

FACILITY AUDIT REPORT

BOYD LABORATORY
#110

MARCH 29, 1991

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

Table of Contents

GENERAL BUILDING INFORMATION 3

BUILDING SYSTEMS INFORMATION 4

BOYD HALL NARRATIVE 5

PROPOSED MAINTENANCE PROJECTS 8

 FOUNDATIONS 10

 COLUMNS AND BEAMS 11

 EXTERIOR WALLS 12

 EXTERIOR WINDOWS & DOORS 13

 ROOFING 14

 PARTITIONS & DOORS 15

 WALL FINISHES 16

 FLOOR FINISHES 17

 CEILINGS AND FINISHES 18

 CONVEYING 19

 MECHANICAL/PLUMBING 20

 MECHANICAL/HEATING 21

 COOLING & VENTILATING 22

 ELECTRICAL/SERVICE & DISTRIBUTION 23

 ELECTRICAL/LIGHTING & POWER 24

 SAFETY STANDARDS 25

BUILDING AUDIT METHODOLOGY 26

APPENDIX 28

 Building Floor Plans 28

 C-1 Building Space Assignments 28

GENERAL BUILDING INFORMATION

Boyd Laboratory #110

BUILDING ADDRESS: 155 W. Woodruff Avenue

GROSS SQ. FT.: 22,756

NET ASSIGNABLE SQ. FT.: 12,933

MECHANICAL/CUSTODIAL AREA SQ. FT.: 2,217

YEAR OF CONSTRUCTION: 1933

YEAR OF LAST RENOVATION: 1965

NUMBER OF STORIES/BASEMENT: 3 Floors without a basement

AIR CONDITIONING (Percentage): 90%

CURRENT USE: Department of Engineering Mechanics Laboratories & Offices

TYPE OF CONSTRUCTION: Reinforced Concrete Frame with Masonry Skin

ESTIMATED REPLACEMENT COST: \$2,355,000

BUILDING APPEARANCE: Functionally Efficient well maintained and clean.

HANDICAPPED ACCESSIBILITY: Thru the north and west doors to the hallway that leads to the elevator that has both normal and wheelchair accessible controls.

INITIAL CONSTRUCTION QUALITY: Good

OVERALL BUILDING CONDITION: Very Good

BUILDING SYSTEMS INFORMATION

Boyd Laboratory #110

HEATING:

Source Power Plant

Type Heating System Hot Water

Steam (Line size, valve location) None (Hot Water is supplied from Haskett)

Building Htg Water (line size, valve location) 4" HWS & 4" HWR in RM 104M

VENTILATION SYSTEM:

Dual Duct High Velocity System (Modified to VAV in 1976)

COOLING:

Bldg % 90% Chillers Two (2) Reciprocating Compressors - 80 Tons

Window Units 2 - units Thru-the-wall _____ Direct exp. units

HVAC CONTROL SYSTEM:

Manual (Pneumatic) no central control system.

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

1. PGN5/PGS5 1000 KVA 13,800 / 240 RM 110M Haskett Hall

PLUMBING:

Domestic Cold Water (size, valve location) 4" line in RM 104M Boyd

Gas (size, valve location) 1" Gas Line from Haskett Hall

Domestic Hot Water (size, valve location) 1 1/2" Line in Rm 104M

Compressed Air (size, location) 1" Air Line to RM 102D (Laboratory)

SEWERS:

Storm Two storm lines under slab for downspouts Sanitary One 4" under slab

METERS:

Gas (size, location) None

Water (size, location) None

Electric (size, location) None (Meter in Haskett for both buildings)

ALARM SYSTEMS:

Fire Alarm Manual Panel Location RM 110M

Fire Pump None Pump Location

Sprinklers None Panel Location

Other Alarms None

ELEVATORS:

Number One Type (passenger, freight) Passenger

Manufacturer OTIS Size 2500# Cab has floor area of 4' X 5'

EMERGENCY GENERATOR: Size None Location

KEY BOX LOCATION: South Entrance Door next to RM 104M

ASBESTOS SURVEY (1986):

The pipe insulation between sections of fiberglass pipe insulation in Room 302M.

BOYD HALL NARRATIVE

GENERAL

This Building Audit was conducted by Physical Facilities for the purpose of evaluating the present condition of the building for which Physical Facilities has a budgetary responsibility. This audit describes the current physical condition of the facility and identifies existing corrective maintenance 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 this facility, which is the budgetary responsibility of the tenant departments.

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

HISTORY

Boyd Laboratory was constructed in 1933. It is connected to Johnson Laboratory on the south and Haskett Hall on the east. It was originally built as a Highway Testing Laboratory for the Ohio Department of Transportation. In 1964 the building was extensively remodeled and assigned to the Department of Engineering Mechanics. The building is still used primarily by the Engineering Mechanics department.

In an interview with Dr. Ali Engin, building coordinator, it was learned that the occupants are very happy with the condition and the performance of the building systems. A review of the work orders indicated that there are very few calls or problems with Boyd Laboratory.

The building is functioning the way it was designed to function and has held up well over the 25 years since it was renovated. The building is very clean and shows that the housekeeping staff has taken extra effort to keep this building looking good. With the exception of the stairwells, the building does not show the normal wear and tear that most building this age would.

PRIMARY SYSTEMS

The foundations, substructure, and superstructure all appear to be in excellent shape. There are no signs of settlement or movement in the building foundation. The one exception to this is the threshold under the south entry door heaves in very cold weather. This appears to be caused by moisture getting under the slab rather than a foundation problem.

The exterior closure is brick veneer and is in good condition. The parapet has had some mortar come loose that needs to be repaired. One of the ornamental stones on the third floor exterior had split and the face of the stone removed. The area around this stone did not show any signs of leakage or additional cracking.

The single glazed aluminum frame windows were in good condition and when operated opened and closed correctly. A project to replace these windows is proposed as a building improvement to provide better occupant comfort and to reduce the energy loss through the windows.

The roofing was installed in 1964 when the building was renovated. There have been 6 reported roof leaks in the last 10 years that were the result of failures in the roof surface. There were no leaks currently observed. It is felt that this roof can be patched and maintained for the next few years, but that a major roof replacement will be needed in the next 5 to 10 years.

SECONDARY SYSTEMS

The partitions, doors, walls, floors, and ceilings have held-up well after 25 years of use. The hallways and restrooms were repainted recently and are in very good shape.

The light fixtures and registers are in need of a good cleaning. Some of the ceiling tile are stained, particularly on the 2nd floor underneath the mechanical room. The age and condition of the ceiling tile would justify a replacement rather than cleaning in the near future.

The floors are primarily vinyl tile that has been well maintained. The laboratories have exposed concrete that has been sealed. All these surfaces are in good condition because they have been well maintained over the years.

SERVICE SYSTEMS

The major service systems all appear to be functioning according to their intended purpose. The single elevator operated properly and the maintenance record did not indicate any particular problems.

The plumbing system did not appear to have any problems. There was good water pressure at all faucets. The restrooms had all the fixtures functioning properly and no replacements are needed.

The Hot Water Heating system has convectors located on the outside walls. In every room inspected, the thermostat was reading the temperature to which it was set. Every thermostat was operating correctly and there were no signs of tampering.

The cooling and ventilation system also appeared to operate correctly. It was not cooling season so the A/C was not operating. When asked, the building occupants responded very positively about the performance of the A/C system in the summer. The ventilation system air noise seemed noisier than most, but none of the occupants complained about it.

ELECTRICITY

The electrical service is supplied by a 1000 KVA transformer that also supplies Johnson Lab. and Haskett Hall. The switchgear is located in RM 101M of Johnson Lab. The demand meter for these three buildings was registering off the scale on the meter and appeared to be broken. This was reported to the utilities department.

The distribution panels are located in RM 110M of Boyd. Two 800 amp panels supply the building with the exception of the mechanical room. There are 320 amps of spare breakers in these two panels. The mechanical room 302M also has two panels one with 800 amps and the other with 1200 amps. The building appears to have adequate electrical service. There were no extension cords observed or

panel boxes with any indications of breakers regularly tripping.

The building has fluorescent light fixtures throughout. Every other light fixture in the hallways has had the fluorescent lamps removed as part of the energy conservation program of the mid-1970s.

CONCLUSION

While it has been 25 years since the building was renovated, it is in very good condition. The roof and the cooling systems present the greatest concern as to longevity. Both these systems are currently operating effectively, however breakdowns must be expected as they continue to age.

There are a few corrective maintenance items listed on the project list, however, the building is not in need of any major repairs at this time. The care which the housekeeping staff and building occupants have given Boyd Lab. has kept the building from deteriorating as rapidly as other buildings this age.

PROPOSED MAINTENANCE PROJECTS

Boyd Laboratory #110

A. Corrective Maintenance Projects:

- 1. Clean debris from roof drains.....\$100
 - 2. Paint stairwells and stair hardware.....2600
 - 3. Fasten handrail on 3rd floor of
SW stairway next to Johnson Lab.....100
 - 4. Clean ceiling registers and light fixtures.....1200
 - 5. Repair loose button on elevator 1st floor.....50
 - 6. Tuckpoint and seal brick parapet.....840
 - 7. Replace vent screen in canopies at
three entrance doors. Paint edges
of canopy to control rusting.....420
 - 8. Remove and replace concrete under the
threshold of the south entry door.
This pad heaves in very cold weather
and door cannot open.....350
- SUB-TOTAL = \$5,660**

B. Building Improvement/Addition Projects:

- 1. Replace the single glazed windows with
double glazed thermal-break windows.....\$34,500
 - 2. Install an emergency telephone in the elevator.....650
- SUB-TOTAL = 35,150**

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

- 1. Ceiling Tiles replaced in classrooms,
offices, and hallways.....\$10,848
 - 2. Replacement of BUR roof covering
and flashing.....70,000
- SUB-TOTAL = \$80,848**

Total Cost for all Projects = **\$ 121,658**

BUILDING EVALUATION SUMMARY

I. BUILDING INFORMATION

FAC # 110 FACILITY NAME: Boyd Laboratory
 DATE: 12-7-90 INSPECTOR: RDL
 YEAR CONSTRUCTED: 1932, Renovated in 1965
 GROSS SQ FT: 22,756 NET SQ FT: 12,933
 REPLACEMENT COST \$ 2,208,048 *

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	2.83	62,488	1.00	62,488
Columns and Beams	16.49	364,107	1.00	364,107
Exterior Walls	2.98	65,800	1.00	65,800
Windows & Doors	4.08	90,088	0.35	31,531
Roofing	2.73	60,280	0.95	57,266
Partitions & Drs.	8.85	195,412	1.00	195,412
Wall Finishes	2.64	58,292	0.95	55,377
Floor Finishes	4.81	106,207	1.00	106,207
Ceilings & Finish	7.24	159,863	0.98	156,666
Conveying	1.68	37,095	0.99	36,724
Plumbing	8.20	181,060	1.00	181,060
Heating	7.51	165,824	1.00	165,824
Cooling & Vent.	12.03	265,628	1.00	265,628
Elec. Ser. & Dist	1.70	37,537	1.00	37,537
Lighting & Power	11.29	249,289	0.99	246,796
Safety Standards	4.94	109,078	1.00	109,078
TOTALS	100.00	2,208,048		2,137,501

III. BUILDING RATING SUMMARY

Overall Building Rating = 96.8

* Replacement Cost assigned June 1990 by The Office of Campus Planning and Space Utilization without the furnishings and fixed equipment allocation.

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

EXTERIOR WALLS

FAC # 110 DATE 12-7-90 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a) Walls

Concrete NO
Masonry YES
Metal Siding NO
Wood/siding NO
Other N/A

(b) Finishes

Stucco NO
Paint NO
Other N/A

B. COMMENTS

NO DEFICIENCIES NOTED

C. COMPONENT RATING: (2.98) X (1.00) = 2.98
Possible Condition Component
Rating Value Multiplier Rating

EXTERIOR WINDOWS & DOORS

FAC # 110 DATE 12-7-90 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a) Windows type & number: Fixed(F), Double hung(DH), Casement(C)

Wood NO

Steel NO

Alum YES, SINGLE GLAZED (ANODIZED ALUMINUM), TOTAL OF
69 AWNING TYPE WINDOWS WITH 2 PANES OF FIXED GLASS

(b) Doors type & number:

Wood NO

Steel YES, ENTRY DOOR FROM HASKETT HALL

Alum YES, SIX ENTRY DOORS FROM OUSIDE

Other N/A

(c) Shading Devices

Types VENETIAN BLINDS

B. COMMENTS

THE WINDOWS ARE SINGLE GLAZED. THEY OPERATED OKAY AND NO DEFICIENCIES WERE
OBSERVED WITH THE WINDOW OR DOOR OPERATIONS. THE ONLY REASON TO REPLACE THE
WINDOWS WOULD BE FOR ENERGY CONSERVATION AND TO IMPROVE OCCUPANT COMFORT.

C. COMPONENT RATING: (4.08) X (0.35) = 1.43
Possible Condition Component
Rating Value Multiplier Rating

ROOFING

FAC # 110 DATE 12-7-90 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

- (a) Roof System
 - Flat YES, VERY LITTLE SLOPE ALMOST DEAD LEVEL.
 - Pitched NO
 - Concrete DECK UNDER FELT
 - Steel NO
 - Wood NO
 - Other N/A
- (b) Roof Covering
 - Built-up YES, 4-PLY WITH GRAVEL
 - Single Ply Membrane NO
 - Metal NO
 - Preformed Met NO
 - Shingle or tile NO
 - Other N/A
- (c) Flashing
 - Base & Counter BASE IS FELT AND COUNTER IS METAL
 - Cap YES, STONE COPING
 - Through Wall NO
 - Valley & Ridge N/A
 - Vent YES, NO FAULTS OBSERVED IN THE 8 EXHAUST VENTS
 - Chimney N/A
- (d) Gravel Stop & Edge Strips
 - Type N/A
- (e) Drainage
 - Gutters N/A
 - Drains YES, 3 OF THE 8 DRAINS WERE CLOGGED
 - Scuppers NO SCUPPERS
 - Downspouts YES, ON SOUTHSIDE IN GOOD CONDITION
- (f) Projections
 - Pipes YES, 12 PLUMBING VENTS
 - Stacks N/A
 - Bracing N/A
 - Skylights N/A
 - Other N/A
- (g) Parapets
 - Concrete NO
 - Brick YES, MORTAR ON SOUTH PARAPET IS LOOSE
 - Block N/A
 - Precast N/A
 - Other N/A

B. COMMENTS

1. ROOF DRAINS NEED TO BE CLEANED TO DRAIN PROPERLY.
2. MORTAR IN PARAPET WALL NEED TO BE REPAIRED AND PARAPET WALL SEALED TO KEEP OUT MOISTURE.
3. STAIRWAY ENCLOSURE TO ROOF HAS A CRACK IN THE EXTERIOR WALL THAT SHOULD BE REPAIRED. THIS WALL HAS A STUCCO FINISH.

C. COMPONENT RATING: (2.73) X (0.95) = 2.59

Possible	Condition	Component
Rating	Value Multiplier	Rating

FLOOR FINISHES

FAC # 110 DATE 12-7-90 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

- (a) Carpet
 - Rolled N/A
 - Tile N/A
- (b) Composition
 - Epoxy N/A
 - Synthetic N/A
 - Other N/A
- (c) Concrete Topping
 - Abrasive N/A
 - Epoxy N/A
 - Aggregate N/A
- (d) Resilient
 - Vinyl Tile 9" X 9" FLOOR TILE
 - Linoleum N/A
 - Vinyl N/A
 - Rubber N/A
 - Cork N/A
- (e) Ceramic Tile N/A
- (f) Masonry N/A
- (g) Terrazzo N/A
- (h) Wood N/A
- (i) Metal N/A

B. COMMENTS

NO DEFICIENCIES OBSERVED

C. COMPONENT RATING: (4.81) X (1.00) = 4.81

Possible	Condition	Component
Rating	Value Multiplier	Rating

CONVEYING

FAC # 110 DATE 12-7-90 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

- (a) Elevators
 - Number ONE (1)
 - Type OTIS, PASSENGER
 - Speed 50 FPM
 - Capacity (lbs) 2500 #
 - Dimensions 4' X 5' FLOOR AREA
 - Door Operation:
 - Center NO To Side YES
- (b) Lifts and Hoists
 - Number N/A
 - Type _____
- (c) Moving Stairs and Walks
 - Number N/A
 - Type _____
- (d) Conveyors
 - Number N/A
 - Type _____
- (e) Pneumatic Tubes
 - Number N/A
 - Type _____

B. COMMENTS:

- 1. HANDICAPPED CALL BUTTON ON 1ST FLOOR IS LOOSE FROM THE WALL.
- 2. ELEVATOR DOES NOT HAVE AN EMERGENCY TELEPHONE.

C. COMPONENT RATING: (1.68) X (0.99) = 1.66

Possible Condition Component

Rating Value Multiplier Rating

MECHANICAL/HEATING

FAC # 110

DATE: 12-7-90

INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a)Heat Source:

Central Plant Steam NO (STEAM IS COVERTED TO HOT WATER)
Central Plant Hot Water NO (AT HASKETT AND SUPPLIED TO BOYD)
Boilers: Type N/A
Size N/A
Furnace: Type N/A
Size N/A
Heat Pump: Type N/A
Size N/A
Burners: gas N/A
oil N/A

(b)System Type:

Steam NO
Hot Water YES
Air YES, THE VENTILATION SYSTEM PROVIDES SOME HEAT.
Electric NO
Solar NO
Other N/A

(c)Space Equipment:

Radiators NO
Convectors YES, UNDER WINDOWS ON OUTSIDE WALLS
Finned Tube NO
Baseboard NO
2-Pipe Fan Coil YES, IN ENTRANCE STAIRWAYS
4-Pipe Fan Coil NO
Unit Venilators NO
Multizone NO
Radiant Panels NO
Double Duct YES, MODIFIED TO VAV SYSTEM
Terminal Reheat NO
Other N/A

(d)Control Type:

Pneu YES
Electric NO
Electronic NO
DDC NO

B. COMMENTS:

- 1. THE HOT WATER PIPING HAS DEVELOPED A FEW LEAKS OVER THE PAST FIVE YEARS, BUT DOES NOT APPEAR TO BE ANY MAJOR PROBLEMS WITH THE SYSTEM.
- 2. NO DEFICIENCIES WERE OBSERVED.

C. COMPONENT RATING: (7.50) X (1.00) = 7.50
Possible Condition Component
Rating Value Multiplier Rating

COOLING & VENTILATING

FAC # 110 DATE: 12-7-90 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a) System:

Type DOUBLE DUCT HIGH VELOCITY SYSTEM (MODIFIED TO VAV)
Capacity APPROXIMATELY 80 TONS

(b) Chillers:

Centrifugal
Reciprocating 2 YORK ELECTRIC RECIPROCATING COMPRESSORS
Condensers 2 CARRIER AIR COOLED CONDENSERS

(c) Cooling Towers:

Type N/A
Capacity N/A
Condensers N/A

(d) Space Equipment:

Direct Expansion -
Window units TWO LOCATED IN RM 111 & 115
Thru-the-wall NONE
single zone NONE
all-air multizone NO
single zone con. vol. NO
double duct MODIFIED TO VARIABLE VOLUME SYSTEM

Air/Water -

2-pipe fan coil YES, LOCATED IN STAIRWAYS AT ENTRIES
unit ventilators NO
induction NO
4-pipe fan coil NO
terminal reheat NO
self contained NO
variable volume NO
var. vol. reheat NO

(e) Special Systems:

Type NONE Capacity

(f) Control Systems

Pneu YES
Electric NO
Electronic NO

(g) Fans:

Exhaust YES
Recirculating NO

B. COMMENTS:

AT THE TIME OF THE AUDIT THE COOLING SYSTEM WAS SHUT DOWN FOR THE SEASON. THE OCCUPANTS DID NOT INDICATE ANY PROBLEMS WITH THE COOLING SYSTEM. THE AIR HANDLING SYSTEM WAS INSTALLED IN 1965. IT APPEARED THAT THE RECIPROCATING CHILLERS WERE REBUILT SOMETIME IN THE LAST 2 TO 3 YEARS.

C. COMPONENT RATING: (6.43) X (1.00) = 6.43
Possible Condition Component
Rating Value Multiplier Rating

ELECTRICAL/LIGHTING & POWER

FAC # 110

DATE: 12-7-90

INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a)Lighting (lamp type):

Fluor YES, TWO TUBES IN MOST AREAS

Incand NO

HID NO

Other NO

(b)Emergency Lighting:

Battery Pack(#) NO

In Fixture(#) NO

Exit Lights(#) YES, THREE PER FLOOR

Lights on Emergency Power(#) NO

(c)Motors and Starters:

Type and Capacity ELEVATOR, CHILLERS AND FANS, & MACHINE SHOP

(d)Receptacles & Switches:

Type & Capacity STANDARD

(e)Special:

Baseboard Heat NO

Lightning Protection NO

Communication & Alarm NO

Data Systems NO

B. COMMENTS:

1. EVERY OTHER FLUORESCENT LIGHT FIXTURE IN THE HALLWAYS HAVE HAD THE LAMPS REMOVED.

2. LIGHT FIXTURES NEED A GOOD CLEANING.

3. A FEW FLUORESCENT LAMPS NEEDED REPLACED. ABOUT TWO LAMPS IN EVERY ROOM.

C. COMPONENT RATING: (11.29) X (0.99) = 11.18
Possible Condition Component
Rating Value Multiplier Rating

SAFETY STANDARDS

FAC # 110 DATE: 12-7-90 INSPECTOR: RDL

A. SYSTEM DESCRIPTION

(a) Exits

Stair Construction:

concrete NO

steel YES, WITH CONCRETE TREADS

wood NO

Number of exits TWO

(b) Fire Rating

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

Building Height: 35 FT ft., 3 stories

(c) Extinguishing Systems:

Portable YES

Standpipe NO

Hose Cabinets NO

Sprinklers NO

Suppression NO

Other N/A

(d) Detection & Alarm Systems:

Manual Alarm YES

Annunciator NO

Smoke Detectors NO

(e) Lighting Systems:

Exit Signs YES

Exit Lighting NO

Emergency Lighting NO

Emergency Generator NO

B. COMMENTS:

1. FIREPANEL IS LOCATED IN ROOM 110-M.

C. COMPONENT RATING: (4.94) X (1.00) = 4.94
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 and redecorating, wholesale replacement of building and system components. Ongoing maintenance, replacement and renovation projects are not included.

(b) Includes exterior building walls and attached items.

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

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

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

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

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

APPENDIX

Building Floor Plans
C-1 Building Space Assignments