alarm YES Panel Location B112A

Fire Pump YES Pump Location B112M

Sprinklers YES Panel Location B112M

Other Alarms SMOKE AND HEAT DETECTORS

ELEVATORS:

Number 5 Type (passenger, freight) 4 PASSENGER AND 1 FREIGHT

Manufacturer OTIS Size 3 @ 2500LBS, 2 @ 4500LBS CAPACITY

EMERGENCY GENERATOR:

Size 1 @ 250KW, 1 @ 150KW Location 250KW - B112A, 150KW - PENTHOUSE

KEY BOX LOCATION: INSIDE AT NORTHEAST DOOR

ASBESTOS SURVEY (1986): ASBESTOS CONTAINED IN PREFORMED BLOCK PIPE INSULATION THROUGHOUT THE BUILDING AND IN SPRAY-APPLIED FIREPROOFING ABOVE SEVERAL CEILINGS.

GRAVES HALL BUILDING NARRATIVE

GENERAL

This Building Audit was conducted by Physical Facilities for the purpose of evaluating the present condition of those aspects of the building for which Physical Facilities has a budgetary responsibility. This audit describes the current physical condition of those aspects of the facility and identifies existing corrective maintenance repairs and building component system replacement requirements. It has been assumed that the program needs of the tenant departments are being met by the facility.

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

HISTORY

Graves Hall construction was completed in 1969. It was built to house College of Medicine classrooms, departmental offices, and laboratories. Meiling Hall, the College of Medicine Administration building, was constructed concurrent with Graves and is connected by a hallway to the west side of the building. Graves Hall is also connected to Newton Hall on the east side by a two-story wing that includes loading docks.

Facility use by category is: 46% laboratories and related uses, 28% office and related uses, 21% mechanical/custodial/ toilet, and 5% for miscellaneous uses including shops, storage and animal quarters.

PRIMARY SYSTEMS

The structure is supported by continuous concrete footers at the perimeter and individual concrete footings and piers under the cast-in-place concrete columns used throughout the building. The floors and the roof structure are also composed of reinforced cast-in-place concrete. The exterior consists of concrete blocks with a brick and cut-stone veneer. The roof structure is cast-in-place concrete. The building was designed and constructed for an additional two floors. There are no indications of structural problems at this time.

The building is covered with built-up roofing and gravel. We observed a number of blisters. While there do not appear to be any leaks at this point, the age and deteriorating condition of the coverings will warrant roof replacement within the next five to ten years.

The exterior consists of brick and stone panels. Polished granite trim has been used to highlight the main entrances. Prefinished metal panels are used on the roof to screen the cooling towers. The limestone panels are dirty and the mortar is beginning to sand lightly to the touch. The exterior should be cleaned and sealed within the next five to ten years.

The building has aluminum frame double-pane windows throughout. The windows are designed to remain closed but can be opened with a special key. Occupants reported that the windows have only been opened on rare occasions. The seals appear to be intact with the exception of one window on the fourth floor.

SECONDARY SYSTEMS

Interior partition walls are predominantly light weight masonry units, either painted concrete block or glazed block. Surface finishes are in good condition and consist of several treatments including wall coverings, glazed block, polished marble, and ceramic tile.

Floors coverings are predominantly vinyl tile that is in good condition. Carpeting is limited to some of the departmental offices. Ceramic tile is used in a few private restrooms on the 3rd and 4th floors. Terrazzo floors are found in the public restrooms, wash rooms, exam rooms and animal rooms.

There are many stained panels in the suspended ceilings on the fifth floor, which require replacement. Maintenance personnel and building occupants commented that the stains have resulted primarily from plumbing leaks in the penthouse area. We are proposing a project to install a waterproof membrane in the penthouse to contain leaks. Ceiling finishes are generally in good condition throughout the rest of the building although every floor appears to have a few stained tiles.

SERVICE SYSTEMS

Graves Hall is equipped with four passenger elevators and one freight elevator. The passenger elevators are centrally located and the freight elevator is located in the connecting wing at the east end of the building by the loading dock. The building was constructed with a shaft for an additional elevator. Three of the four elevators are not equipped with wheelchair accessible controls. Maintenance personnel reported that the elevators are functioning adequately at this time but are at an age where modernization is required. The Department of Physical Facilities has an unfunded project to provide firefighter's service to the elevators. Maintenance personnel commented that this project should be deleted and the scope of this work included in a new modernization project.

The building is heated and cooled by four dual duct high velocity systems that were modified to variable air volume systems in 1980 to conserve energy. A terminal reheat system serves a portion of the basement. Chilled water is supplied to the DDHV/VAV and TR systems from a 500-ton centrifugal chiller that was installed in 1980 to replace one of the two absorption chillers originally installed. The centrifugal chiller has been rebuilt within the last year and is reported to be operating well. The remaining absorption chiller functions largely as a back-up but it is also used to augment chilled water capacity in very hot weather. A 100-ton glycol chiller is located in the basement of the building and is used to provide chilled water to a terminal reheat system located in the basement. The condenser was recently replaced in this chiller and no problems are noted.

There are two 500 ton cooling towers located on the roof to serve the two large chillers. The tower connected to the centrifugal chiller was replaced in 1991. The other tower which serves the absorption chiller was reported by maintenance personnel to be leak prone and at the end of its life expectancy. It requires replacement. The HVAC control system is aging and is to be replaced within the next several months with a DDC system.

Heating hot water for the terminal reheat coils and the perimeter radiation system is supplied by two steam converters using steam supplied by the University Power Plant. Maintenance personnel reported that the converters, which are original, have begun to leak and require new tube bundles. The basement and first floor perimeter heating system is beginning plug up, according to maintenance personnel,

and will require replacement.

Domestic hot water is provided by two local steam converters. Maintenance personnel reported that the tube bundles in these converters also require replacement. There were no major plumbing problems in the maintenance workorder system when we surveyed it. Plumbing fixtures are in good condition throughout.

ELECTRICITY

Power is supplied by four transformers. The primary voltage for all four transformers is 13,200 Volts. Two transformers have capacities of 1500 KVA, one has a 750 KVA capacity, and the fourth has a 300 KVA capacity. Three of the four transformers have secondary voltages of 480/277. The 300 KVA transformer supplies 208/120 volts. Utility Division utilization records indicate that the two 1500 KVA transformers are utilized at 28%, the 750 KVA transformer is 51% utilized and the 300 KVA transformer is utilized 86% during peak demand conditions. 480 volt current is distributed throughout the building to step-down transformers on each floor that supply 120 volt current to grounded duplex outlets.

The building lighting system is predominantly fluorescent. Most of the building electrical distribution is in good condition. There is still space for additional circuits but maintenance personnel reported that the system is at a point where new circuits will begin to require additional distribution panels. In the future, new panel boxes should be added at the entrances to the laboratories to control power as demand increases.

SAFETY STANDARDS

The building is equipped with standpipes, fire hose cabinets and valves. There are sprinklers throughout several basement rooms. Maintenance personnel reported that the smoke detector system was updated two years ago. The smoke detectors are located in the hallway by the elevators and in the HVAC ductwork. The building is also equipped with automatic doors controlled by smoke detectors. The building has lighted exit signs. Two emergency generators power fluorescent lights in the hallways, several coolers and an HVAC system serving a portion of the basement.

The north entrance to the building is equipped with an automatic door for handicapped access. All floors are accessible from the elevators.

ASBESTOS

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, identifies asbestos containing materials in preformed block pipe insulation throughout the building and breaching insulation at the emergency generators. Spray-applied asbestos-containing fireproofing is found on the ceilings in several areas throughout the building. The asbestos containing materials in the basement mechanical room were being encapsulated during the time the audit was conducted.

BUILDING PERIMETER

Graves Hall is located between W. Tenth and W. Ninth Avenues. There are mature trees on the north and south sides of the building. The lawn on the north side of the building is the site of a current steam line replacement project and is in poor

condition as a result. There is a large green space to the south of the building. Signage and security lighting are adequate. A loading dock is located at the east end of the north side of the building. There appears to be a drainage problem to the west of the loading dock. The sidewalk is sunken in this area and the curb at an areaway located there is deteriorating. The sidewalk should be replaced in this area and the areaway repaired. The sidewalks on the north side of the building are cracked in a number of locations.

CONCLUSION

Graves Hall is a well-maintained facility that is generally in good condition. A portion of the chiller system has been replaced but a new cooling tower is required for the absorption chiller. Domestic hot water and the heating hot water steam converters have reached the end of their lives and require replacement.

The roof is aging and will require replacement within the next five to ten years. The exterior masonry should be cleaned and sealed in the near future also. Maintenance personnel reported that problems with the perimeter hot water radiation system are increasing on the first floor and in the basement and that the system will require replacement. The floor of the penthouse mechanical room should be waterproofed. After the plumbing repairs and waterproofing are accomplished the ceiling grids should be cleaned on the first and fifth floors and the stained acoustical tiles should be replaced.

PROPOSED MAINTENANCE PROJECTS

GRAVES HALL #277

(R&R OR CAPITAL FUNDED)

A. Corrective Maintenance Projects:

- 1. Replace 4 steam converter bundles for heating and domestic hot water systems\$40,000
 - 2. Modernize 4 passenger elevators.....300,000*
 - 3. Replace cooling tower.....60,000
 - 4. Replace piping to perimeter radiation system - basement and 1st floor.....15,300
 - 5. Clean grids and replace ceiling tiles 1st & 5th floor halls, clean diffusers throughout building 10,200
- Sub Total \$425,500**

B. Building Improvement/Addition Project:

- 1. Install waterproof membrane in penthouse mechanical room.....\$24,200

C. Projected (over the next 5 yrs) Component Replacement Projects:

- 1. Replace built-up roofing ..\$172,400
 - 2. Clean and seal exterior masonry ... 66,480
- Sub Total \$238,880**

Total cost for all estimated projects = \$688,580

* This project is proposed to replace an existing, unfunded Repair and Renovation project: "Elevator Fireman's Service", control number - 0284.

D. Maintenance Projects (LESS THAN \$5000)

- 1. Replace window with broken glazing seal - rm 4018.
- 2. Fix leak above window in rm 4018 next to unit with broken seal.
- 3. Replace sidewalk correcting local drainage and install new curb at areaway next to loading dock.
- 4. Replace cover for fluorescent light at landing between first and second floors in southwest stairway.
- 5. Apply concrete sealer to penthouse floor.

BUILDING EVALUATION SUMMARY

I. BUILDING INFORMATION

FAC # 277 FACILITY NAME: GRAVES HALL
 DATE: 10/29/92 INSPECTOR: JAMES P. HERTENSTEIN
 YEAR CONSTRUCTED: 1969
 GROSS SQ FT: 224,932 NET SQ FT: 118,644
 REPLACEMENT COST \$ 32,160,000 X .85 = 27,336,000*

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	3.8	1,038,768	.93	966,054
Columns and Beams	14.9	4,073,064	.93	3,787,950
Exterior Walls	7.5	2,050,200	.80	1,640,160
Windows & Doors	6.0	1,640,160	.81	1,328,530
Roofing	2.0	546,720	.65	355,368
Partitions & Drs.	7.9	2,159,544	.88	1,900,399
Wall Finishes	4.0	1,093,440	.92	1,005,965
Floor Finishes	4.5	1,230,120	.86	1,057,903
Ceilings & Finish	5.3	1,448,808	.78	1,130,070
Conveying	2.7	738,072	.77	568,315
Plumbing	16.4	4,483,104	.78	3,496,821
Heating	6.5	1,776,840	.75	1,332,630
Cooling & Vent.	7.5	2,050,200	.77	1,578,654
Elec. Ser. & Dist	1.3	355,368	.85	302,063
Lighting & Power	7.9	2,159,544	.74	1,598,063
Safety Standards	1.8	492,048	.70	344,434
TOTALS	100.00	27,336,000		22,393,379

III. BUILDING RATING SUMMARY

Overall Building Rating = 82%

* Replacement Cost assigned September 1991 by The Office of Campus Planning and Space Utilization without the 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 # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
a. Footings:			
Individual Footings & Piers <u>UNDER BUILDING COLUMNS</u>	[]	[X]	[]
Continuous Footings <u>UNDER EXTERIOR AND BASEMENT WALLS</u>	[]	[X]	[]
Grade Beams _____	[X]	[]	[]
Piles _____	[X]	[]	[]
Caissons _____	[X]	[]	[]
b. Foundation Wall Materials:			
Steel _____	[X]	[]	[]
Concrete Cast-in-place _____	[]	[X]	[]
Concrete Block _____	[X]	[]	[]
Other _____	[X]	[]	[]
c. Waterproofing and Underdrain:			
Coating <u>FOUNDATION WALLS WERE WATER-PROOFED</u>	[]	[X]	[]
Membrane <u>VAPOR BARRIER UNDER CONCRETE FLOOR SLAB</u>	[]	[X]	[]
Board _____	[X]	[]	[]
Drain Tile <u>4" PERIMETER TILE CONNECTED TO SUMP PUMPS</u>	[]	[X]	[]
d. Slab on Grade (floor):			
Plain _____	[X]	[]	[]
Reinforced <u>5" THICK REINFORCED BASEMENT SLAB</u>	[]	[X]	[]
e. Special Substructures:			
_____	[X]	[]	[]

B. COMMENTS:

NO SIGNS OF MOVEMENT OR MOISTURE INFILTRATION.

C. COMPONENT RATING: (\$1,039,000) X (93 %) = \$966,100
 Possible Condition Component
 Value Value Multiplier Value

COLUMNS AND BEAMS

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Columns and Beams:

	N/A	Sat	Att
Concrete-in-place <u>USED THROUGHOUT BUILDING</u>	[]	[X]	[]
Precast Concrete _____	[X]	[]	[]
Steel _____	[X]	[]	[]
Steel Fireproofing _____	[X]	[]	[]
Wood _____	[X]	[]	[]

b. Floors:

Concrete Slab _____	[]	[X]	[]
Precast Slab _____	[X]	[]	[]
Metal Deck _____	[X]	[]	[]
Metal Deck w/concrete fill _____	[X]	[]	[]
Wood _____	[X]	[]	[]
Other _____	[X]	[]	[]

c. Roof System:

Flat <u>ROOFS ARE FRAMED LIKE FLOORS BELOW</u>	[]	[X]	[]
Pitched _____	[X]	[]	[]
Concrete <u>STRUCTURAL CONCRETE & LIGHTWEIGHT INSUL. CONCR.</u>	[]	[X]	[]
Steel <u>REMOVABLE PANELS ARE LOCATED ABOVE ELEVATOR SHAFTS</u>	[]	[X]	[]
Wood _____	[X]	[]	[]
Other _____	[X]	[]	[]

B. COMMENTS:

NO PROBLEMS WERE OBSERVED WITH STRUCTURAL ALIGNMENT. BUILDING IS FRAMED TO ACCOMMODATE A FULL 6TH FLOOR AND THE ADDITION OF A SEVENTH FLOOR.

C. COMPONENT RATING: (\$4,073,000) X (93%) = \$3,788,000

Possible	Condition	Component
Value	Value Multiplier	Value

EXTERIOR WALLS

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Walls:

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Concrete <u>LIMITED TO MINOR AREAS OF EXPOSED FOUNDATION</u>	[]	[X]	[]
Masonry <u>PREDOMINANTLY BRICK, LIMESTONE AND GRANITE TRIM</u>	[]	[]	[X]
Metal Siding <u>LIMITED TO SCREENING PANELS AT ROOF</u>	[]	[X]	[]
Wood Siding _____	[X]	[]	[]
Other _____	[X]	[]	[]

b. Finishes:

Stucco _____	[X]	[]	[]
Paint <u>STEEL ANGLES SUPPORTING BRICK PANELS NEED NEW PAINT</u>	[]	[]	[X]
Other _____	[X]	[]	[]

B. COMMENTS:

LIMESTONE IS SOILED AND SHOULD BE CLEANED. MORTAR JOINTS ARE SANDING LIGHTLY AND THE CAULKING IS BEGINNING TO CRACK. BUILDING SHOULD BE CLEANED SEALED AND THE CAULKING REPLACED IN THE NEXT 5 TO 10 YEARS. THERE ARE SOME CRACKS AT THE CORNERS OF THE BUILDING THAT WERE CRACKED AND APPEAR TO HAVE BEEN CAULKED. NO ADDITIONAL MOVEMENT WAS INDICATED.

C. COMPONENT RATING: (\$2,050,000) x (80 %) = \$1,640,000

Possible	Condition	Component
Value	Value Multiplier	Value

EXTERIOR WINDOWS & DOORS

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Windows type & number:	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Wood _____	[X]	[]	[]
Steel _____	[X]	[]	[]
Alum <u>16 FIXED, 168 CENTER PIVOT -LOCKED CLOSED</u>	[]	[]	[X]
Other _____	[X]	[]	[]
b. Window glazing:			
Single pane _____	[X]	[]	[]
Double pane <u>ALL WINDOWS</u>	[]	[X]	[]
Other _____	[X]	[]	[]
c. Doors type & number:			
Wood _____	[X]	[]	[]
Steel <u>2 DOUBLE DOORS AND 3 SINGLE DOORS</u>	[]	[X]	[]
Alum <u>2 SETS OF DOUBLE ENTRY WITH GLAZING</u>	[]	[X]	[]
Other _____	[X]	[]	[]
d. Shading Devices:			
Types <u>CURTAINS AND VENETIAN BLINDS</u>	[]	[X]	[]

B. COMMENTS:

MAINTENANCE PERSONNEL REPORTED THAT THERE IS A LEAK ABOVE ONE OF THE WINDOWS ON THE 4TH FLOOR (RM 4018). THERE IS ALSO A BROKEN SEAL ON THE ADJACENT WINDOW.

C. COMPONENT RATING: (\$1,640,000) X (81 %) = \$1,329,000

Possible	Condition	Component
Value	Value Multiplier	Value

ROOFING

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Roof Covering:	N/A	Sat	Att
Built-up _____	[X]	[]	[]
Built-up w/gravel <u>32,832 SF INSTALLED IN 1969</u>	[]	[X]	[]
Asphalt Shingle _____	[X]	[]	[]
Copper _____	[X]	[]	[]
Glass (Skylight) _____	[X]	[]	[]
Slate _____	[X]	[]	[]
Spanish Tile _____	[X]	[]	[]
Metal _____	[X]	[]	[]
Other <u>PLASTIC SKYLIGHT DOMES</u>	[]	[X]	[]

c. Flashing:

Base & Counter <u>FELT AND STAINLESS STEEL</u>	[]	[X]	[]
Cap <u>STAINLESS STEEL</u>	[]	[X]	[]
Through Wall _____	[X]	[]	[]
Valley & Ridge _____	[X]	[]	[]

d. Gravel Stop & Edge Strips:

Type _____	[X]	[]	[]
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e. Drainage:

Gutters w/ Exterior Downspouts _____	[X]	[]	[]
Scuppers w/ Exterior Downspouts _____	[X]	[]	[]
Drains w/ Interior Storm Drains _____	[]	[X]	[]

f. Parapets:

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

g. Insulation:

Type <u>LIGHTWEIGHT INSULATING CONCRETE</u>	[X]	[]	[]
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B. COMMENTS

NO MAJOR LEAKS WERE INDICATED. THERE ARE A NUMBER OF BLISTERS AND THE ROOF IS APPROACHING THE END OF ITS LIFE EXPECTANCY. A NEW ROOF WILL BE REQUIRED WITHIN THE NEXT FIVE TO TEN YEARS.

C. COMPONENT RATING: (\$547,000) X (65 %) = \$355,000

Possible	Condition	Component
Value	Value Multiplier	Value

PARTITIONS & DOORS

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Partition Framing:			
Concrete Block <u>SOLID AT STAIRWAYS, HOLLOW THROUGHOUT BLDG</u>	[]	[X]	[]
Glazed Block <u>CUSTODIAL CLOSETS</u>	[]	[X]	[]
Wood Stud _____	[X]	[]	[]
Metal Stud <u>LIMITED USE</u>	[]	[X]	[]
Structural Tile _____	[X]	[]	[]
Rated _____	[X]	[]	[]
Other _____	[X]	[]	[]
b. Special partitions and Walls:			
Toilet <u>METAL PARTITIONS</u>	[]	[X]	[]
Screen Walls _____	[X]	[]	[]
Gate _____	[X]	[]	[]
Other <u>MOVEABLE PARTITIONS</u>	[]	[X]	[]
c. Wall Material:			
Plaster _____	[X]	[]	[]
Plaster Board <u>USED WITH METAL STUDS</u>	[]	[X]	[]
Glass _____	[X]	[]	[]
Plywood _____	[X]	[]	[]
Paneling _____	[X]	[]	[]
Trim & Wainscot _____	[X]	[]	[]
Tile/Glazed <u>RESTROOMS, STAIRWAYS AND CUSTODIAL CLOSETS</u>	[]	[X]	[]
Other _____	[X]	[]	[]
d. Interior Doors & Frames:			
Met Door/Met Frame <u>MAINTENANCE RMS AND COLD ROOMS</u>	[]	[X]	[]
Wood Door/Wood Frame _____	[X]	[]	[]
Wood Door/Metal Frame <u>PREDOMINANT</u>	[]	[X]	[]
Glazing _____	[]	[X]	[]
Rollup _____	[X]	[]	[]
Sliding _____	[X]	[]	[]
Other _____	[X]	[]	[]
e. Hardware:			
Door Closers _____	[]	[X]	[]
Lock Sets _____	[]	[X]	[]
Kick/Push Plates _____	[]	[X]	[]
Thresholds _____	[]	[X]	[]
Panic Devices _____	[]	[X]	[]
Security & Detection _____	[X]	[]	[]
Automatic Openers <u>HANDICAPPED-ACCESSIBLE DOORS</u>	[]	[X]	[]
Other _____	[X]	[]	[]

B. COMMENTS:

NO PROBLEMS WERE OBSERVED.

C. COMPONENT RATING: (\$2,160,000) X (88 %) = \$1,900,000
 Possible Condition Component
 Value Value Multiplier Value

WALL FINISHES

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
a. Paint <u>VERY GOOD CONDITION THROUGHOUT</u>	[]	[X]	[]
b. Wall Coating _____	[X]	[]	[]
c. Wall Coverings <u>VINYL FABRIC WALL COVERINGS</u>	[]	[X]	[]
d. Paneling			
Prefinished	[X]	[]	[]
Plank	[X]	[]	[]
e. Cork _____	[X]	[]	[]
f. Wallpaper _____	[X]	[]	[]
g. Ceramic Tile <u>RESTROOMS AND SOME STAIRWAY WALLS</u>	[]	[X]	[]
h. Trim & Wainscot _____	[X]	[]	[]
i. Decoration _____	[X]	[]	[]
j. Glass _____	[X]	[]	[]
k. Other <u>MARBLE AT FIRST FLOOR ELEVATOR LOBBY</u>	[]	[X]	[]

B. COMMENTS

MAINTENANCE PERSONNEL COMMENTED THAT MOST OF THE BUILDING HAD BEEN PAINTED WITHIN THE LAST THREE YEARS.

C. COMPONENT RATING: $(\underline{\$1,093,000}) \times (\underline{92\%}) = \underline{\$1,006,000}$
 Possible Condition Component
 Value Value Multiplier Value

FLOOR FINISHES

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Carpet:			
Rolled <u>LIMITED TO SOME DEPARTMENTAL OFFICES</u>	[]	[X]	[]
Tile _____	[X]	[]	[]
b. Composition:			
Epoxy _____	[X]	[]	[]
Synthetic _____	[X]	[]	[]
Other _____	[X]	[]	[]
c. Concrete Topping:			
Clear Sealant <u>EQUIPMENT AND MAINTENANCE ROOMS</u>	[]	[]	[X]
Abrasive _____	[X]	[]	[]
Epoxy _____	[X]	[]	[]
Aggregate _____	[X]	[]	[]
d. Resilient:			
Vinyl Tile <u>USE THROUGHOUT - GOOD CONDITION</u>	[]	[X]	[]
Linoleum _____	[X]	[]	[]
Vinyl _____	[X]	[]	[]
Rubber <u>SHEET GOODS ON STAIRS AND LANDINGS</u>	[]	[X]	[]
Cork _____	[X]	[]	[]
e. Ceramic Tile <u>3RD AND 4TH FLOOR RESTROOMS</u>	[]	[X]	[]
f. Masonry _____	[X]	[]	[]
g. Terrazzo <u>WASH, ANIMAL, EXAM ROOMS AND TOILETS</u>	[]	[X]	[]
h. Wood _____	[X]	[]	[]
i. Metal _____	[X]	[]	[]

B. COMMENTS

FLOOR FINISHES ARE IN GOOD CONDITION. THE PENTHOUSE MECHANICAL ROOM FLOOR SHOULD BE WATERPROOFED TO CONTAIN THE OCCASIONAL EQUIPMENT LEAKS.

C. COMPONENT RATING: (\$1,230,000) X (86 %) = \$1,058,000
 Possible Condition Component
 Value Value Multiplier Value

CEILING AND FINISHES

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. System Type:	N/A	Sat	Att
Exposed <u>MAINTENANCE ROOMS AND CUSTODIAL CLOSETS</u>	[]	[X]	[]
Applied to Structure _____	[X]	[]	[]
Suspended <u>1ST FLOOR CEILING SHOULD BE CLEANED</u>	[]	[]	[X]
 b. Materials:			
Drywall _____	[X]	[]	[]
Plaster <u>BASEMENT ANIMAL ROOMS, UTILITY LABS, SHOWERS</u>	[]	[X]	[]
Mineral Fiber Board <u>THROUGHOUT</u>	[]	[]	[X]
Metal Pan _____	[X]	[]	[]
Luminous Panels _____	[X]	[]	[]
Other _____	[X]	[]	[]
 c. Finishes:			
Paint _____	[]	[X]	[]
Fabric _____	[X]	[]	[]
Prefinished <u>WATER STAINS THROUGHOUT</u>	[]	[]	[X]
Other _____	[X]	[]	[]
 d. Openings & Inserts:			
Air Distribution <u>DIRTY AT LIGHT FIXTURES</u>	[]	[]	[X]
Lighting Fixtures <u>AIR DIFFUSERS ARE DIRTY</u>	[]	[]	[X]
Access Panels _____	[X]	[]	[]
Skylights _____	[]	[X]	[]
Fire Protection _____	[]	[X]	[]
Other _____	[X]	[]	[]

B. COMMENTS:

THE FIRST FLOOR HALLWAY CEILING GRIDS AND TILES ARE DIRTY, REQUIRING CLEANING. WATER-STAINED TILES ARE PARTICULARLY NOTICEABLE ON THE FIRST AND FIFTH FLOOR HALLWAY CEILINGS. MANY OF THE DIFFUSERS ARE DIRTY, REQUIRING CLEANING.

C. COMPONENT RATING: (\$1,449,000) x (78 %) = \$1,130,000
 Possible Condition Component
 Value Value Multiplier Value

CONVEYING

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Elevators:

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Number <u>3</u>	[]	[X]	[]
Type <u>OTIS, PASSENGER, ELECTRIC (EACH)</u>	[]	[X]	[]
Speed <u>350 FPM - EACH ELEVATOR SERVICES 6 FLOORS</u>	[]	[X]	[]
Capacity (lbs) <u>2500 LBS (EACH)</u>	[]	[X]	[]
Dimensions <u>51" X 80" (EACH)</u>	[]	[X]	[]
Door Operation:			
Center	[]	[X]	[]
To Side	[X]	[]	[]
Handicapped-accessible controls _____	[]	[]	[X]
 Number <u>1</u>	[]	[X]	[]
Type <u>OTIS, PASSENGER, ELECTRIC</u>	[]	[X]	[]
Speed <u>300 FPM - (SERVICES 7 FLOORS)</u>	[]	[X]	[]
Capacity (lbs) <u>4500 LBS</u>	[]	[X]	[]
Dimensions <u>80" X 78"</u>	[]	[X]	[]
Door Operation:			
Center	[X]	[]	[]
To Side <u>ELEVATOR HAS FRONT AND REAR DOORS</u>	[]	[X]	[]
Handicapped-accessible controls _____	[]	[X]	[]
 Number <u>1</u>	[]	[X]	[]
Type <u>OTIS, FREIGHT, HYDRAULIC</u>	[]	[X]	[]
Speed <u>75 FPM</u>	[]	[X]	[]
Capacity (lbs) <u>4500 LBS</u>	[]	[X]	[]
Dimensions <u>96" X 74"</u>	[]	[X]	[]
Door Operation:			
Center	[X]	[]	[]
To Side <u>ELEVATOR HAS FRONT AND REAR DOORS</u>	[]	[X]	[]
Handicapped-accessible controls _____	[X]	[]	[]

B. COMMENTS:

3 OF THE PASSENGER ELEVATORS REQUIRE HANDICAPPED-ACCESSIBLE CONTROLS. ALL OF THE PASSENGER ELEVATORS REQUIRE TACTILE/BRAILLE MARKINGS, LANDING GONGS, AND NEW REOPENING/TIMING DEVICES. MAINTENANCE PERSONNEL RECOMMEND MODERNIZATION OF CONTROLLERS. EXISTING UNFUNDED PROJECT FOR FIREFIGHTER'S SERVICE SHOULD BE INCLUDED IN MODERNIZATION PROJECT FOR THE FOUR PASSENGER ELEVATORS ALONG WITH HANDICAPPED ACCESSIBILITY IMPROVEMENTS.

C. COMPONENT RATING: (\$ 738,100) X (77 %) = \$ 568,300

Possible	Condition	Component
Value	Value Multiplier	Value

MECHANICAL/PLUMBING

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Services Available:	N/A	Sat	Att
Cold Water <u>6" SUPPLY - RM B112M</u>	[]	[X]	[]
Hot Water <u>LOCAL DOMESTIC HOT WATER CONVERTERS</u>	[]	[X]	[]
Acid Waste <u>DILUTION TANKS LOCATED IN B112M</u>	[]	[X]	[]
Oxygen	[X]	[]	[]
Natural Gas <u>6" SUPPLY - RM W059</u>	[]	[X]	[]
Vacuum <u>LABORATORY VACUUM SERVICE</u>	[]	[X]	[]
Distilled Water <u>SUPPLIED TO LABS FROM 3 CONVERTERS</u>	[]	[X]	[]
Compressed Air <u>SEPARATE SYSTEMS FOR LABS AND CONTROLS</u>	[]	[X]	[]
Other	[X]	[]	[]
b. Piping & Fittings:			
Cast Iron <u>SANITARY WASTE VENTS</u>	[]	[X]	[]
Copper Tubing <u>SMALLER DOMESTIC WATER LINES</u>	[]	[X]	[]
Plastic	[X]	[]	[]
Steel <u>STEAM, HEATING AND CHILLER WATER LINES</u>	[]	[X]	[]
Glass <u>PYREX USED FOR ACID WASTE SYSTEM</u>	[]	[X]	[]
Other	[X]	[]	[]
c. Water Heaters:			
Electric	[X]	[]	[]
Gas	[X]	[]	[]
Oil	[X]	[]	[]
Steam Converter <u>4 HOT WATER CONVERTERS REQUIRE NEW TUBES</u>	[]	[]	[X]
Other	[X]	[]	[]
d. Drainage:			
Storm Drains <u>4 @ 6", 1 @ 8"</u>	[]	[X]	[]
Sanitary Drainage <u>4 @ 6"</u>	[]	[X]	[]
Combined Storm/San.	[X]	[]	[]
Floor Drains <u>USED THROUGHOUT, TRENCH DRAINS ALSO IN BSMT</u>	[]	[X]	[]
e. Fixtures:			
Water Closets <u>42</u>	[]	[X]	[]
Urinals <u>25</u>	[]	[X]	[]
Lavatories <u>48</u>	[]	[X]	[]
Showers <u>2</u>	[]	[X]	[]
Kitchen Sinks <u>LABORATORY SINKS THROUGHOUT THE BUILDING</u>	[]	[X]	[]
Service Sinks <u>ONE PER FLOOR IN CUSTODIAL CLOSET</u>	[]	[X]	[]
Drinking Fountains	[X]	[]	[]
Electric Water Coolers <u>28</u>	[]	[X]	[]
f. Sprinkler Systems:			
Wet <u>THROUGHOUT BASEMENT</u>	[]	[X]	[]
Dry	[X]	[]	[]
g. Standpipe Systems:			
Wet <u>SERVICES SPRINKLERS, SPRINKLERS AND VALVES THROUGHOUT</u>	[]	[X]	[]
Dry	[X]	[]	[]
Valves <u>LOCATED IN STAIRWAYS</u>	[]	[X]	[]
Hose Cabinets <u>LOCATED THROUGHOUT</u>	[]	[X]	[]

B. COMMENTS:

MAINTENANCE PERSONNEL REPORTED THAT THE PLUMBING SYSTEM IS FUNCTIONING ADEQUATELY. THE TWO STEAM CONVERTERS USED TO PRODUCE DOMESTIC HOT WATER REQUIRE NEW TUBE BUNDLES.

C. COMPONENT RATING: (\$4,483,000) X (78 %) = \$3,497,000
 Possible Condition Component
 Value Value Multiplier Value

MECHANICAL/HEATING

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

a. Heat Source:	N/A	Sat	Att
Central Plant Steam <u>8" SUPPLY AND 4" RETURN</u>	[]	[X]	[]
Central Plant Hot Water _____	[X]	[]	[]
Boilers: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]
Furnace: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]
Heat Pump: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]

b. System Type:			
Steam _____	[X]	[]	[]
Hot Water <u>PERIMETER RADIATION SYSTEM</u>	[]	[]	[X]
Air _____	[X]	[]	[]
Multizone _____	[X]	[]	[]
Dual Duct _____	[]	[X]	[]
Terminal Reheat _____	[]	[X]	[]
Variable Volume <u>MOST OF DDHV WAS CONVERTED IN 1978</u>	[]	[X]	[]
Other _____	[X]	[]	[]

c. Space Equipment:			
Radiators _____	[X]	[]	[]
Convectors <u>AT BUILDING PERIMETER</u>	[]	[]	[X]
2-Pipe Fan Coil _____	[X]	[]	[]
Unit Heaters <u>ENTRANCE FOYERS & MAINTENANCE ROOMS</u>	[]	[X]	[]
Other _____	[X]	[]	[]

d. Control Type:			
Pneu _____	[]	[X]	[]
Electric _____	[]	[]	[X]
DDC _____	[X]	[]	[]
Manual Valves _____	[X]	[]	[]

B. COMMENTS:

MAINTENANCE PERSONNEL REPORTED THAT THE 2 HEATING HOT WATER CONVERTERS REQUIRE NEW TUBE BUNDLES. THEY ALSO COMMENTED THAT THE BASEMENT AND FIRST FLOOR PERIMETER HEATING SYSTEM IS PLUGGING UP AND SHOULD BE REPLACED. HVAC CONTROLS HAVE BECOME UNRELIABLE AND WILL BE REPLACED IN THE NEAR FUTURE BY A DDC SYSTEM.

C. COMPONENT RATING: (\$1,777,000) X (75 %) = \$1,333,000

Possible	Condition	Component
Value	Value	Multiplier
		Value

COOLING & VENTILATING

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. System:			
Type <u>4-DDHV/VAV, 1-TERMINAL REHEAT(TR), 2 SINGLE ZONE DX</u>	[]	[X]	[]
Capacity <u>1100 TONS TOTAL CAPACITY</u>	[]	[X]	[]
b. Chillers:			
Centrifugal <u>TRANE, 500T, INSTALLED:1980, REBUILT:1992</u>	[]	[X]	[]
Reciprocating <u>ACME, 100T, INSTALLED:1969, SERVES TR SYS</u>	[]	[X]	[]
Absorption <u>TRANE, 500T, INSTALLED 1969</u>	[]	[X]	[]
c. Cooling Towers:			
Type <u>2 MARLEYS INSTALLED: 1991 & 1969 ACME: INST: (1969)</u>	[]	[]	[X]
Capacity <u>MARLEYS 500T EACH, ACME - 100T</u>	[]	[X]	[]
d. Condensers: <u>AIR COOLED CONDENSERS FOR SMALL A/C SYSTEM</u>	[]	[X]	[]
e. Space Equipment:			
Direct Expansion -			
Window units _____	[X]	[]	[]
Thru-the-wall _____	[X]	[]	[]
Single zone <u>2 LIEBERT SYSTEMS INSTALLED FOR 2 ROOMS</u>	[]	[X]	[]
Single zone con. vol. _____	[X]	[]	[]
Other _____	[X]	[]	[]
Air/Water -			
2-pipe fan coil _____	[X]	[]	[]
Unit ventilators _____	[X]	[]	[]
Terminal reheat <u>SERVES ANIMAL AREA IN BASEMENT</u>	[]	[X]	[]
Variable volume <u>DDHV SYSTEMS CONVERTED IN 1979/80</u>	[]	[X]	[]
Dual Duct _____	[]	[X]	[]
Multizone _____	[X]	[]	[]
f. Special Systems:			
Type _____	[X]	[]	[]
Capacity _____	[X]	[]	[]
g. Control Systems:			
Pneu <u>ACTUATORS</u>	[]	[X]	[]
Electric <u>AGING SYSTEM IS TO BE REPLACED WITH DDC SYSTEM</u>	[]	[]	[X]
Electronic _____	[X]	[]	[]
h. Fans:			
Exhaust <u>40 EXHAUST FANS</u>	[]	[X]	[]
Recirculating <u>6 SUPPLY AND 4 RETURN AIR FANS</u>	[]	[X]	[]

B. COMMENTS:

MAINTENANCE PERSONNEL REPORTED OLDER MARLEY COOLING TOWER IS CONNECTED TO ABSORPTION CHILLER AND REQUIRES REPLACEMENT. THIS SYSTEM IS USED A BACK-UP FOR THE NEWER CENTRIFUGAL CHILLER AND COOLING TOWER.

C. COMPONENT RATING: (\$2,050,000) x (77 %) = \$1,579,000

Possible	Condition	Component
Value	Value Multiplier	Value

ELECTRICAL/SERVICE & DISTRIBUTION

FAC # 277 DATE 10/30/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

(a) Service:

Substation BUCKEYE (101/302)
Primary Voltage 13,200 VOLTS

Transformer:

Manufacture	Type	KVA	Secondary Voltages
<u>GENERAL ELECTRIC</u>	<u>DRY</u>	<u>1500</u>	<u>480/277</u>
<u>GENERAL ELECTRIC</u>	<u>DRY</u>	<u>1500</u>	<u>480/277</u>
<u>GENERAL ELECTRIC</u>	<u>DRY</u>	<u>300</u>	<u>208/120</u>
<u>NIAGARA</u>	<u>DRY</u>	<u>300</u>	<u>480/277</u>

(b) Distribution System:

Panelboard (type) CIRCUIT BREAKERS
Voltage 208/120 SUPPLIED BY 11 LOW-VOLT TRANSFORMERS
Amperage 5800 AMPS TOTAL SERVICE
Conduit ALUMINUM AND GALVANIZED STEEL
Conductor COPPER
Wire (type) VARIES
Armored Cable LIMITED USE WITH EQUIPMENT
Other

(c) Emergency System:

General or (type & capacity) 2 EMERGENCY GENERATORS
AT 150 KW AND 250 KW SUPPLY EMERGENCY POWER TO AIR
HANDLERS IN ANIMAL AREA, HALLWAY LIGHTS, ONE ELEVATOR,
AND EXIT LIGHTS THROUGHOUT THE BUILDING.

B. COMMENTS:

NO PROBLEMS NOTED.

C. COMPONENT RATING: (\$355,400) X (85 %) = \$302,100
 Possible Condition Component
 Value Value Multiplier Value

SAFETY STANDARDS

FAC # 277 DATE 11/3/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
(a) Exits:			
Stair Construction:			
concrete _____	[X]	[]	[]
steel _____	[]	[X]	[]
wood _____	[X]	[]	[]
Number of exits <u>6</u>	[]	[X]	[]
(b) Fire Rating:			
Construction Type: <u>I X</u> II___ III___ IV___ V___ VI___			
Building Height: <u>88 ft., 6 STORIES, PENTHOUSE AND BASEMENT</u>			
(c) Extinguishing Systems:			
Portable <u>CARBON DIOXIDE FIRE EXTINGUISHERS</u>	[]	[X]	[]
Standpipe <u>SUPPLIES VALVES, HOSES AND SPRINKLERS</u>	[]	[X]	[]
Hose Cabinets <u>LOCATED BY STAIRWAYS ON EACH FLOOR</u>	[]	[X]	[]
Sprinklers <u>BASEMENT ROOMS</u>	[]	[X]	[]
Suppression _____	[X]	[]	[]
Other <u>HALLWAYS ARE EQUIPPED WITH SMOKE DOORS</u>	[]	[X]	[]
(d) Detection & Alarm Systems:			
Manual Alarm _____	[]	[X]	[]
Annunciator <u>PANEL LOCATED IN LOBBY AT NORTH</u>	[]	[X]	[]
Smoke Detectors <u>IN DUCTS AND HALLWAYS</u>	[]	[X]	[]
(e) Lighting Systems:			
Exit Signs <u>LIGHTED EXIT SIGNS</u>	[]	[X]	[]
Exit Lighting <u>SIGNS</u>	[]	[X]	[]
Emergency Lighting <u>HALLWAY LIGHTING ON GENERATOR</u>	[]	[X]	[]
Emergency Generator <u>2 GENERATORS SERVE 10 PANELS</u>	[]	[X]	[]

B. COMMENTS:

SMOKE AND HEAT DETECTORS WERE UPDATED WITHIN THE LAST THREE YEARS.

C. COMPONENT RATING: (\$492,000) x (70 %) = \$344,400
 Possible Condition Component
 Value Value Multiplier Value

BUILDING PERIMETER EVALUATION

FAC # 277 DATE 11/3/92 INSPECTOR: JPH

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
1. Building Access:			
Driveway <u>SERVES DOCK AT EAST END OF NORTH SIDE OF BLDG</u>	[]	[X]	[]
Loading Dock <u>EAST END OF NORTH SIDE OF BUILDING</u>	[]	[X]	[]
Sidewalks			
Front <u>SEVERAL SUNKEN SECTIONS AND CRACKS</u>	[]	[]	[X]
Side _____	[X]	[]	[]
Rear <u>CONCRETE AND ASPHALT WALKS</u>	[]	[X]	[]
Steps			
Front _____	[X]	[]	[]
Side _____	[X]	[]	[]
Rear _____	[X]	[]	[]
Handicap Ramp <u>ENTRANCES ARE AT GRADE LEVEL</u>	[X]	[]	[]
2. Lawn and Landscaping:			
Lawn <u>GREEN SPACES TO NORTH AND SOUTH OF BUILDING</u>	[]	[]	[X]
Shrubs <u>SHRUBBERY REQUIRES TRIMMING ON NORTH SIDE</u>	[]	[]	[X]
Trees <u>MATURE TREES ON NORTH AND SOUTH SIDES OF BLDG</u>	[]	[X]	[]
Undesirable Insect _____	[X]	[]	[]
Bedding Material _____	[]	[X]	[]
Watering System _____	[X]	[]	[]
3. General Site Information:			
Signage <u>LOCATED ON BOTH NORTH AND SOUTH SIDES OF BLDG</u>	[]	[X]	[]
Address Identification <u>IDENTIFIED ON NORTH SIGN</u>	[]	[X]	[]
Security Lights <u>MOUNTED ON EXTERIOR WALLS</u>	[]	[X]	[]
Street Lights <u>LOCATED ON W 10TH AND W 9TH AVENUES</u>	[]	[X]	[]
Drainage <u>SOME WATER DAMAGE AT AN AREAWAY BY DOCK</u>	[]	[]	[X]
Storm Drains _____	[]	[X]	[]

B. COMMENTS:

THE NORTH ENTRANCE AREA IS CURRENTLY THE SITE OF A STEAM LINE REPLACEMENT PROJECT. AS A RESULT, WE DO NOT RECOMMEND ANY BUILDING PERIMETER MAINTENANCE PROJECTS UNTIL THE CONTRACTOR IS FINISHED IN THIS AREA. THE AREAWAY CURB LOCATED TO THE WEST OF THE DOCK IS SPALLING FROM WATER THAT STANDS IN THIS AREA AS A RESULT OF IMPROPER DRAINAGE. THE SIDE WALK SLOPES INTO THE AREAWAY AND SHOULD BE REPLACED.

**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 OSU buildings that the Department of Physical Facilities has budgetary responsibility for. These audits will be used to establish corrective maintenance projects and budget cost estimates.

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.

5. 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, redecorating and wholesale replacement of building and system components. Ongoing maintenance, replacement and renovation projects are included.
- (b) Includes exterior building walls and attached items.
- (c) Includes the entrance steps at all entries. Ramps outside the buildings are included. Plantings around the building exterior are included.
- (d) Movable furniture is 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
BLDG.....BUILDING
BUR.....BUILT UP ROOF
COND.....CONDENSATE WATER
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
HPS.....HIGH PRESSURE STEAM (125 PSI)
HVAC.....HEATING, VENTILATING AND AIR CONDITIONING SYSTEM
KV.....KILOVOLTS
KVA.....KILOVOLTS AMPS
KW.....KILOWATTS
LC.....LIQUID COOLED
LPS.....LOW PRESSURE STEAM (15 PSI)
MPS.....MEDIUM PRESSURE STEAM (50 PSI)
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
Reduced Scale Building Floor Plans
C-1 Building Space Assignments