

FACILITY AUDIT REPORT

CONVERSE HALL, Bldg 056

February 11, 1991

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

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GENERAL BUILDING INFORMATION

BUILDING NAME: CONVERSE HALL BLDG. NO.: 056

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

YEAR OF LAST RENOVATION: 1980

NUMBER OF STORIES/BASEMENT: 3 Stories and Basement

AIR CONDITIONING (Percentage): 75

CURRENT USE: Military Sciences (offices and classrooms)  
University Archives (stacks and offices)

TYPE OF CONSTRUCTION: Cast-in-Place Reinforced Concrete and Concrete Block

ESTIMATED REPLACEMENT COST: \$5,400,000 \*

BUILDING ENVIRONMENT: Concrete, metal and block walls reflective of WWII military architecture

BUILDING APPEARANCE: Slightly deteriorated and dirty in need of a good cleaning

HANDICAPPED ACCESSIBILITY: First floor only (no elevator)

INITIAL CONSTRUCTION QUALITY: good

OVERALL BUILDING CONDITION: Fair

\* Replacement Cost assigned 6/90 by The Office of Campus Planning and Space Utilization.

BUILDING SYSTEMS INFORMATION

CONVERSE HALL #056

**HEATING:**

Source CENTRAL: POWER PLANT HOT WATER  
Type Heating System HOT WATER RADIATOR, GAS-FIRED AIR  
Steam (Line size, valve location) NONE  
Building Htg Water (line size, valve location) 4 1/2", RM #041N

**VENTILATION SYSTEM:**

**COOLING**

Bldg % 75 Chillers 4 ELECT RECIP @30T EACH  
Window Units 2 Thru-the wall 0 Direct exp. units 1

**TEMPERATURE CONTROL SYSTEM:** ELECTRIC CENTRAL CONSOLE

**ELECTRIC:**

Source	Size(KVA)	Primary/Secondary	Switch&Main disc. (Rm)
1. BUCKEYE,	3 @50 KVA,	13.2KV 208/120V	RM 053M
2. BUCKEYE,	3 @100 KVA,	13.2KV 240V delta	RM 053M

**PLUMBING:**

Water (size, valve location) 4" RM # 054  
Gas (size, valve location) 3" OUTSIDE EAST OF BLDG (METER)  
Domestic Hot Water (size, valve location) 1-1/2" DHWS RM # 041  
Compressed Air (size, location) N/A

**SEWERS** Storm \_\_\_\_\_ Sanitary 2 @5", 1 @8", (COMBINATION)

**METERS:**

Gas (location) 40 FT EAST OF BLDG  
Water (location) N/A  
Electric (location) N/A

**ALARM SYSTEMS:**

Fire Alarm YES Panel Location RM # 053M  
Fire Pump NO Pump Location NONE  
Sprinklers YES Panel Location NONE  
Other Alarms SMOKE DETECTOR

**ELEVATORS:**

Number 0 Type (passenger, freight) N/A  
Manufacturer N/A Size N/A

**EMERGENCY GENERATOR:** Size N/A Location NONE

**KEY BOX LOCATION:** EAST DOORS AT BASEMENT ENTRANCE

**ASBESTOS SURVEY (1986):** MOST PIPE INSULATION CONTAINS ASBESTOS

## CONVERSE HALL 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 that 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

Converse Hall was constructed in 1941. The building was originally constructed as a military shop/classroom facility. In 1942, the second floor was expanded and a third floor was added. In 1968, a major renovation was accomplished converting the remaining shop space to classroom space and subdividing the space into more offices. A central air conditioning system was also added. University Archives was moved into the building in 1980 occupying space in the basement, first and second floors. At that time, an additional air conditioner for archive photographic storage, smoke detectors, and a security system were added. Additional office space was constructed.

The building has a rifle range in basement and currently houses Woody Hayes' last office that is maintained exactly as he left it. Classroom use appears to be restricted to ROTC classes.

### PRIMARY SYSTEMS

The original portion of this building was constructed of poured-in-place concrete reinforced exterior walls, columns and floors on continuous concrete footings. No waterproofing was observed on the basement walls. Despite the lack of protection, no evidence of major moisture problems was found in the basement. The second floor addition was constructed of concrete block and cast-in-place concrete flooring. Windows on the first floor and the original portions of the second floor are all steel single-pane casement type. The remaining windows on the second floor and those on the third floor are either double-hung or octagonal casement, single-pane wood windows. The roof structure is wooden trusses supporting wood decking, clad with either built-up roofing or slate tiles.

The foundations, substructure, and superstructure all appear to be in good condition. No signs of settlement or movement were observed on the exterior structure. The basement floor exhibited a few cracks but no structural problems are evident.

The windows all appeared to be in good mechanical condition with glazing solidly in place. The metal casement windows are rusting and require painting and rust treatment. The wooden windows are in good structural condition but require

paint. The exterior stucco-like coating is cracking in places and discolored in spots. The coating has several 4 to 6 inch spots where the stucco has fallen off.

We were unable to find records of the last built-up roof replacement. The slate tile roof is showing its age with a few missing or broken shingles. Similarly, the built-up roofing displayed signs of patching and weathering. All roofs appear to be functioning well. The roof inspection report listed six roof leaks in the last ten years. Gutters and downspouts require repair and painting. In one instance, a downspout has been removed for a condenser piping run on the third floor. Runoff from the roof was falling directly on the pipes. We observed some discoloration of the copper piping and evidence of rot on the wooden window directly below the missing downspout. A large hole in a downspout was also observed on the west side of the building.

## SECONDARY SYSTEMS

The interior partitions are predominantly painted concrete block, as well as, some metal-clad demountable partitions and metal-studded drywall walls. All the walls are in good shape. Hallway floors were clean and serviceable with well-maintained vinyl tile coverings in good condition. The hallway doors in this facility could all use a fresh coat of paint and show signs of heavy surface wear. The ceilings are all showing signs of age with evidence of past plumbing leaks apparent on tiles. Many of the tiles are also dirty from years of use. The light fixtures and registers are in need of a good cleaning. There were a number of door hardware maintenance work orders in the system at the time we surveyed the building.

## SERVICE SYSTEMS

The major service systems all appear to be functioning moderately well. A review of the work order history, interviews with the building coordinator and various occupants and direct observation lead us to conclude the plumbing system requires renewal due to the age of the fixtures and pipes. The domestic hot water supply is inadequate. The hot water is lukewarm, at best. We noticed that a small camping trailer-type water heater had been installed in the first floor men's restroom for the shower. The wiring for the heater does not meet code.

This building could benefit from the installation of 50-gallon water heater for the restroom and shower facilities. Rich Braddock, Physical Facilities, verified that domestic hot water supply has been a problem with this building and that a hot water heater installation project has been proposed. One of the building coordinators reported that the women's restroom is undersized for dressing and showering needs encountered on Thursdays for ROTC drills and for physical training. One of the two water closets in the first floor women's restroom was removed to convert the remaining water closet to a handicapped accessible facility. Additionally, one of the two sinks was removed to install a shower. We recommend expanding and renovating the restrooms on the first floor, as well as, renovating the two restrooms on the second floor.

The cooling and ventilation system appeared to perform adequately. We did not uncover any major defects during our inspection of the two roof-top units or the air-cooled condensers located on the roof and next to the building. The air duct work connections for the HVAC system were completely exposed to the elements on the roof and some rust was observed. Building coordinators and occupants did not voice any major complaints with the heating and cooling system in our interviews

with them. Problems with temperature imbalances appear to be associated with the proximity and location of windows. No one complained about the heating hot water system. The hot water heating system is supplemented by gas-heated air supplied by the rooftop HVAC system. (Converse hall has a separate gas meter.) We failed to uncover any major problems in our inspection of the piping for it. Our historical research reveals that the air conditioning system is at least 22 years old and the heating hot water system is approaching 50 years in age.

#### ELECTRICITY

The building transformers have a primary voltage of 13,200, secondary voltages of 208/120 and 240 (delta) and 450 KVA total capacity. The old PCB transformers were being replaced with new transformers during our site survey. We did not observe any outlet overload conditions and did not discover any excessive work orders or complaints about the system. No problems were observed with the building electrical distribution system.

The majority of the building has fluorescent lighting fixtures. We observed a number of fixtures that required relamping, the installation of light covers and/or repair. In general, the light system requires cleaning and relamping.

#### SAFETY STANDARDS

The building is equipped with a manual fire alarm system and an exit lighting system. There is no emergency lighting system. There is a fire hose on the first and second floors. A smoke detector system with annunciator has been installed in the University Archives stack areas along with motion detectors for security. The Archivist reported that security is often a problem because of public use of the firing range on weekends. He reported that building doors are often propped open on Saturdays and Sundays.

Handicapped accessibility is limited to one door on the west side of the building. This building is one of the three remaining classroom buildings on campus without an elevator. As a result, handicapped accessibility is limited to the first floor. Building occupants on the third floor commented that they were unable to meet Federal handicapped accessibility requirements without an elevator.

During our inspection of Converse Hall there were a few observations that should be noted. The rifle range has had the target backstop recently replaced to eliminate the old steel that is practically lead coated from the bullets hitting the steel plates. The old steel plates that have been removed are being stored in the stairway on the east side of the building. These should be removed from the building.

The roof area has had wood (ladder type) steps built to go from one roof area to the other. While these steps are used by OSU personnel only, they are hazardous and are deteriorating from being exposed to the weather. They should be repaired and/or improved to assure no one trips and falls when working on the roof or the HVAC system.

The military science department is storing some material in a roof access corridor and a basement stairwell. While no immediate danger was observed, the potential exists for having the wrong materials stored in these areas and consideration should be given to finding other storage areas for the military science department.

## ASBESTOS

We observed pipe insulation with damage leaving loose (friable) materials in the men's restroom on the first floor. These areas were reported, tested and repaired as required to eliminate the loose material. The ceiling of the rifle range has recently been painted white, but it appears these ceiling tiles may be made of an asbestos containing material. We observed that the ceiling had been pierced in a number of spots by bullets. If the ceiling is made of asbestos containing materials, a hazardous condition may exist. As a result, we requested that a test be performed to determine if an asbestos hazard exists. 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, states, in effect that:

The pipe insulation in Converse Hall rooms 054, 041N, 041G, 041F, 041A, 041B, 041, 134A, 150B, 210, 228, 248, 248A, 256, 253 (and corridor outside), 353A, 353D, 353E, 353F, 353C, 353P contains asbestos and recommends eventual replacement.

## CONCLUSION

Converse Hall is in sound structural shape. The exterior stucco-like coating is cracking in places and discolored in spots. The building exterior could benefit from minor patching and a complete repainting. Converse Hall does not require structural repair. The window system is aging and beginning to deteriorate but is still very serviceable at this time. It should eventually be replaced with double-pane windows for energy efficiency and user comfort as the existing windows deteriorate. The built-up roof does not require repair at this time but is approaching 22 years in age. The slate roofs could benefit from limited replacement of broken or missing slate tiles but no major problems are noted with these roofs at this time. The metal casement windows require scraping, rust treatment and painting along with the gutters and downspouts. Two downspout repairs are also required.

Interior walls are all in good condition. Floor coverings are in acceptable condition in the interior hallways. The hallway and exterior doors require cleaning and painting. The ceiling registers require cleaning and a number of ceiling tiles should be replaced. The exit light system requires new lenses.

The HVAC system is functioning adequately. It should be noted that the Air Conditioning system is now 22 years old and the heating system age is approaching 50 years. We do not anticipate any major problems with the electric reciprocating air conditioning units. The heating hot water system may be approaching its design life limits and replacement of the piping and radiators should be analyzed.

The building plumbing system requires work. A domestic hot water heater should be installed to supply hot water to the restrooms/showers. The restroom sink and water closet fixtures require replacement. The women's restroom on the first floor is undersized and should be expanded.

PROPOSED MAINTENANCE PROJECTS

CONVERSE HALL

#056

A. Corrective Maintenance Projects:

1. Repair cracks and holes and paint exterior walls, downspouts, gutters and doors.	\$9,100
2. Install domestic 50 gallon hot water tank and system*	\$9,000
3. Repair building exit lights	\$180
4. Clean fixtures, registers and ceiling tiles	8,800
<b>Sub Total</b>	<b>\$27,080</b>

B. Building Improvement/Addition Projects:

1. Restroom renovations (first and second floors)	\$49,200
2. Replace windows with insulated glass.	60,800
3. Add elevator to building	120,000
<b>Sub Total</b>	<b>\$230,000</b>

C. Projected (over the next 10 yrs) Component Replacement Projects:

1. Renovate building hot water heating system	\$282,000
2. Replace slate and built-up roofs	\$145,000
<b>Sub Total</b>	<b>\$427,000</b>

**Total cost for all projects \$684,080**

\*Project was proposed but unfunded in FY90-91 R&R Program

**BUILDING EVALUATION SUMMARY**

**I. BUILDING INFORMATION**

FAC # 056 FACILITY NAME CONVERSE HALL  
 DATE 9-06-90 INSPECTOR JPH & RDL  
 YEAR CONST, ADDN 1941, 1942, 1968 PARTIAL RENOVATION  
 GROSS SQ FT 58,912 NET SQ FT 44,589  
 REPLACEMENT COST \$ 4,860,000\*

**II. COMPONENT RATING**

COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST**	BUILDING COMPONENT REPLACEMENT COST	CONDITION VALUE MULTIPLIER FOR BLDG. COMPONENT	BUILDING COMPONENT CURRENT VALUE
1. Foundation	4.9	238,100	.99	235,700
2. Columns and Beams	10.8	524,900	1.00	524,900
3. Exterior Walls	6.4	310,000	.97	300,700
4. Windows & Doors	3.4	165,200	.70	115,600
5. Roofing	5.4	262,400	.85	223,000
6. Partitions & Doors	8.5	413,100	.99	409,000
7. Wall Finishes	2.9	141,000	1.00	141,000
8. Floor Finishes	7.0	337,777	.93	264,000
9. Ceilings & Finish	7.9	384,000	1.00	384,000
10. Conveying	1.5	73,000	0.00	0
11. Plumbing	5.3	257,580	.75	193,200
12. Heating	included in Cooling and Ventilation			
13. Cooling & Vent	19.3	938,000	.60	562,800
14. Elect Serv & Dist.	1.6	78,000	1.00	78,000
15. Lighting & Power	11.8	573,000	.80	458,400
16. Safety Standards	3.4	165,000	.95	156,800
TOTALS	100	4,860,000		4,047,100

**III. BUILDING RATING SUMMARY**

Overall Building Rating = 83.3

\* Replacement Cost assigned 6/90 by The Office of Campus Planning and Space Utilization without the furnishing and fixed equipment allocation.

\*\* Building Component percentage is calculated from the Means Standard Construction Cost data for College Classroom Buildings.

**FOUNDATIONS**

FAC #056                      DATE 9/4/90                      INSPECTOR: JPH & RDL

**A. SYSTEM DESCRIPTION**

**(a)Footings:**

Individual Footings & Piers   X    
Continuous Footings   X    
Grade Beams   NO    
Piles   NO    
Caissons   NO  

**(b)Foundation Wall Materials:**

Steel   NO    
Concrete Cast-in-place   X    
Concrete Block   NO    
Other   N/A  

**(c)Waterproofing and Underdrain:**

Coating   UNKNOWN    
Membrane   NO    
Board   NO    
Drain Tile   UNKNOWN  

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

Plain   NO    
Reinforced   X  

**(e)Special Substructures:**

  NONE  

**B. COMMENTS:**

BASEMENT SLAB HAS MINOR CRACKS IN THE RIFLE RANGE AREA - DOES NOT APPEAR TO BE STRUCTURAL PROBLEM

**C. COMPONENT RATING:**     $\frac{( 4.9 )}{\text{Possible Rating}} \times \frac{( .99 )}{\text{Condition Value Multiplier}} = \frac{4.85}{\text{Component Rating}}$

COLUMNS AND BEAMS

FAC # 056      DATE 9/4/90      INSPECTOR: JPH & RDL

**A. SYSTEM DESCRIPTION**

**(a) Columns and Beams:**

Concrete-in-place X  
Precast Concrete NO  
Steel NO  
Steel Fireproofing NO  
Wood NO  
Other N/A

**(b) Floors:**

Concrete Slab X  
Precast Slab NO  
Metal Deck NO  
Metal Deck w/concrete fill NO  
Wood NO  
Other N/A

**B. COMMENTS:**

**C. COMPONENT RATING:**     $\left( \frac{10.8}{\text{Possible Rating}} \right) \times \left( \frac{1.00}{\text{Condition Value Multiplier}} \right) = \frac{10.8}{\text{Component Rating}}$

EXTERIOR WALLS

FAC #056                      DATE 9/4/90                      INSPECTOR: JPH & RDL

A. SYSTEM DESCRIPTION

(a)Walls:

Concrete   X    
Masonry   CONCRETE BLOCK - UPPER LEVELS    
Metal Siding   NO    
Wood Siding   NO    
Other   N/A  

(b)Finishes:

Stucco   X    
Paint   X    
Other   N/A  

B. COMMENTS:

THE STUCCO-COATING REQUIRES CRACK REPAIR, SOME PATCHING AND PAINT.

C. COMPONENT RATING:     $\frac{( 6.4 )}{\text{Possible Rating}} \times \frac{( .97 )}{\text{Condition Value Multiplier}} = \frac{6.2}{\text{Component Rating}}$

EXTERIOR WINDOWS & DOORS

FAC #056                      DATE 9/4/90                      INSPECTOR: JPH & RDL

A. SYSTEM DESCRIPTION

(a) Windows type & number:

Wood 81 DOUBLE HUNG                      & 7 FIXED  
Steel 81 CASEMENT  
Alum NO  
Other GLASS BLOCK - 7

(b) Doors type & number:

Wood NO  
Steel 5  
Alum NO  
Other N/A

(c) Shading Devices:

Types COPPER AWNING OVER NORTH DOOR WEST SIDE

B. COMMENTS:

C. COMPONENT RATING:     $\left( \frac{3.4}{\text{Possible Rating}} \right) \times \left( \frac{.70}{\text{Condition Value Multiplier}} \right) = \frac{2.4}{\text{Component Rating}}$

ROOFING

FAC #056

DATE 9/4/90

INSPECTOR: JPH & RDL

A. SYSTEM DESCRIPTION

(a)Roof System:

- Flat  X
- Pitched  X
- Concrete  NO
- Steel  NO
- Wood  X
- Other  NO

(b)Roof Covering:

- Built-up  WITH GRAVEL
- Single Ply Membrane  NO
- Metal  ON CHILLER ENCLOSURE
- Preformed Met  NO
- Shingle or tile  SLATE SHINGLES
- Other  N/A

(c)Flashing:

- Base & Counter  X
- Cap  NO
- Through Wall  NO
- Valley & Ridge  X
- Vent  X
- Chimney  NO

(d)Gravel Stop & Edge Strips:

- Type  PAINTED SHEET METAL

(e)Drainage:

- Gutters  X
- Drains  X
- Scuppers  NO
- Downspouts  X

(f)Projections:

- Pipes  X
- Stacks  X
- Bracing  X
- Skylights  NO
- Other  N/A

(g)Parapets:

- Concrete  NO
- Brick  NO
- Block  NO
- Precast  NO
- Other  N/A

B. COMMENTS

SOME CORROSION AND MINOR DAMAGE TO DOWNSPOUTS. FEW MISSING OR BROKEN SLATE TILES.

C. COMPONENT RATING: 
$$\left( \frac{5.4}{\text{Possible Rating}} \right) \times \left( \frac{.85}{\text{Condition Value Multiplier}} \right) = \frac{4.6}{\text{Component Rating}}$$

PARTITIONS & DOORS

FAC #056

DATE 9/5/90

INSPECTOR: JPH & RDL

A. SYSTEM DESCRIPTION

(a) Partition Framing:

- Concrete Block  X
- Glazed Block  NO
- Wood Stud  NO
- Metal Stud  X
- Structural Tile  NO
- Rated  NO
- Other  N/A

(b) Special partitions and Walls:

- Toilet  X
- Screen Walls  NO
- Gate  NO
- Other  N/A

(c) Wall Material:

- Plaster  NO
- Plaster Board  NO
- Glass  NO
- Plywood  NO
- Paneling  X
- Trim & Wainscot  NO
- Tile/Glazed  NO
- Other  PAINTED CONCRETE BLOCK

(d) Interior Doors & Frames:

- Met Door/Met Frame  X
- Wood Door/Wood Frame  NO
- Wood Door/Metal Frame  X
- Glazing  X
- Rollup  NO
- Sliding  NO
- Other  N/A

(e) Hardware:

- Door Closers  X
- Lock Sets  X
- Kick/Push Plates  X
- Thresholds  X
- Panic Devices  X
- Security & Detection  X
- Automatic Openers  NO
- Other  N/A

B. COMMENTS:

ORIGINAL DOORS AND HARDWARE. HALLWAY DOORS REQUIRE PAINT.

C. COMPONENT RATING: (  8.5  ) X (  .99  ) =  8.4   
Possible Condition Component  
Rating Value Multiplier Rating

**WALL FINISHES**

FAC #056                      DATE 9/5/90                      INSPECTOR: JPH & RDL

**A. SYSTEM DESCRIPTION**

- (a)Paint   X
- (b)Wall Coating   NO
- (c)Wall Coverings   X
- (d)Paneling
  - Prefinished   X
  - Plank   NO
- (e)Cork   NO
- (f)Wallpaper   X
- (g)Ceramic Tile   NO
- (h)Trim & Wainscot   NO
- (i)Decoration   NO
- (j)Glass   NO
- (k)Other   N/A

**B. COMMENTS**

**C. COMPONENT RATING:**     $\frac{( \quad 2.9 \quad )}{\text{Possible Rating}} \times \frac{( \quad 1.00 \quad )}{\text{Condition Value Multiplier}} = \frac{\quad 2.9 \quad}{\text{Component Rating}}$

FLOOR FINISHES

FAC #056                      DATE 9/5/90                      INSPECTOR: JPH & RDL

A. SYSTEM DESCRIPTION

(a) Carpet:

Sheet Goods   X    
Tile   NO  

(b) Composition:

Epoxy   NO    
Synthetic   NO    
Other   N/A  

(c) Concrete Topping:

Abrasive   NO    
Epoxy   NO    
Aggregate   NO  

(d) Resilient:

Vinyl Tile   X    
Linoleum   NO    
Vinyl   NO    
Rubber   NO    
Cork   NO  

(e) Ceramic Tile   NO  

(f) Masonry   NO  

(g) Terrazzo   NO  

(h) Wood   NO  

(i) Metal   NO  

B. COMMENTS

PAINTED CONCRETE FLOOR IN BASEMENT. TILE IS AGING BUT STILL IN GOOD CONDITION.

C. COMPONENT RATING:     $\frac{( \quad 7.0 \quad )}{\text{Possible Rating}}$  X  $\frac{( \quad 1.00 \quad )}{\text{Condition Value Multiplier}}$  =  $\frac{\quad 7.00 \quad}{\text{Component Rating}}$

CEILING AND FINISHES

FAC #056                      DATE 9/4/90                      INSPECTOR: JPH & RDL

A. SYSTEM DESCRIPTION

(a) System Type:

Exposed NO  
Applied to Structure NO  
Suspended X

(b) Materials:

Drywall NO  
Plaster NO  
Mineral Fiber Board X  
Metal Pan NO  
Luminous Panels NO  
Other N/A

(c) Finishes:

Paint NO  
Mineral Fiber X  
Fabric NO  
Prefinished X  
Other N/A

(d) Openings & Inserts:

Air Distribution X  
Lighting Fixtures X  
Access Panels NO  
Skylights NO  
Fire Protection NO  
Other N/A

B. COMMENTS:

LIGHTS & AIR REGISTERS ARE DIRTY - REQUIRES CLEANING. CEILING TILE IS STAINED AND DISCOLORED - REQUIRES CLEANING

C. COMPONENT RATING:     $\frac{( 7.9 )}{\text{Possible Rating}} \times \frac{( .75 )}{\text{Condition Value Multiplier}} = \frac{5.9}{\text{Component Rating}}$

CONVEYING

FAC # 056

DATE 9/5/90

INSPECTOR: JPH & RDL

**A. SYSTEM DESCRIPTION**

**(a)Elevators:**

Number \*\*\*NO ELEVATOR\*\*\*

Type

Speed

Capacity (lbs)

Dimensions

Door Operation:

Center \_\_\_\_\_ To Side

**(b)Lifts and Hoists:**

Number

Type

**(c)Moving Stairs and Walks:**

Number

Type

**(d)Conveyors:**

Number

Type

**(e) Pneumatic Tubes:**

Number

Type

**B. COMMENTS:**

**C. COMPONENT RATING:**  $\left( \frac{1.5}{\text{Possible Rating}} \right) \times \left( \frac{0}{\text{Condition Value Multiplier}} \right) = \frac{0}{\text{Component Rating}}$

MECHANICAL/PLUMBING

FAC # 056 DATE 9/5/90 INSPECTOR: JPH & RDL

A. SYSTEM DESCRIPTION

(a) Services Available:

- Cold Water X
Hot Water X
Acid NO
Waste NO
Oxygen NO
Natural Gas X
Vacuum NO
Distilled Water NO
Compressed Air NO
Other N/A

(b) Piping & Fittings:

- Cast Iron X
Copper Tubing X
Plastic NO
Steel NO
Glass NO
Other N/A

(c) Water Heaters:

- Electric X
Gas NO
Oil NO
Steam Converter NO
Other N/A

(d) Drainage:

- Storm Drains COMBINED WITH SANITARY
Sanitary Drainage COMBINED WITH STORM
Floor Drains X

(e) Fixtures:

- Water Closets 12
Urinals 4
Lavatories 12
Showers 1
Kitchen Sinks 0
Service Sinks 4
Drinking Fountains 2
Electric Water Coolers NO

(f) Sprinkler Systems:

- Wet NO
Dry NO
Water Storage/Supply NO

(g) Standpipe Systems:

- Wet X
Dry NO
Valves NO
Hose Cabinets X

B. COMMENTS:

C. COMPONENT RATING: ( 5.3 ) X ( .75 ) = 4.0
Possible Condition Component
Rating Value Multiplier Rating

MECHANICAL/HEATING

FAC # 056

DATE: 9/5/90

INSPECTOR: JPH & RDL

A. SYSTEM DESCRIPTION

(a)Heat Source:

Central Plant Steam NO
Central Plant Hot Water X
Boilers: Type NO Size N/A
Furnace: Type NO Size N/A
Heat Pump: Type NO Size N/A
Burners: gas X oil NO

(b)System Type:

Steam NO
Hot Water X
Air X
Electric NO
Solar NO
Other N/A

(c)Space Equipment:

Radiators X
Convectors NO
Finned Tube NO
Baseboard NO
2-Pipe Fan Coil NO
4-Pipe Fan Coil NO
Unit Ventilators X
Multizone X
Radiant Panels NO
Double Duct NO
Terminal Reheat NO
Other N/A

(d)Control Type:

Pneu NO
Electric X
Electronic NO
DDC NO

B. COMMENTS:

ORIGINAL SYSTEM - PIPES HAVE PROBABLY NOT BEEN FLUSHED AND WILL REQUIRE EVENTUAL REPLACEMENT ALONG WITH RADIATORS.

C. COMPONENT RATING: ( \* ) X ( \* ) = \*
Possible Condition Component
Rating Value Multiplier Rating

\* Combined with Cooling and Ventilation

COOLING & VENTILATING

FAC # 056

DATE: 9/4/90

INSPECTOR: JPH & RDL

A. SYSTEM DESCRIPTION

(a) System:

Type DX Capacity 120 TONS

(b) Chillers:

Centrifugal NO

Reciprocating X

Absorption NO

(c) Cooling Towers:

Type N/A

Capacity N/A

(d) Condensers: X

(e) Space Equipment:

Direct Expansion -

Window units 2

Thru-the-wall NO

single zone NO

all-air multizone X

single zone con. vol. NO

double duct NO

Air/Water -

2-pipe fan coil NO

unit ventilators NO

induction NO

4-pipe fan coil NO

terminal reheat NO

self contained NO

variable volume NO

var. vol. reheat NO

(f) Special Systems:

Type LIEBERT Capacity

(g) Control Systems:

Pneu NO

Electric X

Electronic NO

(h) Fans:

Exhaust X

Recirculating X

B. COMMENTS:

C. COMPONENT RATING: ( 19.3 ) X ( .60 ) = 11.6

Possible	Condition	Component
Rating	Value Multiplier	Rating

ELECTRICAL/SERVICE & DISTRIBUTION

FAC # 056

DATE: 9/4/90 INSPECTOR: JPH & RDL

**A. SYSTEM DESCRIPTION**

**(a) Service:**

Substation BUCKEYE

Primary Voltage 13.2KV

Transformer:

Manufacture	Type	KVA	Secondary Voltages
<u>GE</u>	<u>SILICONE</u>	<u>300</u>	<u>240 DELTA</u>
<u>GE</u>	<u>SILICONE</u>	<u>150</u>	<u>240/120</u>

Switchgear (type and capacity) PC - AIR 600A

**(b) Distribution System:**

Panelboard (type) CIRCUIT BREAKER

Voltage 120/208, 240 (feeds roof-top chillers)

Amperage 2 @ 600

Conduit (aluminum) X

Conductor COPPER

Wire (copper) X

Armored Cable NO

Other N/A

**(c) Emergency System:**

General or (type & capacity) NONE

**B. COMMENTS:**

**C. COMPONENT RATING:**  $\left( \frac{1.6}{\text{Possible Rating}} \right) \times \left( \frac{1.00}{\text{Condition Value Multiplier}} \right) = \frac{1.6}{\text{Component Rating}}$

ELECTRICAL/LIGHTING & POWER

FAC # 056

DATE: 9/5/90

INSPECTOR: JPH & RDL

**A. SYSTEM DESCRIPTION**

**(a)Lighting (lamp type):**

Fluor X

Incand X

HID NO

Other N/A

**(b)Emergency Lighting:**

Battery Pack( # ) 0

In Fixture( # ) 0

Exit Lights( # ) 18

Lights on Emergency Power( # ) 0

**(c)Motors and Starters:**

Type and Capacity VARIOUS

**(d)Receptacles & Switches:**

Type & Capacity GROUND

**(e)Special:**

Baseboard Heat NO

Lightning Protection NO

Communication & Alarm X

Data Systems NO

**B. COMMENTS:**

REPLACE EXIT LIGHT LENSES. CLEAN FLUORESCENT LIGHTS.

**C. COMPONENT RATING:**     $\left( \frac{11.8}{\text{Possible Rating}} \right) \times \left( \frac{.80}{\text{Condition Value Multiplier}} \right) = \frac{9.44}{\text{Component Rating}}$

**SAFETY STANDARDS**

FAC # 056      DATE: 9/5/90      INSPECTOR: JPH & RDL

**A. SYSTEM DESCRIPTION**

**(a) Exits:**

Stair Construction:  
concrete X  
steel X  
wood NO  
Number of exits 5

**(b) Fire Rating:**

Construction Type: IX    II         III         IV         V         VI       
Building Height: 40 ft., 3 stories

**(c) Extinguishing Systems:**

Portable X  
Standpipe X  
Hose Cabinets X  
Sprinklers NO  
Suppression NO  
Other N/A

**(d) Detection & Alarm Systems:**

Manual Alarm X  
Annunciator X  
Smoke Detectors X

**(e) Lighting Systems:**

Exit Signs X  
Exit Lighting X  
Emergency Lighting NO  
Emergency Generator NO

**B. COMMENTS:**

EXIT LIGHT LENSES ARE FADING AND NEED TO BE REPLACED.

**C. COMPONENT RATING:**    (3.4) X (.95) = 3.23  
Possible                    Condition                    Component  
Rating                    Value Multiplier            Rating

**The Ohio State University  
Department of Physical Facilities  
BUILDING AUDIT METHODOLOGY**

1. BUILDING AUDIT PROGRAM OBJECTIVE

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

2. BUILDING AUDIT APPROACH

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

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

3. DATA ORGANIZATION

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

4. COST ESTIMATES

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

5. DATA USAGE

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

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

6. LIMITATIONS

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

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

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

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

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

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

(a) Includes general repainting, 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 area 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 Building Floor Plans**  
**C-1 Building Space Assignments**