

FACILITY AUDIT REPORT

CONVERSE HALL

#056

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Department of Physical Facilities
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EXECUTIVE SUMMARY AND PROJECT LIST FOR CONVERSE HALL

Converse Hall was constructed in 1941 to accommodate the ROTC program at The Ohio State University. The building had shops for military equipment as well as classroom facilities. In 1942, the second floor was expanded and a third floor was added to the north side of the building. In 1968, a major renovation converted the shop space to classrooms and office space. A central air conditioning system was also added at this time. The University Archives Department moved to Converse Hall in 1980, occupying space in the basement as well as on the first and second floors. An additional air conditioning unit was added to accommodate the special needs of the Archives Department. In 1995, the Archives Department moved to its new location on Kenny Road and Buckeye Bargains moved into the basement of Converse Hall in 1996. Cop-Ez Department occupies about 600 sq.ft. of office space on the second floor. The building has a rifle range in the basement that is used by cadets, clubs and The O.S.U. Police Department.

The major projects identified with the building include an elevator to allow access to all floors, a new hot water heating system, replace the built-up roof and repair the slate roof, replace the windows that are original installation and replace the power distribution system between the transformers and the roof top units.

PROPOSED MAINTENANCE PROJECTS:

A. Corrective Maintenance Projects:		Control #
None		
B. Building Improvement/Addition Projects:		
Install an elevator to serve all floors.	\$ 300,000	1654*
Sub Total	\$ 300,000	
C. Component Replacement Projects expected within the next 5 to 10 years:		
Replace windows.	\$ 136,000	1700
Replace the roof-top units.	385,000	
Replace hot water heating distribution system.	282,000	1656
Replace the built-up and slate roof.	175,000	2191*
Replace power distribution from transformers to the roof-top units.	14,000	2963
Sub Total	\$ 992,000	
Total cost for estimated projects =	\$ 1,292,000	

* Funded Project

GENERAL BUILDING INFORMATION

CONVERSE HALL

BUILDING ADDRESS: 221 TUTTLE PARK PL.

GROSS SQ. FT.: 58,912

NET ASSIGNABLE SQ. FT.: 44,589

MECHANICAL/CUSTODIAL AREA SQ. FT.: 2,401

YEAR OF CONSTRUCTION: 1941

YEARS OF ADDITIONS: 1942

YEAR OF LAST RENOVATION: 1980

NUMBER OF STORIES/BASEMENT: 3 STORIES AND BASEMENT

AIR CONDITIONING (Percentage): 75%

CURRENT USE: MILITARY SCIENCE, COP-EZ AND BUCKEYE BARGAINS

TYPE OF CONSTRUCTION: CAST-IN-PLACE CONCRETE AND CONCRETE BLOCK

ESTIMATED REPLACEMENT COST: 8,305,000 *

WHEELCHAIR ACCESSIBILITY: FIRST FLOOR AT GRADE. THERE IS NO ELEVATOR.

OVERALL BUILDING CONDITION: SATISFACTORY**

NUMBER OF EXIT STAIRWAYS: 3

NUMBER OF EXITS: 5

AREA SHOP RESPONSIBILITY: NORTH SHOP

* Replacement Cost assigned June, 1995 by The Office of University Resource Planning & Institutional Analysis.

** The Office of University Resource Planning & Institutional Analysis C-1 Report Condition Code.

BUILDING SYSTEMS INFORMATION

CONVERSE HALL # 056

HEATING:

Source POWER PLANT

Type Heating System HOT WATER AND GAS FIRED ROOF TOP UNITS

Main Steam Feed (Line size, valve location) NONE

Building Htg. Water (line size, valve location) 4 1/2@ IN ROOM 041N

VENTILATION SYSTEM: EXHAUST FANS AND FOUR 30 TON ROOF-TOP UNITS

COOLING:

BLDG % 75 Chillers FOUR UNITS WITH TOTAL CAPACITY OF 120 TONS

Window Units 1 Thru-the-wall NONE Direct exp. units 1

HVAC CONTROL SYSTEM: PNEUMATIC AND ELECTRIC

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

1. BUCKEYE 107/307 3 @ 50 KVA 13.2 KV 208/120V RM 053M

2. BUCKEYE 107/307 3 @ 100 KVA 13.2 KV 240/DELTA RM 053M

PLUMBING SERVICES:

Water (size, valve location) 4@ IN ROOM 054

Gas (size, valve location) 3@ OUTSIDE ON EAST SIDE AT METER

Domestic Hot Water (size, valve location) 1 1/2@ IN RM 041N

Compressed Air (size, location) N/A

SEWERS:

Storm 1 @ 8@ Sanitary 1 @ 5@, 1 @ 8@, 1 @ 10@

Combined Storm/San. N/A

METERS:

Gas (size, location) 3@ LOCATED 40 FEET EAST OF THE BUILDING

Water (size, location) N/A

Electric (size, location) ROOM 53M

ALARM SYSTEMS:

Fire Alarm, Main Panel Room 053M, Remote Panel Location Room N/E DOOR

Fire Pump @ _____ GPM, Pump Location, Room _____

Sprinklers, Valve Location Room _____, 100%, Partial, Limited

Horns/Strobes, Bells in Halls, Rooms

Other Alarms

ELEVATORS:

Number NONE Freight) N/A

Manufacturer N/A Size N/A

EMERGENCY GENERATOR:

Size NONE Location N/A

ASBESTOS SURVEY (1986): ASBESTOS WAS NOTED IN ROOMS 041 AND 150 IN THE PIPE INSULATION

CONVERSE HALL NARRATIVE

HISTORY

Converse Hall was constructed in 1941 to accommodate the ROTC program at The Ohio State University. The building had shops for military equipment as well as classroom facilities. In 1942, the second floor was expanded and a third floor was added to the north side of the building. In 1968, a major renovation converted the shop space to classrooms and office space. A central air conditioning system was also added at this time. The University Archives Department moved to Converse Hall in 1980, occupying space in the basement as well as on the first and second floors. An additional air conditioning unit was added to accommodate the special needs of the Archives Department. In 1995, the Archives Department moved to its new location on Kenny Road and Buckeye Bargains moved into the basement of Converse Hall in 1996. Cop-Ez Department occupies about 600 sq.ft. of office space on the second floor. The building has a rifle range in the basement that is used by cadets, clubs and The O.S.U. Police Personnel.

Building use by room category is 37% office, 20% stacks (University Archives), 18% classroom, 18% rifle range, 4% mechanical/custodial and 3% sales (Buckeye Bargains).

PRIMARY SYSTEMS

The three story building is supported by continuous concrete footings at the exterior with individual spread footers for the concrete columns. The exterior walls to the second floor of the building consist of reinforced concrete. The second and third floor addition was constructed of concrete blocks. All the floors are cast-in-place concrete. The windows of the original first and second floors are single-pane, steel casement. The windows of the additions are either double-hung or pivoting octagonal single-pane, wood casement type. The roof structure consists of wooden trusses supporting a wooden deck. Approximately half of the roof is a built-up, with gravel, roof while the other half is slate tiles.

The foundation and basic structure appear to be in good condition with only minor signs of movement at some columns in the north side of the basement. The windows are original and the steel casements are rusting. Many of the wooden windows are inoperable because they have rotted and/or have been painted shut. The windows should all be replaced except for the glass block windows. The exterior walls are in good condition except for a few bricks that need to be replaced and a small patch of concrete that needs to be repaired.

The built-up part of the roof is at the end of its life expectancy and should be replaced. Approximately ten percent of the slate tiles are damaged and need to be replaced. Both these items should be done within the next five years. There are some minor repairs that need to be made to the gutters and down-spouts.

SECONDARY SYSTEMS

The interior partitions are predominantly concrete blocks with some metal stud and drywall partitions. Several renovations over the years have divided the interior space into different configurations of offices and classrooms and have produced varied ages and conditions in the wall finishes. Overall, the partitions are in good condition. The vinyl wall covering in the south and northeast stairwells needs to be repaired or replaced. The wall in the south stairwell leading from the basement to the first floor needs to be repainted. The vinyl tile floors are in good condition but the carpeting is showing some wear in the high traffic areas. The treads on the northeast and the south stairs need to be replaced. The interior doors are in good condition. The ceiling tiles need to be replaced in several places because of stains from plumbing and roof leaks. The ceiling tiles in the rifle range area have many holes from gun shots but are not recommended for replacement.

SERVICE SYSTEMS

There is no elevator in this building but a project is in design to install one to provide access to all floors.

The heating system is a hot water system with hot water supplied to the radiators by the power plant. Heat is also supplied by the gas fired heating coils in the roof-top units. The radiator system is original and needs to be replaced. There is an identified project to replace the existing hot water heating distribution system as well as the radiators.

The cooling and ventilation system consists of four 30-ton Carrier roof-top units and one window unit. The system is twenty nine years old and at the end of its life expectancy. The four roof-top units and the duct work leading into the building should be replaced within the next five years.

The plumbing system in the building appears to be functioning adequately. There were no problems noted with the domestic hot water from the electric hot water heater. The faucets in the restrooms are in working order. The lateral storm and sanitary drains should be cleaned out. There is no backflow preventor and one should be installed.

ELECTRICITY

Electrical power is supplied by three 100 KVA transformers and three 50 KVA transformers, located in room 053M. These transformers were installed during the PCB replacement project in 1989. The primary voltage is 13,200, with secondary voltages of 208/120 and 240/delta. There was a problem noted with the main power feeds from the transformers to the roof-top units. The wiring from the breakers in the basement to the roof top units is inadequate to carry the start-up load. A project has been identified to replace these feeds.

The majority of the building has 40 watts, fluorescent lighting fixtures with some incandescent lighting in the rifle range area. A concern was expressed by the building coordinator that the circuits might become overloaded because of the installation of computer equipment throughout the building and that more convenience outlets would be desirable.

SAFETY STANDARDS

The building has lighted exit signs and battery back-up emergency lighting. There are manual fire alarms as well as fire hoses on the first and second floors. There are smoke detectors in some parts of the building. An annunciator is located at the northeast entrance. There is one automatic access door operator at the northwest entrance. However, without an elevator, only the first floor is wheelchair accessible.

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 and Recommendations for Corrective Action by PEI Associates states that: the pipe insulation in rooms 054, 041N, 041G, 041F, 041A, 041B, 041, 134A, 150B, 210, 228, 248, 248A, 256, 253, 353A, 353D, 353E, 353F, 353C and 353P contain asbestos.

There has been no removal of asbestos since that report.

BUILDING PERIMETER

The driveway/parking area on the east side of the building has cracks in the black top that should be filled. The asphalt sidewalk on the south side has cracks that need to be repaired. Broken asphalt at the southwest corner needs to be repaired. Shrubs on the south and east side need to be trimmed. The security lights on the building exterior are all working and the building entrances and approaches are well lighted. There is a sign at the northeast corner of the building that identifies the building and its address.

MAINTENANCE PROJECTS (LESS THAN \$5000)

1. Replace veneer bricks at the east entrance.
Workorder # 01-5063-02140-51
2. Repair concrete patch on east wall and paint area.
Workorder # 01-5063-021410-51
3. Repair gutters and down-spouts on the east and west side.
Workorder # 01-5064-241309-73
4. Repair vinyl wall cover in the east and south stairwells.
Workorder # 01-5064-241311-65
5. Repaint the wall in south basement stairwell.
Workorder # 01-5064-241311-65
6. Clean out lateral sanitary and storm drains.
Workorder # 01-5064-241311-65
7. Repair cracks in blacktop on the south and east side. Also replace broken asphalt at the southwest corner.
Workorder # 01-5063-021410-51
8. Trim shrubs and bushes on the south and east sides of the building.
Workorder # 01-5063-021411-52
9. Patch broken tiles at roof door and paint roof entrance door.
Workorder # 01-5064-241309-73
Workorder # 01-5061-002114-20
10. Repaint flashing on the slate roof.
Workorder # 01-5061-002114-20
11. Repaint metal screen wall and metal cover over the roof-top units.
Workorder # 01-5061-002114-20
Workorder # 01-5064-241311-65
12. Clean exterior light fixtures.
Workorder # 01-5064-241311-65
13. Replace cover for communication wires at east entrance.
Workorder # 01-5064-241311-65

BUILDING EVALUATION SUMMARY

I. BUILDING INFORMATION

FAC # 056 FACILITY NAME: CONVERSE HALL
 DATE: 9/96 INSPECTOR: AJR
 YEAR CONSTRUCTED: 1942
 GROSS SQ FT: 59,912 NET SQ FT: 44,589
 REPLACEMENT COST \$ 8,305,000 *

II. COMPONENT RATING

COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST **	BUILDING COMPONENT REPLACEMENT COST	CONDITION VALUE MULTIPLIER BUILDING COMPONENT	BUILDING COMPONENT CURRENT VALUE
Foundation	7.92	657,619	0.85	556,833
Columns and Beams	8.36	694,154	0.85	587,768
Exterior Walls	6.16	511,482	0.75	385,347
Ext. Windows & Doors	4.05	336,116	0.31	103,080
Roofing & Flashing	5.28	438,413	0.48	209,475
Partitions & Doors	8.45	701,460	0.70	491,057
Wall Finishes	3.52	292,275	0.53	155,888
Floor Finishes	5.28	438,413	0.60	263,067
Ceilings & Finishes	6.92	574,321	0.59	338,233
Conveying	0.00	0	0.00	0
Plumbing	7.92	657,619	0.50	328,826
Heating	8.45	701,460	0.50	350,748
Cooling and Vent.	9.68	803,757	0.59	473,354
Elect. Serv. & Dist.	1.67	138,831	0.60	83,303
Lighting and Power	11.09	920,667	0.60	552,428
Safety Standards	5.28	438,413	0.60	263,061
TOTALS	100.00	8,305,000	0.62	5,142,468

III. BUILDING RATING SUMMARY

Overall Building Rating = 62%

* Replacement Cost assigned January, 1996 by The Office of The University Resource Planning & Institutional Analysis 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.

Value Value Multiplier Value

EXTERIOR WALLS

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Walls:			
Concrete <u>FIRST FLOOR</u>	[]	[X]	[]
Concrete Block <u>UPPER LEVELS</u>	[]	[X]	[]
Brick Masonry _____	[X]	[]	[]
Brick Veneer <u>BROKEN BRICKS AT THE NORTHEAST ENTRANCE</u>	[]	[]	[X]
Glass Wall _____	[X]	[]	[]
Metal Siding _____	[X]	[]	[]
Wood Siding _____	[X]	[]	[]
Other _____	[X]	[]	[]
b. Wall Lintels:			
Concrete _____	[]	[X]	[]
Limestone _____	[X]	[]	[]
Brick Masonry _____	[X]	[]	[]
Steel _____	[]	[X]	[]
Wood _____	[X]	[]	[]
Other _____	[X]	[]	[]
c. Trim:			
Limestone _____	[X]	[]	[]
Brick _____	[]	[X]	[]
Marble _____	[X]	[]	[]
Wood _____	[X]	[]	[]
Other _____	[X]	[]	[]
d. Finishes:			
Plain _____	[X]	[]	[]
Stucco _____	[]	[X]	[]
Paint _____	[]	[X]	[]
Parging _____	[X]	[]	[]
Exposed Aggregate _____	[X]	[]	[]
Drivit _____	[X]	[]	[]
Other _____	[X]	[]	[]
e. Exterior Wall Backing System:			
Concrete _____	[]	[X]	[]
Concrete Block _____	[]	[X]	[]
Brick Masonry _____	[X]	[]	[]
Steel Girts _____	[X]	[]	[]
Metal Studs _____	[X]	[]	[]
Wood Studs _____	[X]	[]	[]

C. COMMENTS:

THE EXTERIOR WALLS ARE IN GOOD CONDITION EXCEPT FOR A FEW BROKEN BRICKS AT THE NORTHEAST ENTRANCE AND A CONCRETE PATCH THAT NEEDS TO BE REPAIRED ON THE EAST SIDE.

C. COMPONENT RATING: (\$ 511,482) (75 %) = \$ 385,347
 Possible Condition Component
 Value Value Multiplier Value

EXTERIOR WINDOWS & DOORS

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Window materials:			
Wood <u>WITH THE DOUBLE HUNG</u>	[]	[]	[X]
Steel <u>WITH THE CASEMENT</u>	[]	[]	[X]
Alum _____	[X]	[]	[]
PVC _____	[X]	[]	[]
Other <u>GLASS BLOCK</u>	[]	[X]	[]
b. Windows type & number:			
Double Hung <u>81</u>	[]	[]	[X]
Awning _____	[X]	[]	[]
Casement <u>81</u>	[]	[]	[X]
Pivoted _____	[X]	[]	[]
Sliding _____	[X]	[]	[]
Fixed <u>7</u>	[]	[X]	[]
Other _____	[X]	[]	[]
c. Window glazing:			
Single pane _____	[]	[X]	[]
Double pane _____	[X]	[]	[]
d. Window Wall and/or Store Front:			
Store Front _____	[X]	[]	[]
Vestibule _____	[X]	[]	[]
Single pane _____	[X]	[]	[]
Double pane _____	[X]	[]	[]
Other _____	[X]	[]	[]
e. Door Materials:			
Wood _____	[X]	[]	[]
Steel _____	[]	[X]	[]
Alum _____	[X]	[]	[]
f. Doors type & number:			
Vestibule Double _____	[X]	[]	[]
Double <u>3 ENTRANCE</u>	[]	[X]	[]
Exit <u>2 EXIT ONLY</u>	[]	[X]	[]
Stair Exit <u>3</u>	[]	[X]	[]
Garage _____	[X]	[]	[]
Special _____	[X]	[]	[]
Other _____	[X]	[]	[]
g. Hardware:			
Automatic opener <u>NORTHWEST ENTRANCE</u>	[]	[X]	[]
Push Bar Openers wt Closures _____	[]	[X]	[]
Key Cards _____	[X]	[]	[]

B. COMMENTS:

THE WOOD WINDOW FRAMES ARE ROTTING OUT AND THE CASEMENT WINDOWS ARE RUSTING. THE WINDOWS ARE ALL ORIGINAL AND SHOULD BE REPLACED.

C. COMPONENT RATING: (\$ 336,116) (31 %) = \$ 103,080
 Possible Condition Component
 Value Value Multiplier Value

ROOFING

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
a. Roof Covering:			
Built-up <input type="checkbox"/> asphalt <input type="checkbox"/> Coal Tar <input type="checkbox"/> Modified	[X]	[]	[]
Built-up w/gravel <u>COAL TAR 8,388 SQ FT</u>	[]	[]	[X]
Asphalt Roll _____	[X]	[]	[]
Asphalt Shingle _____	[X]	[]	[]
Copper _____	[X]	[]	[]
Slate <u>9,975 SQ FT</u>	[]	[]	[X]
Skylights _____	[X]	[]	[]
Other _____	[X]	[]	[]
b. Flashing:			
Materials: <input type="checkbox"/> Cu <input checked="" type="checkbox"/> Galv <input type="checkbox"/> Al <input type="checkbox"/> EPDM <input type="checkbox"/> SS <input type="checkbox"/> PVC _____	[]	[X]	[]
Base & Counter <u>WITH BUR ROOF</u>	[]	[X]	[]
Cap <u>MISSING ON SEVERAL RIDGES OF THE SLATE ROOF</u>	[]	[]	[X]
Reglet _____	[X]	[]	[]
Valley & Ridge _____	[]	[]	[X]
c. Gravel Stop & Edge Strips:			
Type <input type="checkbox"/> SS <input checked="" type="checkbox"/> Galv <input type="checkbox"/> Al <input type="checkbox"/> Cu <input type="checkbox"/> PVC _____	[]	[X]	[]
d. Drainage:			
Gutters w/ Exterior Down-spouts _____	[]	[]	[X]
Scuppers w/o Exterior Down-spouts _____	[X]	[]	[]
Drains w/ Interior Storm Drains _____	[X]	[]	[]
Emergency Overflow _____	[X]	[]	[]
e. Parapets:			
Concrete _____	[X]	[]	[]
Brick _____	[X]	[]	[]
Precast _____	[X]	[]	[]
Other _____	[X]	[]	[]
f. Parapet Caps:			
Metal <input type="checkbox"/> SS <input type="checkbox"/> Galv <input type="checkbox"/> Al <input type="checkbox"/> Cu <input type="checkbox"/> PVC _____	[X]	[]	[]
Tile _____	[X]	[]	[]
Limestone _____	[X]	[]	[]
Precast _____	[X]	[]	[]
Other _____	[X]	[]	[]
h. Roof accessories:			
Lightning Protection _____	[X]	[]	[]
Roof Curbs _____	[X]	[]	[]
Equipment Frames _____	[]	[]	[X]
Pitch Pockets _____	[X]	[]	[]
Other _____	[X]	[]	[]

B. COMMENTS:

THE BUILT-UP ROOF IS 29 YEARS OLD AND SHOULD BE REPLACED WITHIN THE NEXT FIVE TO TEN YEARS. THE SLATE ROOF NEEDS TO BE REPLACED AS WELL. FOR NOW, THE MISSING METAL CAP ON THE SLATE ROOF SHOULD BE REPLACED. THE GALVANIZED FLASHING ON THE SLATE ROOF NEEDS TO BE PAINTED AS WELL AS THE METAL SCREEN WALL AND COVER FOR THE ROOF TOP EQUIPMENT.

C. COMPONENT RATING: (\$ 438,413) (48 %) = \$ 209,475
 Possible Condition Component
 Value Value Multiplier Value

FLOOR FINISHES

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Carpet:			
Rolled <u>WEAR PATTERN IN HIGH TRAFFIC LOCATION</u>	[]	[X]	[]
Tile _____	[X]	[]	[]
b. Concrete Topping:			
Clear Sealant <u>IN THE RIFLE RANGE</u>	[]	[X]	[]
Antislip _____	[X]	[]	[]
Epoxy _____	[X]	[]	[]
d. Resilient:			
Vinyl Composition Tile _____	[X]	[]	[]
Vinyl/Plastic Tile _____	[X]	[]	[]
Asphalt Tile _____	[]	[X]	[]
Linoleum Tile _____	[X]	[]	[]
Vinyl Roll _____	[X]	[]	[]
Rubber _____	[X]	[]	[]
e. Ceramic Tile [] Mosaic [] Quarry [] Pavers	[X]	[]	[]
f. Masonry [] Marble [] Granite [] Slate [] Brick	[X]	[]	[]
g. Terrazzo [] Marble [] Granite	[X]	[]	[]
h. Wood [] Tiles [] T&G Hardwood [] Planking	[X]	[]	[]
h. Pedestal [] Vinyl Tiles [] Grills [] Supply Air [] Vent	[X]	[]	[]
I. Base Molding:			
Vinyl _____	[]	[X]	[]
Wood _____	[X]	[]	[]
Terrazzo _____	[X]	[]	[]
Ceramic Tile _____	[X]	[]	[]
Masonry _____	[X]	[]	[]

B. COMMENTS:

THE TILE FLOORS ARE IN GOOD CONDITION. THE CARPETING VARIES IN AGE AND CONDITION BUT IS SERVICEABLE AT THIS TIME.

C. COMPONENT RATING: (\$ 438,413) (60 %) = \$ 263,067
 Possible Condition Component
 Value Value Multiplier Value

CONVEYING

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Elevators:			
Number <u>NONE</u>	[X]	[]	[]
Type _____	[X]	[]	[]
Speed _____	[X]	[]	[]
Capacity (lbs) _____	[X]	[]	[]
Dimensions _____	[X]	[]	[]
Door Operation:			
Center _____	[X]	[]	[]
To Side _____	[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:

THERE IS NO ELEVATOR IN THIS BUILDING.

C. COMPONENT RATING: (\$ _____) (_____ %) = \$

Possible Condition Component
Value Value Multiplier Value

MECHANICAL/PLUMBING DOMESTIC

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Services Available:			
Cold Water <u>4@ ROOM 054</u>	[]	[X]	[]
Backflow Valve <u>ONE NEEDS TO BE INSTALLED</u>	[]	[]	[X]
Hot Water <u>4 1/2@ ROOM 041</u>	[]	[X]	[]
Natural Gas <u>3@ EAST OF BUILDING</u>	[]	[X]	[]
Other _____	[X]	[]	[]
b. Piping & Fittings:			
Cast Iron _____	[]	[X]	[]
Copper Pipe _____	[]	[X]	[]
Copper Tubing _____	[]	[X]	[]
Steel _____	[X]	[]	[]
Galv. Steel _____	[]	[X]	[]
Other _____	[X]	[]	[]
c. Water Heaters:			
Gas <u>80 GALLON HOT WATER TANK</u>	[]	[X]	[]
Steam Converter/Tank _____	[X]	[]	[]
Steam Instantaneous _____	[X]	[]	[]
Central Hot Water <u>FROM POWER PLANT</u>	[]	[X]	[]
d. Drainage:			
Storm Drains <u>5@ , 8@ , 10@</u>	[]	[X]	[]
Sanitary Drainage <u>4@</u>	[]	[X]	[]
Floor Drains _____	[]	[X]	[]
e. Fixtures: Number			
Water Closets <u>12</u>	[]	[X]	[]
Urinals <u>4</u>	[]	[X]	[]
Lavatory Sinks <u>12</u>	[]	[X]	[]
Kitchen Sinks <u>0</u>	[X]	[]	[]
Service Sinks <u>4</u>	[]	[X]	[]
Showers <u>1</u>	[]	[X]	[]
Electric Water Coolers <u>3</u>	[]	[X]	[]
f. Sprinkler Systems:			
Wet _____	[X]	[]	[]
Dry _____	[X]	[]	[]
Carbon Dioxide _____	[X]	[]	[]
Haylon _____	[X]	[]	[]
g. Standpipe Systems:			
Wet _____	[]	[X]	[]
Dry _____	[X]	[]	[]
Fire Hose Valves []2.5@ [X]1.25@	[]	[X]	[]
Hose Cabinets _____	[X]	[]	[]
Hoses [X]Installed []Removed	[]	[X]	[]

C. COMMENTS:

THERE WERE NO PLUMBING PROBLEMS NOTED BY THE OCCUPANTS OR IN THE WORK ORDER SYSTEM. THERE ARE OCCASIONAL STORM/SANITARY LINE BACK-UPS AND IT IS RECOMMENDED THAT THESE LINES SHOULD BE CLEANED OUT. REMOVE HOSES

C. COMPONENT RATING: (\$ 657,619) (50 %) = \$ 328,826
 Possible Condition Component
 Value Value Multiplier Value

MECHANICAL/HEATING

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Heat Source:			
Central Plant Steam _____	[X]	[]	[]
Central Plant Hot Water <u>4 1/2@ HWS IN ROOM 041</u>	[]	[X]	[]
Boilers: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]
Furnace/s: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]
Heat Pump/s: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]
b. System Type:			
Steam _____	[X]	[]	[]
Hot Water <u>HEATING</u>	[]	[X]	[]
Warm Air <u>GAS FIRED</u>	[]	[X]	[]
c. Air Handling Units:			
Multizone _____	[]	[X]	[]
Dual Duct _____	[X]	[]	[]
Make-up Air _____	[X]	[]	[]
Variable Volume Air _____	[X]	[]	[]
Constant Volume Air _____	[]	[X]	[]
Other _____	[X]	[]	[]
d. Space Equipment:			
Radiators <u>AT THE PERIMETER</u>	[]	[]	[X]
Convectors _____	[X]	[]	[]
Unit Heaters <u>AT ENTRANCES</u>	[]	[]	[X]
Reheat Coils _____	[X]	[]	[]
VAV Boxes _____	[X]	[]	[]
CAV Boxes _____	[X]	[]	[]
2-Pipe Fan Coil _____	[X]	[]	[]
Other _____	[X]	[]	[]
d. Control Type:			
Pneu _____	[]	[X]	[]
Electric _____	[]	[X]	[]
DDC _____	[X]	[]	[]
DDC Upgrade _____	[X]	[]	[]

B. COMMENTS:

THE HEATING SYSTEM IS ORIGINAL AND SHOULD BE REPLACED.

C. COMPONENT RATING: (\$ 701,460) (50 %) = \$ 350,748

Possible	Condition	Component
Value	Value Multiplier	Value

COOLING & VENTILATING

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. System/Capacity:			
Water _____	[X]	[]	[]
DX _____	[]	[]	[X]
b. Chillers Capacity/Year/Refrigerant:			
Centrifugal _____	[X]	[]	[]
Reciprocating <u>4 UNITS @ 30 TONS EACH, CARRIER, 1969, R12</u>	[]	[]	[X]
Absorption _____	[X]	[]	[]
c. Cooling Towers:			
Type/Capacity _____	[X]	[]	[]
d. Condensers:			
Type/Capacity <u>CARRIER, 120 TONS TOTAL CAPACITY</u>	[]	[]	[X]
e. Air Handling Units:			
Multizone _____	[X]	[]	[]
Dual Duct _____	[X]	[]	[]
Make-up Air _____	[X]	[]	[]
Variable Volume _____	[X]	[]	[]
Constant Volume _____	[]	[X]	[]
Other _____	[X]	[]	[]
f. Space Equipment:			
Direct Expansion: Number			
Window units <u>1</u>	[]	[X]	[]
Thru-the-wall _____	[X]	[]	[]
Single zone <u>5 TON WINDOW UNIT</u>	[]	[X]	[]
Other _____	[X]	[]	[]
VAV _____	[X]	[]	[]
Fan Coil _____	[X]	[]	[]
CAV _____	[X]	[]	[]
Fan Coil _____	[X]	[]	[]
Dual Duct _____	[]	[X]	[]
Fan Coil _____	[X]	[]	[]
Diffusers _____	[]	[X]	[]
g. Special Systems:			
Type _____	[X]	[]	[]
Capacity _____	[X]	[]	[]
h. Control Systems:			
Pneu _____	[]	[X]	[]
Electric _____	[]	[X]	[]
DDC _____	[X]	[]	[]
DDC Upgrade _____	[X]	[]	[]
i. Fans:			
Exhaust <u>6</u>	[]	[X]	[]
Recalculating <u>4</u>	[]	[X]	[]

C. COMMENTS

THE AIR CONDITIONING UNITS WERE INSTALLED IN 1969 AND ARE PAST THEIR LIFE EXPECTANCY AND SHOULD BE REPLACED IN THE NEXT FIVE TO TEN YEARS.

C. COMPONENT RATING: (\$ 803,757) (59 %) = \$ 473,354
 Possible Condition Component
 Value Value Multiplier Value

ELECTRICAL/SERVICE & DISTRIBUTION

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Service:

Substation: [X]Buckeye, []McCracken Power Plant

Primary Voltage: [X]13,200 Volts, [] Volts

Switch Gear Circuit No.: 107/ 307

Transformer:

Manufacture	Type	KVA	Secondary Voltages
GEN. ELECTRIC	SILICONE	300	240 DELTA
GEN. ELECTRIC	SILICONE	150	208/120

b. Distribution System:

1. Motor Control Center

Panelboard []Fused, [X]Circuit Breakers

Voltage []480/3, []277/3, [X]208/3, [X]240/3

Amperage []1200A, []800A, [X]600A, []400A, []200A

2. Lighting

Panelboard []Fused, [X]Circuit Breakers

Voltage []480/3, []277/3, [X]208/3, [X]240/3

Amperage []800A, []400A, []250A, [X]200A, []150A, []100A

3. Building Power

Panelboard []Fused, [X]Circuit Breakers

Voltage []480/3, []277/3, []208/3, [X]240/3

Amperage []800A, []400A, []250A, [X]200A, []150A, []100A

4. Isolated Ground Power

Panelboard []Fused, []Circuit Breakers

Voltage []480/3, []277/3, []208/3, []240/3

Amperage []400A, []250A, []200A, []150A, []100A

c. Conduit and wire:

Conduit [X]Steel, []Aluminum, []PVC, [X]Flexible

Conductor [X]Copper, []Aluminum, []MIT

Wire: [X]PVC Cover, [X]Romex, []Armored Cable(BX)

d. Emergency System:

[X]Battery backup, []Emergency Panel 400A, []UPS

e. Emergency Generator:

Size NONE KVA, Location, Room # N/A

B. COMMENTS:

THERE IS ADEQUATE POWER TO THE BUILDING WITH SUFFICIENT CONVENIENCE OUTLETS. HOWEVER, THE POWER SUPPLY TO THE ROOF TOP UNITS FROM THE TRANSFORMERS SHOULD BE REPLACED.

C. COMPONENT RATING: (\$ 138,831) (60 %) = \$ 83,303
Possible Condition Component
Value Value Multiplier Value

ELECTRICAL/LIGHTING & POWER

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Lighting (lamp type):			
Fluor 40 watt _____	[]	[X]	[]
Fluor 32 watt _____	[X]	[]	[]
Fluor Can _____	[X]	[]	[]
Incandescent <u>IN THE RIFLE RANGE AREA</u>	[]	[X]	[]
HID [X]Mercury []HPS [X]Metal Halide	[]	[X]	[]
Low Voltage (12V) _____	[X]	[]	[]
Other _____	[X]	[]	[]
 b. Lighting Levels			
Halls _____	[]	[X]	[]
Rooms _____	[]	[X]	[]
Mechanical Rooms _____	[]	[X]	[]
 c. Fixture Condition			
Fixtures _____	[]	[X]	[]
Bulbs _____	[]	[X]	[]
Fixture Lens <u>CLEAN</u>	[]	[]	[X]
 d. Receptacles & Switches:			
Wall Outlet _____	[]	[X]	[]
GFIC Breakers _____	[]	[X]	[]
Switches _____	[]	[X]	[]
Cover Plates _____	[]	[X]	[]
 c. Special:			
Lightning Protection _____	[X]	[]	[]
Communication [X]Clock []Public Address [X]Bells	[]	[X]	[]
Alarm [X]Fire [X]Security	[]	[X]	[]
Telecommunication [X]Phones [X]Data []Cable TV	[]	[X]	[]
Data Systems _____	[]	[X]	[]
Fiber Optics _____	[X]	[]	[]

C. COMMENTS

THE LIGHTING IS ADEQUATE IN THE VARIOUS OFFICES, CLASSROOMS AND HALL WAYS. THE EXTERIOR LIGHT FIXTURES SHOULD BE CLEANED.

C. COMPONENT RATING: (\$ 920,667) (60 %) = \$ 552,428

Possible	Condition	Component
Value	Value Multiplier	Value

SAFETY STANDARDS

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
a. Exits:			
Stair Construction:			
concrete _____	[X]	[]	[]
steel <u>WITH CONCRETE FILL</u>	[]	[X]	[]
wood _____	[X]	[]	[]
Number of Exit Stairs <u>THREE</u>	[]	[X]	[]
Number of Other Exits <u>TWO</u>	[]	[X]	[]
b. Fire Rating:			
Construction Type: I___ II___ III <u>X</u> IV___ V___ VI___			
Building Height: <u>40</u> ft., <u>3</u> stories			
c. Extinguishing Systems:			
Portable _____	[]	[X]	[]
Standpipe _____	[]	[X]	[]
Hose Cabinets _____	[X]	[]	[]
Hoses _____	[]	[X]	[]
Sprinklers _____	[X]	[]	[]
Gas Suppression _____	[X]	[]	[]
Other _____	[X]	[]	[]
d. Detection & Alarm Systems:			
Pull Stations _____	[]	[X]	[]
Bells _____	[]	[X]	[]
Horns <u>IN SOME ROOMS</u>	[]	[X]	[]
Strobes <u>IN SOME ROOMS</u>	[]	[X]	[]
Annunciator Panel <u>AT NORTHEAST ENTRANCE</u>	[]	[X]	[]
Smoke Detectors _____	[]	[X]	[]
Halls _____	[X]	[]	[]
Elevators _____	[X]	[]	[]
Rooms <u>STORAGE AREA</u>	[]	[X]	[]
Equip Rooms _____	[]	[X]	[]
Ducts _____	[]	[X]	[]
e. Lighting Systems:			
Exit Signs _____	[]	[X]	[]
Exit Lighting _____	[]	[X]	[]
Battery Backup _____	[]	[X]	[]
Emergency Lighting _____	[]	[X]	[]
Battery Backup _____	[]	[X]	[]
Emergency Generator _____	[X]	[]	[]
f. Lightning Protection _____	[X]	[]	[]

B. COMMENTS:

THE CORRIDORS AND STAIRWAYS ARE WELL LIGHTED.

C. COMPONENT RATING: (\$ 438,413) (60 %) = \$ 263,061
 Possible Condition Component
 Value Value Multiplier Value

BUILDING PERIMETER EVALUATION

FAC # 056

DATE 09/30/96

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Building Access:			
Driveway <u>EAST SIDE - CRACKS</u>	[]	[]	[X]
Loading Dock _____	[X]	[]	[]
Sidewalks			
Front _____	[]	[X]	[]
Side <u>SOUTH SIDE - CRACKS</u>	[]	[]	[X]
Rear _____	[X]	[]	[]
Steps			
Front _____	[X]	[]	[]
Side _____	[X]	[]	[]
Rear _____	[X]	[]	[]
Ramp _____	[X]	[]	[]
b. Lawn and Landscaping:			
Lawn _____	[X]	[]	[]
Shrubs <u>TRIM ON EAST AND SOUTH SIDES</u>	[]	[]	[X]
Trees _____	[]	[X]	[]
Undesirable Insect _____	[]	[X]	[]
Bedding Material <u>NEEDED ON THE WEST SIDE</u>	[]	[]	[X]
Watering System _____	[]	[X]	[]
c. General Site Information:			
Signage _____	[]	[X]	[]
Address Identification _____	[]	[X]	[]
Security Lights _____	[]	[X]	[]
Street Lights _____	[]	[X]	[]
Drainage _____	[]	[X]	[]
Storm Drains _____	[]	[X]	[]

B. COMMENTS:

THE PARKING AND DRIVE AREA ON THE EAST SIDE OF THE BUILDING HAS CRACKS IN THE BLACK TOP THAT SHOULD BE FILLED AS WELL AS THE CRACKS IN THE ASPHALT SIDEWALK ON THE SOUTH SIDE. THE SHRUBS ON THE EAST AND SOUTH SIDE NEED TO BE TRIMMED. BEDDING MATERIAL IS MISSING ON THE WEST SIDE.

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 budgetary 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. on going 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

A/C	AIR CONDITIONING
AHU	AIR HANDLING UNIT
ATT	ATTENTION
BLDG	BUILDING
BUR	BUILT UP ROOF
COND	CONDENSATE WATER
CAV	CONSTANT AIR VOLUME
DD	DUAL DUCT AIR HANDLING UNIT
DDHV	DUAL DUCT HIGH VELOCITY
DHWH	DOMESTIC HOT WATER HEATER
DHWR	DOMESTIC HOT WATER RETURN
DHWS	DOMESTIC HOT WATER SUPPLY
DHWT	DOMESTIC HOT WATER TANK
DX	DIRECT EXPANSION AIR CONDITIONER
EWC	ELECTRIC WATER COOLER
FPM	FEET PER MINUTE
GPM	GALLONS PER MINUTE
HID	HIGH INTENSITY DISCHARGE LIGHT
HPS	HIGH PRESSURE STEAM (125 PSI)
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
KV	KILOVOLTS
KVA	KILOVOLTS AMPS
KW	KILOWATTS
LC	LIQUID COOLED
LF	LINEAL FEET
LPS	LOW PRESSURE STEAM (15 PSI)
MPS	MEDIUM PRESSURE STEAM (50 PSI)
MZCV	MULTIZONE CONSTANT VOLUME AIR HANDLING
N/A	NOT APPLICABLE
PSI	POUNDS PER SQUARE INCH
RM	ROOM
RTU	ROOF TOP UNIT (HEATING OR A/C)
SAT	SATISFACTORY
SF	SQUARE FEET
S/P	STAND PIPE
SR	STEAM RETURN LINE
SS	STEAM SUPPLY LINE
SY	SQUARE YARDS
TR	TERMINAL REHEAT
V	VOLTS
VAV	VARIABLE AIR VOLUME

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