

FACILITY AUDIT REPORT  
AGRICULTURAL ADMINISTRATION BUILDING, Bldg 003  
January 8, 1992

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

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## 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

GENERAL BUILDING INFORMATION

AGRICULTURAL ADMINISTRATION BUILDING #003

BUILDING ADDRESS: 2120 FYFFE ROAD

GROSS SQ. FT.: 101,313

NET ASSIGNABLE SQ. FT.: 58,327

MECHANICAL/CUSTODIAL AREA SQ. FT.: 11,091

YEAR OF CONSTRUCTION: 1955

YEAR OF LAST RENOVATION: AUDITORIUM & 2ND FLOOR OF TWO WINGS, ADDED 1957

NUMBER OF STORIES/BASEMENT: 4 STORIES AND PARTIAL BASEMENT

AIR CONDITIONING (Percentage): 85%

CURRENT USE: 54% OFFICE, 13% LIBRARY, 13% MECHANICAL/CUSTODIAL/TOILET, 9% AUDITORIUM, 8% CLASSROOM

TYPE OF CONSTRUCTION: REINFORCED CONCRETE FRAME WITH BRICK EXTERIOR

ESTIMATED REPLACEMENT COST: \$12,253,000

BUILDING APPEARANCE: BRICK AND CUT STONE EXTERIOR WITH ALUMINUM SPANDREL PANELS. INTERIOR IS PREDOMINANTLY GLAZED TILE/BLOCK WALLS WITH ACOUSTICAL TILE CEILINGS.

HANDICAPPED ACCESSIBILITY: DOORS TO AUDITORIUM (4-H ENTRANCE). THE REST OF THE BUILDING IS ACCESSIBLE FROM ELEVATOR.

NUMBER OF EXIT STAIRWAYS: 5

**BUILDING SYSTEMS INFORMATION**

AGRICULTURAL ADMINISTRATION BUILDING #003

**HEATING:**

Source PRIMARY - POWER PLANT STEAM, 3 STEAM BOILERS ON-SITE FOR BACK-UP  
Type Heating System HOT WATER  
Steam (Line size, valve location) 4", RM 9001  
Building Htg Water (line size, valve location) STEAM CONVERTER

**VENTILATION SYSTEM:** MULTIZONE SYSTEMS

**COOLING:**

Bldg % 85 Chillers 1 EVAPORATING CHILLER  
Window Units 80 Thru-the-wall N/A Direct exp. units 7

**HVAC CONTROL SYSTEM:** PNEUMATIC

**ELECTRIC:** Source Size(KVA) Primary/Secondary Switchgear & Main Disc. (Rm)  
BUCKEYE 3 @ 167 KVA 13,200 V/(120/208) RM 9002M

**PLUMBING:**

Water (size, valve location) 4" RM 9001S  
Gas (size, valve location) 4" RM 9001S  
Domestic Hot Water (size, valve location) LOCAL STEAM CONVERTER, RM 9001S  
Compressed Air (size, location) 125 PSI, RM 50M

**SEWERS:** Storm 6 @ 6", 1 @ 10" Sanitary 5 @ 6"

**METERS:**

Gas (location) EAST SIDE OF BUILDING  
Water (location) N/A  
Electric (location) N/A

**ALARM SYSTEMS:**

Fire Alarm YES Panel Location RM 1M  
Fire Pump N/A Pump Location N/A  
Sprinklers N/A Panel Location N/A  
Other Alarms NO

**ELEVATORS:**

Number 1 Type (passenger, freight) PASSENGER  
Manufacturer OTIS Size 2500 LBS, 4'8" X 5'9"

**EMERGENCY GENERATOR:**

Size N/A Location N/A

**KEY BOX LOCATION:** SOUTH ENTRANCE ON WEST SIDE OF BUILDING

**ASBESTOS SURVEY (1986):**

PIPE INSULATION THROUGHOUT THE BUILDING.

## AGRICULTURAL ADMINISTRATION 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. In addition, this audit does not intend to assess the condition of those aspects of this facility which are the budgetary responsibility of tenant departments.

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

### HISTORY

Construction of the first portion of the Agricultural Administration Building was completed in 1955. A second floor was added to the north and south wings of the building along with a one story auditorium on the east side of the building in 1957. The facility is occupied by administrative offices for the College of Agriculture including the Ohio Cooperative Extension Service. Facility use, primarily administrative offices with a limited number of classrooms, has remained unchanged since initial construction. Building use by activity category is: 54% office, 13% library, 13% mechanical/custodial/toilet, 9% auditorium, 8% classroom.

### PRIMARY SYSTEMS

The building rests on continuous concrete footings. Foundation walls are cast-in-place concrete. The supporting building structure is reinforced concrete columns and cast-in-place concrete floors. There were no problems observed with the building structure.

The roof structure consists of a poured concrete deck resting upon structural steel joists. All roof coverings, which are built-up asphalt with gravel, were being replaced during the audit. The brick parapet surrounding this area has a number of areas where efflorescence and mortar deterioration is occurring. Physical Facilities has proposed a project to repair this damage, as well as clean and repair other portions of the exterior.

The exterior is predominantly brick and limestone. The auditorium entrance at the east side of the building is covered with limestone panels. The two building entrances on the west side of the building are flanked with polished granite panels. The west side of the building has aluminum panels with decorative trim. The limestone trim on the building is dirty and should be cleaned. The building was repointed approximately 20 years ago according to maintenance personnel. There are a number of locations where limited mortar deterioration has occurred, particularly at the parapets. There has also been some leaching of caulking that has resulted in stains on the east side of the building. Physical Facilities has a proposed project to replace building sealants, spot repair the masonry including the parapets, and chemically clean all exterior surfaces. The exterior doors are original in most locations but are good condition. The exterior doors to the auditorium,

which is also referred to as the 4-H assembly hall, have been replaced.

The original window frames are dirty and the windows do not seal well in many instances. All windows are double-hung aluminum single pane. Many of them have a bottom-hinged window below the lower sash. Occupants reported that most windows do not operate properly. The windows should be replaced with insulating windows to improve building comfort and reduce energy demands. At a minimum the aluminum frames should be cleaned and the window hardware lubricated and repaired on an as-needed basis.

## SECONDARY SYSTEMS

Interior partitions are predominantly glazed block. The walls throughout are in good condition. Interior partitions are in very good condition, which is reflective of the type of materials used for construction. Hardware is original and is still functional but beginning to show signs of aging.

Floor coverings are predominantly vinyl tile or carpet in many of the department areas. The building coordinator reported that carpets are not vacuumed on a regular basis.

Ceiling finishes consist of 12" x 12" original acoustical tile in the corridors. A number of rooms have had 2' X 4' acoustical tile ceilings installed below the original ceilings. Ceilings are generally in good condition.

## SERVICE SYSTEMS

The building has one passenger elevator which is original and requires renovation/modernization. The elevator has handicapped accessible controls. It does not have an emergency phone. The Department of Physical Facilities has proposed a project to renovate the elevator.

The building plumbing fixtures are aging but serviceable. The Environmental and Occupational Health and Safety Office has tested the water quality within the building several times at the request of both Physical Facilities and the occupants and discovered elevated levels of lead, iron and cadmium in the domestic water supply in one area of the ground floor. A drinking fountain and an adjacent service sink had levels exceeding EPA standards. The drinking fountain was removed and the sink is no longer used. Metal levels in the water throughout the rest of the building are within EPA acceptable standards including the rest of the ground floor. The domestic hot water supply is acceptable.

The building heating system consists of hot water convectors, and steam coils in building multizone systems. There has been a history of plugged building hot water heating lines and maintenance personnel have been replacing piping for several years as they become plugged. The hot water heating system requires better control in the form of zoning and at a minimum requires system balancing. The system is expected to continue to degrade and should be replaced within the next several years with a zoned system with new distribution piping.

There are three boilers in the basement that are no longer used for steam but are maintained in 'wet storage' for emergency use. The boilers would also be used to supply steam to Vivian Hall in addition to the Agricultural Administration Building. There was no evidence that the boilers

had been operated recently. The boilers are maintained as a back-up in the event of loss of central steam supply.

Building cooling systems consist of several multizone systems cooled by reciprocating electric chillers. Most of the electric reciprocating DX units are functioning smoothly. One unit was replaced this past summer and the remaining units are now approximately 30 years old. Maintenance personnel reported that the 30 ton unit serving the south wing of the second floor has had a lot of downtime. The building cooling system is serviced by three cooling towers. The two towers on the west roof have required a great deal of maintenance according to maintenance personnel and require replacement. The cooling towers are approximately 30 years old and are exhibiting some corrosion and deterioration.

## ELECTRICITY

The building has three transformers that were replaced recently during the PCB replacement project. They all have primary voltages of 13,200 volts, secondary voltages of 208Y/120 volts and 167 KVA capacity each. Utilities department records indicate that the building approaches complete transformer utilization during periods of maximum demand. As a result, there is no additional service capacity for this building. Utilities personnel reported that the electric switchgear is so overloaded that they have to take a portable fan and blow on the main secondary breaker in the summer to keep it from tripping off. The building coordinator reported that the electrical demand in the building is continually increasing as a result of the added demand for computers for graduate student offices.

The Department of Agricultural Economics and Rural Sociology has found circuit grounding to be inadequate for computer power requirements in the area around room 250. The Physical Facilities Power Quality Program staff investigated the problem and determined that insulated ground wires needed to be run back to the ground neutral bond in the basement. Physical Facilities is currently working with the occupants to resolve this problem.

Most of the lighting fixtures within this building are fluorescent. The auditorium and entry areas have incandescent fixtures. The Department of Physical Facilities has proposed a project to replace the dimmerboard controls for the auditorium lighting. Departmental personnel reported that, while the controls are functioning adequately at this time, replacement parts are no longer available for this system. There were no faults observed with the lighting. There is little spare circuit capacity within the building. Lighting and electrical distribution was renovated in several areas in 1983, predominantly the ground floor and the first and second floors of the south wing. Additional panels were added at that time and new fluorescent lighting fixtures were installed.

## SAFETY STANDARDS

The building is equipped with a manual fire alarm system and fire hose cabinets on each floor. There are lighted exit signs throughout. There were emergency lights in one mechanical room in the basement. The building does not possess an emergency generator. Handicapped access is accomplished via the east entrance to the auditorium lobby. There were handicapped-accessible controls in the passenger elevator. The elevator does not possess an emergency telephone.

## 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 pipe insulation throughout the building.

There is a Renovation/Construction project out for bid to remove the asbestos containing insulation from surfaces in the lower-level maintenance rooms and pipes located in stairwells throughout the building. Physical Facilities Departmental Asbestos Abatement Program records indicate that asbestos has also been partially removed from several areas since the initial risk assessment survey. Original pipe insulation appears to still be present throughout the majority of the building.

## BUILDING PERIMETER

The Agricultural Administration Building is located at the northwest corner of the intersection of Fyffe Road and Lane Avenue. There are principle building entrances on both the east and west sides of the building.

The entrance on the east side faces a large parking lot and allows public access to the auditorium. This is the most used entrance. There is a driveway to the south of the building that services a parking lot between the building and the Agricultural Engineering building to the east. The building has one loading dock that is in serviceable condition on the east side of the building. The building possesses an exterior security lighting system and there are street lights along the roads and parking areas surrounding it.

The trees and lawns are in good condition. The sidewalks, ramps and other pavements are in generally good condition with the exception of portions of the sidewalk to the west of the building.

## CONCLUSION

Building finishes are generally in good condition. The exterior requires cleaning and spot repairs. The building electrical system is at maximum utilization and can not support continued expansion of resident electrical requirements. Any major increase in electrical demand within the structure will warrant additional transformer capacity. The cooling systems are functioning adequately but the chillers and cooling towers are aging with some requiring replacement now and the rest requiring replacement in the near future. The hot water heating system requires more flushing than similar systems and is being replaced on an as-needed basis by Physical Facilities. The system could benefit from balancing and is at an age where replacement is anticipated in the near future.



**BUILDING EVALUATION SUMMARY**

**I. BUILDING INFORMATION**

FAC # 003 FACILITY NAME: AGRICULTURAL ADMINISTRATION BLDG  
 DATE: 12/6/91 INSPECTOR: JPH  
 YEAR CONSTRUCTED: 1955, ADDITION CONSTRUCTED 1957  
 GROSS SQ FT: 101,478 NET SQ FT: 58,327  
 REPLACEMENT COST \$ 12,253,000 \* .90 = 11,028,000

**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	4.7	518,316	.89	461,301
Columns and Beams	18.2	2,007,096	.89	1,786,315
Exterior Walls	9.1	1,003,548	.75	752,661
Windows & Doors	3.7	408,036	.54	220,339
Roofing	3.3	363,924	.47	171,044
Partitions & Drs.	9.7	1,069,716	.81	866,470
Wall Finishes	2.4	264,672	.74	195,857
Floor Finishes	4.6	507,288	.77	390,612
Ceilings & Finish	6.5	716,820	.77	551,951
Conveying	1.5	165,420	.54	89,327
Plumbing	7.5	827,100	.64	529,344
Heating	7.9	871,212	.63	548,864
Cooling & Vent.	9.1	1,003,548	.56	561,987
Elec. Ser. & Dist	1.6	176,448	.72	127,043
Lighting & Power	9.7	1,069,716	.73	780,893
Safety Standards	.5	55,140	.63	34,738
TOTALS	100.0	11,028,000		8,068,746

**III. BUILDING RATING SUMMARY**

Overall Building Rating = 73%

\* Replacement Cost assigned January 1991 by The Office of Campus Planning and Space Utilization deducting 10% for 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 # 003      DATE 11/18/91      INSPECTOR: JPH

**A. SYSTEM DESCRIPTION**

**a. Footings:**

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Individual Footings & Piers <u>UNDER COLUMNS</u>	[ ]	[X]	[ ]
Continuous Footings <u>UNDER EXTERIOR WALLS</u>	[ ]	[X]	[ ]
Grade Beams _____	[X]	[ ]	[ ]
Piles _____	[X]	[ ]	[ ]
Caissons _____	[X]	[ ]	[ ]

**b. Foundation Wall Materials:**

Steel _____	[X]	[ ]	[ ]
Concrete Cast-in-place <u>NO CRACKING OR DEFLECTION</u>	[ ]	[X]	[ ]
Concrete Block _____	[X]	[ ]	[ ]
Other _____	[X]	[ ]	[ ]

**c. Waterproofing and Underdrain:**

Coating <u>"METALLIC WATERPROOFING" COATING</u>	[ ]	[X]	[ ]
Membrane _____	[X]	[ ]	[ ]
Board _____	[ ]	[ ]	[ ]
Drain Tile <u>4" PERIMETER TILE CONNECTED TO SUMP PUMPS</u>	[X]	[X]	[ ]

**d. Slab on Grade (floor):**

Plain _____	[X]	[ ]	[ ]
Reinforced <u>#3 REBAR 12" O.C. IN BOILER ROOM</u>	[ ]	[X]	[ ]

**e. Special Substructures:**

_____	[X]	[ ]	[ ]
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**B. COMMENTS:**

NO PROBLEMS OBSERVED. THE BUILDING HAS LIMITED BASEMENT SPACE THAT IS USED EXCLUSIVELY AS MAINTENANCE SPACE.

**C. COMPONENT RATING: (\$518,300 ) X ( 89 % ) = \$461,300**

Possible	Condition	Component
Value	Value Multiplier	Value





**EXTERIOR WINDOWS & DOORS**

FAC # 003      DATE 11/19/91      INSPECTOR: JPH

**A. SYSTEM DESCRIPTION**

<b>a. Windows type &amp; number:</b>	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Wood _____	[X]	[ ]	[ ]
Steel _____	[X]	[ ]	[ ]
Alum <u>374 DOUBLE-HUNG, 3 FIXED</u>	[ ]	[ ]	[X]
Other _____	[X]	[ ]	[ ]
 <b>b. Window glazing:</b>			
Single pane _____	[ ]	[X]	[ ]
Double pane _____	[X]	[ ]	[ ]
Other _____	[X]	[ ]	[ ]
 <b>c. Doors type &amp; number:</b>			
Wood <u>ONE GARAGE-TYPE DOOR AT LOADING DOCK</u>	[ ]	[X]	[ ]
Steel <u>4 DOUBLE AND ONE SINGLE</u>	[ ]	[X]	[ ]
Alum <u>3 SETS OF 4, 2 SETS OF 3, AND ONE DOUBLE ALL GLAZED</u>	[ ]	[X]	[ ]
Other _____	[X]	[ ]	[ ]
 <b>d. Shading Devices:</b>			
Types <u>VENETIAN BLINDS THROUGHOUT - GENERALLY DIRTY</u>	[ ]	[ ]	[X]

**B. COMMENTS:**

MANY OF THE WINDOWS ARE A COMBINATION OF A DOUBLE-HUNG UNIT WITH A BOTTOM-HINGED WINDOW BELOW. WINDOWS FRAMES ARE DIRTY. THE BUILDING COORDINATOR REPORTED THAT A LARGE NUMBER OF THE WINDOWS WILL NOT CLOSE PROPERLY AND LEAK RAIN WATER AND COLD AIR IN THE WINTER.

**C. COMPONENT RATING:**    (\$408,000)    X    ( 54 % )    =    \$220,300

Possible	Condition	Component
Value	Value Multiplier	Value



















ELECTRICAL/SERVICE & DISTRIBUTION

FAC # 003      DATE 11/25/91      INSPECTOR: JPH

A. SYSTEM DESCRIPTION

(a) Service:

Substation BUCKEYE  
Primary Voltage 13,000 VOLTS  
Transformer:

Manufacture	Type	KVA	Secondary Voltages
<u>GENERAL ELECTRIC</u>	<u>SILICONE</u>	<u>167</u>	<u>120/240</u>
<u>GENERAL ELECTRIC</u>	<u>SILICONE</u>	<u>167</u>	<u>120/240</u>
<u>GENERAL ELECTRIC</u>	<u>SILICONE</u>	<u>167</u>	<u>120/240</u>

(b) Distribution System:

Panelboard (type) CIRCUIT BREAKER  
Voltage GENERALLY 120 VOLTS WITH 240 VOLT FOR WINDOW A/C  
Amperage 1600 AMP SERVICE  
Conduit ALUMINUM AND STEEL  
Conductor COPPER  
Wire (type) VARIES  
Armored Cable LIMITED  
Other

(c) Emergency System:

General or (type & capacity) NONE

B. COMMENTS:

UTILITY DEPARTMENT RECORDS INDICATE THAT THE BUILDING ELECTRIC SERVICE APPROACHES MAXIMUM UTILIZATION. THERE IS LITTLE SPARE CAPACITY AVAILABLE IN THE DISTRIBUTION PANELS THROUGHOUT THE BUILDING. THE MAIN SECONDARY SWITCHES ARE OLD AND REQUIRE REPLACEMENT. HIGH VOLTAGE PERSONNEL REPORTED THAT THE CONNECTION BETWEEN THE TRANSFORMER AND MAIN BUS FOR THE BUILDING WAS NOT ADEQUATELY SECURED DURING THE RECENT TRANSFORMER REPLACEMENT PROJECT AND REQUIRES REPAIR.

C. COMPONENT RATING: 
$$\frac{(\$176,400)}{\text{Possible Value}} \times \left( \frac{72\%}{\text{Condition Value Multiplier}} \right) = \frac{\$127,000}{\text{Component Value}}$$





**BUILDING PERIMETER EVALUATION**

FAC # 003

DATE: 11/26/91

INSPECTOR: JPH

**A. SYSTEM DESCRIPTION**

	N/A	Sat	Att
1. Building Access:			
Driveway <u>EAST SIDE OF BUILDING - TO LOADING DOCK</u>	[ ]	[X]	[ ]
Loading Dock <u>EAST SIDE OF BUILDING - SOME SPALLING</u>	[ ]	[ ]	[X]
Sidewalks			
Front <u>WEST SIDE OF BUILDING - CONCRETE</u>	[ ]	[ ]	[X]
Side <u>SOUTH SIDE OF BUILDING - CONCRETE</u>	[ ]	[X]	[ ]
Rear <u>EAST SIDE OF BUILDING - CONCRETE &amp; BRICK</u>	[ ]	[X]	[ ]
Steps			
Front <u>2 SETS ON WEST SIDE, NORTH NEEDS CAULKING</u>	[ ]	[ ]	[X]
Side _____	[X]	[ ]	[ ]
Rear <u>EAST SIDE</u>	[ ]	[X]	[ ]
Handicap Ramp <u>ENTRANCE AT GRADE LEVEL</u>	[ ]	[X]	[ ]
2. Lawn and Landscaping:			
Lawn <u>SOME DROUGHT STRESS</u>	[ ]	[X]	[ ]
Shrubs _____	[ ]	[X]	[ ]
Trees _____	[ ]	[X]	[ ]
Undesirable Insect _____	[X]	[ ]	[ ]
Bedding Material _____	[ ]	[X]	[ ]
Watering System _____	[X]	[ ]	[ ]
3. General Site Information:			
Signage _____	[ ]	[X]	[ ]
Address Identification _____	[ ]	[X]	[ ]
Security Lights <u>HIGH INTENSITY DISCHARGE</u>	[ ]	[X]	[ ]
Street Lights <u>EAST, SOUTH AND WEST SIDES OF BUILDING</u>	[ ]	[X]	[ ]
Drainage _____	[ ]	[X]	[ ]
Storm Drains _____	[ ]	[X]	[ ]

**B. COMMENTS:**

SIDEWALK ON THE WEST SIDE OF THE BUILDING IS CRACKED AND HEAVING IN SEVERAL PLACES POSING A TRIPPING HAZARD.

**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 responsible for. 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, redecorating and 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.

**APPENDIX**  
Reduced Scale Building Floor Plans  
C-1 Building Space Assignments