

FACILITY AUDIT REPORT

BROWN HALL

#016

AUGUST 31, 1999



BROWN HALL

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Department of Physical Facilities
Division of Resource Management

BROWN HALL
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EXECUTIVE SUMMARY FOR BROWN HALL

Brown Hall was constructed in 1902/3 and occupied in the fall of 1903 with a gross area of 47,201 SF. The three story building with ground floor and attic was originally built for classrooms and offices. In 1922/3 a building addition of 27,197 SF was added on the north side and occupied in March of 1923 to add additional classroom, studio and office space. In 1975 an elevator was added on the northeast side of the building with an additional area of 507 SF. The total area of the building at this time is 74,902 SF with a net assignable area of 58,894 SF. The roof over the original building was replaced in 1983. The original building was partially remodeled in 1953, 1968 and 1970 for a library and college office space. The building is now used for The Knowlton School of Architecture offices, Career Services Offices for the College of Arts and Sciences and classrooms. There are general maintenance projects that need to be completed within the next five to ten years to repair normal wear items. The building is in need of a total renovation.

PROPOSED MAINTENANCE PROJECTS

BROWN HALL #016

A. Corrective Maintenance Projects:	Control No
1. <i>Repair, caulk and seal the steps at the front entrance. ...</i> \$	8,000 5580
2. <i>Paint the restrooms and corridors.</i> \$	12,000 1907
Sub Total	20,000
B. Building Improvement/Addition Projects:	
1. <i>Install 200 tons of air-conditioning in the building.</i> \$	400,000 5581
2. <i>Replace 302 windows and 4 doors.</i> \$	403,000 5582
3. <i>Upgrade the electrical distribution system.</i> \$	190,000 1911
4. <i>Install ceilings in room 385 and 389.</i> \$	10,000 1913
5. <i>Install emergency lighting.</i> \$	20,000 1908
6. <i>Insulate the attic.</i> \$	15,000 1914
Sub Total	1,038,000
C. Building Component Replacements expected within the next 5-10 years:	
1. <i>Replace the steam station.</i> \$	30,000 5583
2. <i>Replace the two multizone air handling units.</i> \$	320,000 5584
3. <i>Replace the plumbing system.</i> \$	220,000 1904
4. <i>Replace the hot water heating.</i> \$	240,000 1906
Sub Total	810,000
 Total Cost for all Projects	 \$ 1,868,000

**RENOVATION PROJECTS IN PROGRESS OR COMPLETED
SINCE LAST AUDIT**

BROWN HALL #016

Projects:		Project No.
<i>Renovate rooms 105, 109, and 070.</i>	<i>\$90,680</i>	<i>5061-PF970903</i>
<i>Repair the wood window tracks.....</i>	<i>\$ 6,500</i>	<i>5061-003190</i>

GENERAL BUILDING INFORMATION

BROWN HALL #016

BUILDING ADDRESS: *190 West Seventeenth Avenue*

GROSS SQ. FT.: *74,902*

NET ASSIGNABLE SQ. FT.: *58,894*

MECHANICAL/CUSTODIAL AREA SQ. FT.: *1,734*

YEAR OF CONSTRUCTION: *1903, 1923*

YEAR OF LAST RENOVATION: *none*

NUMBER OF STORIES/BASEMENT: *Three stories plus Ground Floor and Attic*

AIR CONDITIONING (Percentage): *60%*

CURRENT USE: *Knowlton School of Architecture, Classrooms and Offices*

TYPE OF CONSTRUCTION: *Masonry Skin with Masonry Walls and Wood Structure*

ESTIMATED REPLACEMENT COST: *\$ 11,276,000 **

COST PER GROSS SQUARE FEET: *\$150.54*

WHEELCHAIR ACCESSIBILITY: *From the north side of the 1923 building to the elevator and all floors.*

OVERALL BUILDING CONDITION: *Satisfactory ***

NUMBER OF EXIT STAIRWAYS: *one (1)*

NUMBER OF EXITS: *Seven (7)*

AREA SHOP RESPONSIBILITY: *North Shop*

** Replacement Cost assigned January 1999 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

BROWN HALL #016

HEATING:

Source – *McCracken Power Plant*

Type Heating System – *Steam and Hot Water*

Main Steam Feed (Line size, valve location) – *2" in room 036M*

Building Htg. Water (line size, valve location) – *2.5" in room 036M*

VENTILATION SYSTEM: *Multizone Air Handling Units with natural exhaust*

COOLING:

BLDG. 60%, Chillers: *one 1993 Carrier 50 ton DX chiller*

Window Units: *60 Thru-the-wall: none, Direct expansion units: five units*

HVAC CONTROL SYSTEM: *Pneumatic and Electric and system monitors*

ELECTRIC:

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

PGN9/PGS3 500 13,200/208/120 PC-AIR north pad

PLUMBING SERVICES:

Water (size, valve location) – *2.5" to room 036M*

Gas (size, valve location) – *none*

Domestic Hot Water (size, valve location) – *2" DHWS to room 036M*

Compressed Air (size, location) – *.5" in room 036M*

SEWERS:

Storm – *2@4, 4@6"*, Sanitary– *1@4", 1@6"*, Combined Storm/San – *yes*

METERS:

Gas (size, location) – *none*

Water (size, location) – *none*

Electric (size, location) – *none*

ALARM SYSTEMS:

Fire Alarm, Main Panel Room *036M*, Remote Panel Location – *Hall x6c*

Fire Pump @ GPM, Riser, Pump Location Room

Sprinkler, Valve Location Room, 100%, Partial, Limited

Horns/Strobes, Bells in Halls, Rooms

Other Alarms –

ELEVATORS:

Number *One*, Type (passenger, freight) *Passenger*
Manufacturer– *Otis*, Size- *2,500#, 51”x80”*

EMERGENCY GENERATOR:

Size–*none*, Location–

ASBESTOS SURVEY (1986): *Asbestos Inspection and Risk Assessment Program's reported by PEI Associates, dated Sept. 1986: Pipe insulation in mechanical rooms 36M, 24M, 89M, restroom pipe chases, attic and in walls.*

BROWN HALL NARRATIVE

HISTORY

Brown Hall was constructed in 1902/3 and occupied in the fall of 1903 with a gross area of 47,201 SF. The three story building with ground floor and attic was originally built for classrooms and offices. In 1922/3 a building addition of 27,197 SF was added on the north side and occupied in March of 1923 to add additional studio classrooms and office space. In 1975 an elevator was added on the northeast side of the building with an additional area of 507 SF. The total area of the building at this time is 74,902 SF with a net assignable area of 58,894 SF. The roof over the original building was replaced in 1983 while the roof over the 1923 building was replaced in 1993. The original building was partially remodeled in 1953, 1968 and 1970 for a library and college office space. The building is now used for The Knowlton School of Architecture offices, Career Services Offices for the College of Arts and Sciences and classrooms. There are general maintenance projects that need to be completed within the next five to ten years to repair normal wear items. The building is in need of a total renovation at this time.

The building is functioning as originally designed, and has held up relatively well over the 96 years since built. However, some items noted in this report need to be repaired or replaced. There are general maintenance projects that need to be completed within the next five years to repair or replace normal wear items. These items when completed will protect and enhance the building performance and create a satisfying visual environment for students, faculty, staff and visitors.

A review of the work orders indicated that there are more than normal maintenance problems are showing up in window A/C repairs, window repairs, temperature controls, doors and door hardware, clogged toilets and leaking faucets.

In an interview with the building coordinator, it was learned that the occupants are basically satisfied with the overall condition and performance of the building systems, however, the items noted above and herein are of concern.

Occupancy of the building, reported by the Office of University Resource Planning & Institutional Analysis in the C-1 Building Space Assignment Report dated January 1999 for a Net Assignable Area of 74,902 SF, is as follows. Faculty offices 15.7%, Administrative and Staff offices 22.5%, Classroom 35.1%, Circulation Areas 21.7% Mechanical 2.9% and Custodial/Toilet 2.1%.

PRIMARY SYSTEMS

The structural components of the original building consist of reinforced concrete perimeter and interior spread footers with loadbearing brick masonry walls up to the attic. The masonry walls support wood or iron beams that support the wood

floor joist with tongue and groove flooring. Wood roof trusses on the loadbearing walls support the roof rafters with tongue and groove roof sheathing. The structural components of the 1923 building consist of reinforced concrete perimeter and interior footers with masonry loadbearing walls that support the plane concrete floors and beams. Steel roof trusses on the loadbearing walls support the flat and pitched reinforced precast gypsum concrete roof system.

The ground floor of both buildings consists of reinforced concrete floors that have stone tunnels under the floor that connect to chases in the masonry walls for the heating and ventilation ducts and are in good to fair condition.

These form the basic skeletal components of this three-story building with ground floor and attic.

There are no major signs of settlement or movement in the building foundation or structural supports. Some minor or local settlement cracks were noted in the exterior brick walls of the original building.

Face brick was installed on the loadbearing masonry walls to form the exterior walls of both buildings. Limestone or brick trim around the perimeter, the gutter cornices, main entrance windows and at the parapet complete the architectural elements that accent both buildings.

The exterior brick of both buildings is in good to fair condition. Some cracking and mortar deterioration in various areas of the building was tuckpointed several years ago and is in good condition. The limestone cornice, trim and parapet caps should be cleaned and sealed to prevent spalling.

Some of the limestone wall/sills of the original building are spalling from excessive moisture due to proximity to the ground and should be patched, repaired and sealed. Also the limestone cornice trim of the original building has cracked, chipped and has missing pieces at joints from moisture and freeze/thaw cycles and needs to be caulked at this time to stop leaks to the interior plaster walls.

Openings in the brick walls for entrance doors and windows are accented with cut limestone, marble, brick or wood that form headers, sills and jambs. Other openings in the various wall elevations include louvered air intakes and exhaust or glass block in windows that have been removed.

Wood double hung single pane windows and one fixed window were installed on the original building. The wood double hung windows have had galvanized steel guides recently installed on all of the lower windows of the original building. Steel double hung single pane windows in groups of one to three units were installed on the 1923 building. All of the windows on both buildings leak large quantities of cold air and are in fair to poor condition. The windows need to be replaced with

energy efficient windows to match the existing units. Five original single pane leaded glass windows are located at the south entrance of the original building. The wood and steel window trim needs to be painted.

The north entry double doors are aluminum doors installed in an aluminum frame and are in good condition. The south entry door consists of oak frames from the floor to the ceiling and to the brick walls for the double doors and leaded glass panels and is in good condition. Other entry doors are wood or steel with lights and steel doors to equipment rooms.

The original sloped roof consists of wood truss and beams with wood purlins that support the tongue and groove deck and red barrel tiles. The tile roofs of the original building were repaired or replaced in 1987 with new tiles. The saw-toothed slope and flat roof of the 1923 addition consists of steel trusses that support the precast gypsum concrete panels and a modified bitumen roll roof that was installed in 1993. The flat roof of the 1975 elevator addition is a metal deck with insulation board, and an asphalt roof with gravel.

The roof drainage system consists of galvanized gutters around the perimeter of the original building that are in good condition but need some repairs at gutter joints to prevent leaks. The roof drains on the flat roof of the 1923 building are run on the interior in masonry walls and appear to be in good condition.

INTERIOR SYSTEMS

The loadbearing masonry brick walls of the 1903 building are enclosed with a plaster finish that form interior loadbearing walls and rooms. Walls in the original building have a plaster finish on brick or wood studs with wood oak base and cornice trim, wainscot trim or chair rails around the rooms and at the doors. Some remodeled areas in the original building are separated with metal studs and drywall. The 1923 building is enclosed with loadbearing brick walls with a plaster finish to form interior walls and rooms. The partitions and walls are all in good to fair condition depending on the area.

The majority of the doors in this building are wood doors in wood frames with transom windows above the door, while remodeled and new areas have wood doors in metal frames that are in good condition. Steel roll-up fire doors in steel frames are installed on each side of the fire wall in the halls on each floor between the two buildings. The metal fire doors in this building are in good to fair condition. Some door and/or door hardware problems are showing up in maintenance calls. Lock mechanisms and door adjustments are beginning to fail and will require continued maintenance.

The floors in the 1903 building have asbestos asphalt tiles installed on the tongue and groove flooring in some offices and classrooms. Other rooms have wood or

vinyl tile over the original flooring. The equipment rooms have exposed concrete floors. The floors throughout the building are in good to fair condition and have been fairly well maintained. The east and west stairs are wood with oak banisters and are in good condition. The stairwell in the 1923 is a steel stair with rubber treads.

The ceilings in the building consist of suspended 2x4 mineral fiber tiles, drywall, plaster or are exposed. The ceilings under the stairwells of the 1903 building consist of attached plaster with wood trim. The ceilings in some rooms and remodeled areas of this building consist of a suspended aluminum 2x4 grid system with mineral fiber tiles. The original plaster ceilings are in good to fair condition. Some ceiling tiles need to be replaced where roof, duct and/or pipe leaks have occurred.

The partitions, doors, walls, and ceilings vary in their condition depending on the location in the building and what remodeling has been completed. The partitions, doors, door hardware, walls, floors, and ceilings have held-up relatively well after 96 years of service.

SERVICE SYSTEMS

The major service systems, domestic cold and hot water, sanitary waste and storm drainage all appeared to be in fair condition and functioning at this time. The plumbing drainage system did not appear to have any problems. There was adequate water pressure at the faucets and fixtures on all of the floors. The domestic hot water is supplied by the power plant domestic hot water loop. The piping for the domestic hot and cold water systems did not appear to have any problems at this time. The restroom fixtures were functioning properly although maintenance records indicated failures of the flush valves, faucets and clogged water closets on a continuing basis.

The passenger/ freight elevator at the northeast corner of the 1923 building was installed in 1975 and meets ADA requirements. The elevator consists of a cab that is moved from floor to floor by a hydraulic cylinder under the cab that is driven by a hydraulic oil pump. The controls consist of push buttons, relays and solenoids that operate the hydraulic motor, break, floor levelers, doors and position lights. The elevator was operating and maintenance records did not indicate any problems.

A 2" steam line feeding the building is tapped into the central power plant high pressure steam loop located in the rear of the building. The 2" high-pressure steam service is reduced through a single 200/15 PSI pressure reducing station in room 036M and piped to air handling units heating coils.

Hot water is pumped from the central power plant hot water heating loop to the building perimeter heating system that supplies convectors and radiators located on

the outside walls under windows, fan coil units and unit heaters. The heating system was not operating at the time of the site visits.

The original heating and ventilation system is a constant air volume (CAV) system with two supply air fans connected to one motor. The two supply air fans move air through a steam coil and a set of filters to the zoned ducts located at the walls in room 036M. The supply air ducts of this system is under the ground floor halls and ties into the masonry ducts in the walls that supplies air to registers and grills located on walls throughout the building. Each ducted supply air zone is controlled with a pneumatic thermostat in the zone to a pneumatic damper for the zone in the duct at the wall in room 036M. Another ducted masonry wall system exhausts air from the rooms and halls to the attic area where the warm air exits the building through gravity ventilators. Some exhaust ducts in the walls at the attic level have been plugged, some have been left open or have been connected to power exhaust fans.

The original heating and ventilation system was over sized for future expansion. The 1923 building heating and ventilation system is tied into the original CAV system on the west side of room 036M. The zoned constant air volume system has a pneumatic control damper in the duct that supplies air to each zone. The air handling unit has steam heating coils and filters. The air handling units supply air to diffusers and grills located throughout the 1923 building. The ducted portion of this system is also under the ground floor hall and supplies the masonry ducts in the walls.

Some air on the ground floor is exhausted from the rooms to the halls and ducted back to the air handling unit in room 036M. There are steam preheating coils and dampers at the fresh air intake for the air handling unit.

There was no central cooling system installed in the original building when built. Individual offices and classrooms in some areas of the building use window air conditioning units with 3/4 to 2 tons of cooling each. The window units have 230 volt power supplies on separate circuits and are mounted in steel frames for a secure installation.

One cooling system consists of a 50 Ton Carrier water chiller installed in 1993 using two reciprocating R-22 compressors that are cooled by a DX air condenser. A chilled water pump supplies chilled water to the fan coil air handling units with reheat located on the east side of the ground and first floors of the building. Room thermostats control the room fan coil air handling unit cycle to provide comfort conditions to the space.

Five DX split system air conditioning units have been installed over the years to cool other offices and classrooms. Two Carrier 5 Ton R-22 DX condensers located on the west side of the building supplies refrigerant to the air handling unit located

in the ceiling of room 181 and 279. A Carrier 5 Ton R-22 DX condenser also located on the west side of the building supplies the air handling unit located in the closet of room 61M.

Two Dunham Bush 5 to 7.5 Ton R-22 DX air cooled condenser located in room 79M supplies the air handling unit that cools several offices. One of the units is broken and the needs to be repaired by the department.

All of the heating equipment is 77 to 97 years old and is well past its expected life and will need to be replaced at this time.

Controls for the heating and cooling system are pneumatic and electric. A panel to monitor the equipment and provide central communication has been installed.

Exhaust fans located throughout the building remove air from restrooms, common areas, conference rooms and mechanical rooms.

ELECTRIC

One 500 KVA 208/120 volt transformer at the north exterior wall at room 036M supplies the electrical service to Brown Hall. Switchgear located in room 036M feeds the equipment, lighting and power distribution panels located throughout the building. Panel sizes vary throughout the building depending on the load. At about 6.7 watts per square foot the building appears to just have an adequate power supply. Any large future electrical requirements would require a larger transformer and switchgear.

The building has 40 watt fluorescent light and incandescent light fixtures throughout most of the building. Some areas have had the newer 32 Watt electronic ballast and tube fixtures installed during room renovation projects. Some stairwells and halls are lighted with incandescent track fixtures. The incandescent bulbs should be replaced with fluorescent or energy efficient halogen bulbs. A program to replace the 40 watt fluorescent fixtures with 32 watt fluorescent fixtures would save energy. There are not an adequate number of convenience and computer outlets in some areas of the building.

SAFETY STANDARDS

Brown Hall is equipped with a manual fire alarm system consisting of pull stations at stairwells and exits that provide local fire annunciation from the panel to all floors. There are lighted exit signs with backup battery packs at each exit. Emergency lighting needs to be installed in the corridors and in stairwells.

There are hose cabinets without hoses on an undersized standpipe system in this building that does not have a fire department connection.

Automatic door openers are installed at the north entrance for wheelchair access to the elevator and all floors.

ASBESTOS

The Ohio Board of Regents Facilities Asbestos Inspection and Risk Assessment Program's report titled "Inventory of Friable Asbestos Containing Material in Buildings of the Ohio State University (Main and Branch Campuses) and the Recommendations for Corrective Action" was completed by PEI Associates on Sept. 1986. Asbestos containing materials were identified in mechanical rooms and pipe chases in the building. All asbestos piping and asbestos containing materials including floor tiles, plaster and drywall speckle need to be removed during any renovation.

PERIMETER

About 95 percent of the sidewalks around the building are in good condition. Some sidewalks on the east side have small cracks.

Some limestone repairs and caulking are required on the front steps and porch.

The lawn area on the south side has some bare spots in the grass and should be seeded. There is no mulch around the shrubbery. All of the shrubbery and trees need to be trimmed and mulched. The fountain in the front of the building should be repaired or removed.

Entrances to the building are well lighted and area, flood, sidewalk and street lighting appear to be distributed properly. The building signs are in good condition.

Minor Maintenance Projects (Less Than \$5000) EXTERIOR

BROWN HALL #016 AUGUST 30, 1999

- 1 Trim the trees and shrubs around the whole building and mulch.
Customer Request #13541
- 2 Repair the gutter leaks around the original building.
Customer Request # 13544
- 3 Caulk the spalling cornice limestone at the joints and seal with an epoxy sealant to prevent further plaster damage in rooms below the cracks.
Customer Request # 13546
- 4 Clean the downspout storm drains to the manhole.
Customer Request # Completed
- 5 Insulate the condenser suction piping on the west side of the building.
Customer Request # 13547
- 6 Install weather-strips at all entrance doors (4).
Customer Request # 13548
- 7 Paint the south steel door and repair and paint the two wood doors to room 074.
Customer Request # 13549

Minor Maintenance Projects (Less Than \$5000) INTERIOR

BROWN HALL #016 AUGUST 30, 1999

1. Replace insulation removed from piping for repairs and repair the leaking valve in equipment room 036M at the tunnel.
Customer Request # 13550
2. Repair the plaster in rooms 261, 247 and 216 and paint.
Customer Request # 13551
3. Replace water damaged ceiling tiles in room 247.
Customer Request #13552

Recommendations

1. Replace the burnt out incandescent lights in the halls with halogen bulbs.

BUILDING EVALUATION SUMMARY

BUILDING INFORMATION

Fac # **016**, Facility Name: **BROWN HALL** Date: **8/30/99**, Inspector: **JAO**
 Year Constructed: **1903/1923**, Gross Sq. Ft **74,902**, Net Sq. Ft **58,894**
 Replacement Cost \$ **11,276,000** *

COMPONENT RATING

BUILDING COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST**	BUILDING COMPONENT REPLACEMENT COST	BUILDING COMPONENT CONDITION VALUE MULTIPLIER	BUILDING COMPONENT CURRENT VALUE
Foundation	4.37	493,066	67	331,524
Columns and Beams	12.93	1,458,461	67	980,629
Exterior Walls	9.32	1,050,645	64	671,402
Ext. Windows & Doors	4.56	513,802	20	102,766
Roofing & Flashing	6.15	693,518	91	634,501
Partitions & Doors	9.75	1,099,030	53	586,179
Wall Finishes	2.98	336,391	67	224,280
Floor Finishes	5.64	635,917	47	296,776
Ceilings & Finishes	8.03	905,490	52	472,898
Conveying	1.88	211,972	81	171,005
Plumbing	2.43	274,181	47	127,958
Heating	9.81	1,105,942	47	516,132
Cooling and Vent.	7.56	852,497	63	539,963
Elect. Serv. & Dist.	1.94	218,884	67	145,936
Lighting and Power	12.01	1,354,779	47	632,262
Safety Standards	0.63	71,425	47	33,334
TOTALS	100.00	11,276,000	57	6,467,544

BUILDING RATING SUMMARY

Overall Building Rating = **57%**

* Replacement Cost assigned January 1999 by The Office of 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.

FOUNDATIONS

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ 551,396 x 67% = \$ 370,744
Possible Condition Component
Value Value Multiplier Value

SYSTEM DESCRIPTION

Sat Att

- a. Footings:**
- [X] [] Interior Footings/Piers *concrete*
- [X] [] Interior Footings/Bearing Walls *spread*
- [X] [] Perimeter Footings..... *spread*
- [] [] Grade Beams
- [] [] Piles
- [] [] Caissons.....
- b. Foundation Wall Materials:**
- [X] [] Concrete Cast-in-place*in 1923 building*
- [] [] Concrete Block
- [] [X] Stone*with limestone trim in 1903 building*
- [] [] Brick
- [] [] Other.....
- c. Waterproofing and Underdrain:**
- [] [] Coating
- [] [] Membrane.....
- [] [] Board
- [] [] Drain Tile.....
- d. Slab on Grade:**
- [] [] Plain.....
- [] [] Reinforced
- e. Ground/Basement Floor Slab:**
- [X] [] Plain.....*in 1903 building*
- [X] [] Reinforced*in 1923 building*
- f. Special Substructures:**
- [X] []*duct chases under the hall floors*

COMMENTS:

Noted some cracking and spalling in sections of concrete of the 1923 addition and in the 1903 building at ground level. Spalling appears to be a result of water in the adjacent areas not being drained properly.

COLUMNS AND BEAMS

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>1,543,121</u> x <u>67%</u> = \$ <u>1,037,552</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>
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SYSTEM DESCRIPTION

Sat Att

a. Columns and Beams:

- Reinforced Concrete
- Precast Concrete.....
- Steel *some iron beams in 1903 building*
- Fireproofing
- Wood..... *beams in the 1903 building*
- Other

b. Floor Joists:

- Concrete
- Steel Trusses
- Wood *in the 1903 building*
- Other

d. Floor Decks:

- Concrete Slab..... *plane on loadbearing walls in addition*
- Precast Slab.....
- Metal Deck w/concrete fill.....
- Wood *T&G in the 1903 building*

e. Roof Joists:

- Concrete
- Steel Trusses *in the 1923 building*
- Wood *in the 1903 building*

f. Pitched Roof System:

- Pitch []3/12, [X]6/12, []10/12, []15/12.....
- Dormers
- Steel Rafters.....*in the 1923 building over studio*
- Wood Rafters*in 1903 buildings*
- Fireproofing
- Underlayment..... *1" T&G in 1903 buildings*
- Insulation.....
- Ventilation *natural vents over stairwells*
- Other *precast concrete slabs on steel trusses 1923 building*

g. Flat Roof System:

- Slope *0.25" per foot*
- Concrete Deck.....

- Precast Gypsum Slab..... *in the 1923 section*
- Metal Deck w/concrete fill
- Metal Deck w/insulation.....
- Wood Deck.....
- Insulation*board*
- Other *saw tooth with steel windows*

COMMENTS:

The T&G wood subflooring and wood joists of the 1903 building are shrinking and causing floor tiles to loosen at the joints. The T&G wood roof sheathing and wood rafters are also shrinking and causing the roof to sag between truss supports. This is a natural process as the moisture content in the wood decreases.

EXTERIOR WALLS

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>902,136</u> x <u>64%</u> = \$ <u>576,499</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>
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SYSTEM DESCRIPTION

Sat Att

a. Walls:

- Concrete []CIP []PRECAST.....
- Concrete Block.....
- Brick [X]MASONRY []VENEER..... *loadbearing*
- Slab Veneer.....
- Window/Curtainwall.....
- Metal Siding.....
- Other

b. Wall Lintels Over Openings:

- Concrete []PRECAST []CIP.....
- Limestone.....
- Brick Masonry
- Steel
- Wood
- Other

c. Wall Trim:

- Limestone.....
- Brick.....
- Marble..... *at front entrance*
- Wood.....
- Other

d. Finishes:

- Plain
- Stucco.....
- Paint *on window and door trim*
- Parging
- Exposed Aggregate
- Drivit.....
- Other *tin ceiling tile over the front entrance*

e. Exterior Wall Backing System:

- Concrete
- Concrete Block.....
- Brick Masonry..... *in both buildings*
- Clay Tiles

[] [] Metal Studs.....
[] [] Wood Studs

COMMENTS:

The stone and limestone foundation walls of the 1903 building at the window sills are spalling and need to be patched and sealed.

Cracks and open joints in the brick and limestone were tuckpointed or caulked several years ago and appear to be in good condition.

Cracks and open joints in the limestone cornice need to be caulked and sealed to prevent water penetration into the rooms.

EXTERIOR WINDOWS AND DOORS

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>456,678</u> x <u>20%</u> = \$ <u>91,340</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>

SYSTEM DESCRIPTION

Sat Att

a. Window materials:

- Wood.....*double hung on 1903 windows*
- Steel*double hung on 1923 building*
- Alum
- PVC.....
- Other

b. Windows type & number:

- Double Hung.....*302 ea.*
- Awning.....
- Casement.....
- Pivoted
- Sliding.....
- Fixed*1 ea. above entrance in attic*
- Other*6 leaded glass fixed panes at the door entrances*

c. Window glazing:

- Single pane*leaded glass at doors*
- Double pane
- Other

d. Window Wall and/or Store Front:

- Store Front
- Vestibule
- Single pane.....
- Double pane
- Other

e. Door Materials:

- Wood..... *at south door, to room 074 and third floor*
- Steel *to mechanical room and ground floor*
- Alum*on north entrance door*

f. Doors type & number:

- Vestibule Double
- Double.....*wood frame and oak trim with leaded glass*
- Double.....*to room 036M entrance*
- Exit.....*three*
- Stair Exit*one*

- Garage.....
- Special*fire escape on the north wall*
- g. Hardware:**
- Automatic opener*at north door*
- Push Bar Openers wt Closures
- Key Cards

COMMENTS:

The wood and steel windows need to be painted and caulked at this time but need to be replaced with energy efficient windows.

The south ground floor door needs to be painted.

ROOFING

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>561,545</u> x <u>91%</u> \$ <u>513,759</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>
--

SYSTEM DESCRIPTION

Sat Att

a. Roof Covering:

- Built-up asphalt Coal Tar Modified 375 SF
- Built-up w/gravel asphalt Coal Tar
- Modified Bitumen Roll..... 1923 building 6,950 SF
- Asphalt Shingle.....
- Copper.....
- EPDM
- EPDM w/gravel
- Otherred tile on 1903 building 17,125 SF

b. Flashing:

- Materials: Cu Galv Al EPDM SS PVC
- Base & Counter 522 LF
- Cap.....
- Reglet.....in walls 84 LF
- Valley & Ridge 875 LF

c. Gravel Stop & Edge Strips:

- Type SS Galv Al Cu PVC 10 LF

d. Drainage:

- Gutters w/ Exterior Downspouts....1903 building, 512LF
- Scuppers w/o Exterior Downspouts 1923 building
- Drains w/ Interior Storm Drains 1923 building
- Emergency Overflow over the edge

e. Parapets:

- Concrete
- Brick/Limestone 310 LF
- Precast
- Othercopper coping 12 LF @ elevator room

f. Parapet Caps:

- Metal SS Galv Al Cu PVC
- Tile
- Limestonelimestone 310 LF
- Precast
- Other

h. Roof accessories:

- Lightning Protection
- Roof Curbs
- Equipment Frames.....
- Pitch Pockets
- Other..... *ventilation caps with curbs*

COMMENTS:

The tile roofs are in good condition.

The gutters are leaking at the seams and need to be cleaned, recaulked and sealed.

PARTITIONS AND DOORS

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>851,338</u> x <u>53%</u> = \$ <u>454,070</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>
--

SYSTEM DESCRIPTION

Sat Att

a. Partition Framing:

- Concrete Block/Brick.....*loadbearing in 1923 addition*
- Clay Tile Block.....
- Glazed Block.....
- Masonry *loadbearing in 1903 building*
- Wood Stud *in 1903 building*
- Metal Stud.....*remodel of 1903*
- Other

b. Special partitions and Walls:

- Demountable
- Toilet.....*marble in 1923 addition*
- Screen Walls
- Glass.....
- Gate
- Other

c. Wall Material:

- Plaster..... *in 1903 and 1923 building*
- Drywall*in remodeled areas*
- Glass.....*hall door transoms and arches*
- Wood Paneling..... *in 1903 building*
- Composite Paneling*on some hall walls*
- Steel Panels
- Tile/Glazed.....
- Other

d. Interior Doors & Frames:

- Met Door/Met Frame
- Wood Door/Wood Frame *in 1903 and 1923 building*
- Wood Door/Metal Frame.....
- Glazing.....
- Roll-up*fire doors between 1903 and 1923 building*
- Sliding.....
- Other

e. Hardware:

- Door Knobs Levers.....

- Door Closures.....
- Kick/Push Plates.....
- Security & Detection.....
- Automatic Openers.....
- Fire Door Magnets.....
- Other.....

COMMENTS :

Aluminum doors have been mounted in oak wood frames at offices.

The roll down fire doors have been installed on each side of the hall fire wall between the 1903 and 1923 building.

Some doors do not close properly and need to be repaired.

WALL FINISHES

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

<p>COMPONENT RATING: \$ <u>350,684</u> x <u>67%</u> = \$ <u>233,810</u></p> <p style="text-align: center; font-size: small;"> Possible Condition Component Value Value Multiplier Value </p>
--

SYSTEM DESCRIPTION

Sat Att

a. Wall Finishes:

- [X] [] Paint.....
- [] [] Vinyl Wall Coverings.....
- [X] [] Paneling Prefinished..... *wood and acoustical panels*
- [] [] Cork.....
- [X] [] Wallpaper
- [X] [] Ceramic Tile.....*in bathrooms*
- [X] [] Marble
- [] [] Stone.....
- [X] [] Trim & Wainscot.....*in oak*
- [X] [] Decoration *oak trim and inlays throughout the building*
- [X] [] Glass
- [] [] Other.....

COMMENTS:

Finishes are generally in good condition on all floors.

The oak trim around entrances, ceilings, stair rails and wainscot trim is in good to fair condition. Cleaning and refinishing the trim would add character to the building.

FLOOR FINISHES

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ 752,109 x 47% = \$ 351,002
Possible Condition Component
Value Value Multiplier Value

SYSTEM DESCRIPTION

Sat Att

- a. Carpet:**
- [] [X] Rolled *in some offices*
- [] [] Tile.....
- b. Concrete Topping:**
- [] [] Clear Sealant.....
- [] [] Antislip.....
- [] [] Epoxy.....
- c. Resilient:**
- [] [X] Vinyl Composition Tile.....*replacement tiles*
- [] [] Vinyl/Plastic Tile.....
- [] [X] Asphalt Tile*in 1903 and 1923 building*
- [] [X] Linoleum Tile*in 1903 and 1923 building*
- [] [] Vinyl Roll.....
- [] [] Rubber.....
- [X] [] **d. Ceramic Tile** []Mosaic [X]Quarry []Pavers.....
- [X] [] **f. Masonry** [X]Marble []Granite []Slate []Brick.....
- [] [] **g. Terrazzo** []Marble []Granite.....
- [] [] **h. Wood** []Tiles []T&G Hardwood []Planking.....
- [] [] **i. Pedestal** []Vinyl Tiles []Grills []Supply Air []Vent....
- j. Base Molding:**
- [X] [] Vinyl.....
- [X] [] Wood *oak throughout the 1903 building*
- [] [] Terrazzo.....
- [] [] Ceramic Tile.....
- [X] [] Masonry..... *in restrooms*
- [X] [] Other..... *formed concrete*

COMMENTS:

Vinyl tiles are cracked at subflooring joints and need to be replaced.

CEILINGS AND FINISHES

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>788,192</u> x <u>52%</u> = \$ <u>411,639</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>
--

SYSTEM DESCRIPTION

Sat Att

a. System Type:

- [] [] Exposed.....
- [X] [] Applied to Structure.....*plaster throughout*
- [X] [] Suspended Stud.....
- [] [] Suspended Steel Grid.....
- [X] [] Suspended Aluminum Grid *in some rooms*
- [] [] Suspended Sealed Grid.....
- [] [] Suspended Concealed Spline.....

b. Materials:

- [] [] Drywall
- [X] [] Plaster..... *on all ceilings*
- [X] [] Mineral Fiber Board..... *2x4 in renovated areas*
- [] [] Fiberglas Board.....
- [] [] Cementitious Fiber Board.....
- [] [] Metal Pan Tile.....
- [X] [] Other *tin panels over entrance stairs*

c. Finishes:

- [X] [] Paint
- [X] [] Prefinished [X]Paint []vinyl [X]Fabric
- [] [] Other

d. Openings & Inserts:

- [X] [] Air Distribution.....
- [X] [] Lighting Fixtures.....
- [X] [] Access Panels.....
- [] [] Sprinklers
- [] [] Smoke Detectors
- [] [] Speakers
- [] [] Skylights
- [] [] Other

COMMENTS

The tin panel ceiling in the south entrance stairwell is in good condition.

CONVEYING

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>280,772</u> x <u>81%</u> = \$ <u>226,508</u>		
Possible Value	Condition Value Multiplier	Component Value

SYSTEM DESCRIPTION

Sat Att

a. Elevators:

- [] Number.....*One Otis*
- [] Type.....*Passenger*
- [] Speed.....*100 FPM*
- [] Capacity (lbs.).....*2500 Lbs.*
- [] Dimensions.....*51"x80"*
- [] Door Operation []Side [X]Center:.....
- [] Accessibility Standards.....
- [] [X] Fire Codes.....

b. Lifts and Hoists:

- [] Number.....
- [] Type.....

c. Moving Stairs and Walks:

- [] Number.....
- [] Type.....

d. Conveyors:

- [] Number.....
- [] Type.....

COMMENTS:

The elevator cab has had a new control panel installed meeting accessibility standards.

MECHANICAL/PLUMBING

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>451,040</u> x <u>47%</u> = \$ <u>210,496</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>
--

SYSTEM DESCRIPTION

Sat Att

a. Services Available:

- [] Cold Water2.5"
- [] Backflow Valve
- [] Hot Water.....2.5" in room 036M
- [] Natural Gas
- [] Compressed Airfor equipment to room 036M
- [] Other 3" fire standpipe line

b. Piping & Fittings:

- [] Cast Iron.....
- [] Ductile Iron
- [] Copper Pipe
- [] Copper Tubing
- [] Steel
- [] Galv. Steel
- [] Other

c. Water Heaters:

- [] Gas
- [] Steam Converter/Tank
- [] Steam Instantaneous.....
- [] Central Hot Water.....2.5" DHWS

d. Drainage:

- [] Storm Drains
- [] Sanitary Drainage.....
- [] Floor Drains

e. Fixtures: Number

- [] Water Closets.....11
- [] Urinals7
- [] Lavatory Sinks9
- [] Kitchen Sinks
- [] Service Sinks4
- [] Showers.....
- [] Electric Water Coolers4

f. Sprinkler Systems:

- [] Wet

- Dry
- Carbon Dioxide
- Halon
- g. Standpipe Systems:**
- Wet Dry *no fire department connections*
- Fire Hose Valves 2.5" 1.25"
- Hose Cabinets, Hoses Installed Removed

COMMENTS:

Fire department valves are not installed in the standpipe water system and the hoses have been removed.

The plumbing systems are original and past their serviceable life and should be replaced.

Maintenance records indicate that many of the water closets are becoming clogged and that flush valves and faucets are failing on a continuing basis.

MECHANICAL/HEATING

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>961,843</u> x <u>47%</u> = \$ <u>448,882</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>
--

SYSTEM DESCRIPTION

Sat Att

a. Heat Source:

- Central Plant Steam.....2" HPS
- Central Plant Hot Water.....2.5"

b. System Type:

- Steam.....
- Hot Water.....
- Warm Air

c. Air Handling Units:

- Multizone Preheat Heating Reheat
- Dual Duct Preheat Heating Reheat
- Make-up Air Preheat Heating Reheat
- Variable Volume Air Preheat Heating Reheat.....
- Constant Volume Air Preheat Heating Reheat
- Other..... *zoned ducts with pneumatic dampers*
- Other..... *preheat coils and louvers at outside air intake*

d. Air Filters:

- Prefilter Multi DDAHU MUAHU VAVAHU CAV
- Bagfilter Multi DDAHU MUAHU VAVAHU CAV
- Other.....

e. Space Equipment:

- Radiators
- Convectors
- Unit Heaters
- Reheat Coils.....*some electric reheat*
- DD Boxes
- VAV Boxes
- 2-Pipe Fan Coil..... *at entrances*
- Other.....

f. Control Type:

- Pneu Electric DDC DDC Upgrade

COMMENTS:

The two air handling units are past their useful life and need to be replaced in the near future.

COOLING/VENTILATING

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>1,103,920</u> x <u>63%</u> = \$ <u>699,212</u> <div style="display: flex; justify-content: space-around; font-size: small;"> Possible Value Condition Value Multiplier Component Value </div>
--

SYSTEM DESCRIPTION

Sat Att

- a. System/Capacity:**
- [] Water *50 Tons*
- [] DX
- b. Chillers Capacity/Year/Refrigerant/Manufacturer:**
- [] Centrifugal
- [] Reciprocating. *2-25 Ton/1993/R-22/Carrier compressors*
- [] Absorption
- c. Condenser Side:**
- [] Type/Capacity []CW [X]DX *air cooled 50 ton*
- d. Air Handling Units:**
- [] Multizone []CW []DX []HUMD
- [] Dual Duct []CW []DX []HUMD
- [] Make-up Air []CW []DX []HUMD
- [] Constant Volume []CW [X]DX []HUMD
- [] Variable Volume []CW []DX []HUMD
- [] Fan Coil Unit [X]CW []DX [X]REHEAT
- e. Additional Air Filters:**
- [] Postfilter []Multi []DDAHU []MUAHU []VAVAHU []CAV
- [] Other []HEPA []BAG []CARTRIDGE []CHARCOAL
- f. Direct Expansion: Number**
- [] Window units *60 units*
- [] Thru-the-wall
- [] Single zone *5 DX split system units*
- g. Distribution Boxes:**
- [] VAV []FC []REHEAT
- [] CAV []FC []REHEAT
- [] DUAL DUCT []FC []REHEAT
- h. Special Systems:**
- [] Type
- [] Capacity
- i. Control Systems:**
- [] [X]Pneu [X]Electric []DDC []DDC Upgrade

j. Fans:

- [] Exhaust equipment..... *10 exhaust fans*
- [] Recirculating.....

COMMENTS:

An exhaust fan needs to be installed in room 036M to remove excess heat from the room.

The suction piping on the west condensers needs to be insulated.

The DX unit in room 079 needs to be repaired.

ELECTRICAL SERVICE AND DISTRIBUTION

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ <u>190,564</u> x <u>67%</u> = \$ <u>127,054</u> Possible Condition Component Value Value Multiplier Value

SYSTEM DESCRIPTION

a. Service:

Substation: Buckeye, McCracken Power Plant

Primary Voltage: 13,200 Volts, Volts

Switch Gear Circuit No.: PGN9/PGS3

Transformer:

Manufacture	Type	KVA	Secondary/Voltages	Room
GE	SILICONE	500	208/120	036M

b. Distribution System:

1. Motor Control Center (MCC) Room 036M

Panelboard Fused, Circuit Breakers

Voltage 480/3, 277/3, 208/3, 240/1

Amperage 1200A, 800A, 600A, 400A, 200A

2. Lighting Room 036M

Panelboard Fused, Circuit Breakers

Voltage 480/3, 277/3, 208/3, 240/1

Amperage 800A, 400A, 250A, 200A, 150A, 100A

3. Building Power Room 036M

Panelboard Fused, Circuit Breakers

Voltage 480/3, 277/3, 208/3, 240/1

Amperage 800A, 400A, 250A, 200A, 150A, 100A

4. Isolated Ground Power Room

Panelboard Fused, Circuit Breakers

Voltage 480/3, 277/3, 208/3, 240/1

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

c. Conduit and wire:

Conduit Steel, Aluminum, PVC, Flexible

Conductor Copper, Aluminum, MIT

Wire: PVC Cover, Romex, Armored Cable(BX)

d. Emergency System:

Battery backup Room

Emergency Panel Room

UPS Room

e. Emergency Generator:

Size KVA, Location, Room

COMMENTS: none

ELECTRICAL LIGHTING AND POWER

COMPONENT RATING: \$ <u>1,280,954</u> x <u>47%</u> = \$ <u>597,808</u>		
Possible Value	Condition Value Multiplier	Component Value

SYSTEM DESCRIPTION

Sat Att

a. Lighting (lamp type):

- Fluor 40 watt *in majority of building*
- Fluor 32 watt *in remodeled rooms and some halls*
- Fluor Can.....
- Incandescent *fixtures in stairwells and halls*
- HID Mercury HPS Metal Halide
- Low Voltage (12V)
- Other..... *150 watt incandescent track lighting*

b. Lighting Levels

- Halls
- Rooms
- Mechanical Rooms.....

c. Fixture Condition

- Fixtures
- Bulbs
- Fixture Lens

d. Receptacles & Switches:

- Wall Outlet 20A
- GFIC Breakers
- Switches
- Cover Plates

c. Special:

- Lightning Protection
- Communication Clock Public Address Bells
- Alarm Fire Security
- Telecommunication Phones Data Cable TV
- Data Systems
- Fiber Optics.....

COMMENTS:

The remaining 40 watt lighting needs to be replaced with 32 watt lighting in the majority of the building. Incandescent lighting should to be replaced with halogen bulbs.

SAFETY STANDARDS

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

COMPONENT RATING: \$ 250,327 x 47% = \$ 116,825
Possible Condition Component
Value Value Multiplier Value

SYSTEM DESCRIPTION

Sat Att

a. Exits:

Stair Construction:

- concrete
- steel *with concrete fill*
- wood.....
- Number of Exit Stairs..... *one*
- Number of Other Exits *five*
- Other.....*fire escape from attic of 1903 building*

b. Fire Rating:

- Construction Type: I__II__ III__IV__X VX VI
- Building Height: 56 ft., 3 stories

c. Extinguishing Systems:

- Portable.....
- Standpipe *next to south stairwells*
- Hose Cabinets..... *removed*
- Hoses *no*
- Sprinklers.....
- Gas Suppression
- Other

d. Detection & Alarm Systems:

- Pull Stations.....
- Bells.....
- Horns
- Strobes *not to present code*
- Annunciator Panel *036M*
- Smoke Detectors.....
- Halls
- Elevators.....
- Rooms
- Equip Rooms.....
- Ducts

e. Lighting Systems:

- Exit Signs []BATTERY []JEMC
- Exit Lighting []BATTERY []JEMC

- Emergency Lighting BATTERY EMC
- Emergency Generator.....
- f. Lightning Protection**

COMMENTS:

Emergency lighting and exit lighting needs to be installed throughout the building.

BUILDING PERIMETER EVALUATION

FAC # 016

DATE 08/31/99

INSPECTOR: JAO

SYSTEM DESCRIPTION

Sat Att

a. Building Access:

- | | | |
|-------------------------------------|-------------------------------------|--------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Driveway |
| <input type="checkbox"/> | <input type="checkbox"/> | Loading Dock |
| | | Sidewalks..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Frontsouth |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Side..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Rear |
| | | Steps |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Front..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Side..... |
| <input type="checkbox"/> | <input type="checkbox"/> | Rear |
| <input type="checkbox"/> | <input type="checkbox"/> | Ramp |

b. Lawn and Landscaping:

- | | | |
|-------------------------------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Lawn |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Shrubs..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Trees |
| <input type="checkbox"/> | <input type="checkbox"/> | Undesirable Insect |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Bedding Material |
| <input type="checkbox"/> | <input type="checkbox"/> | Watering System..... |

c. General Site Information:

- | | | |
|-------------------------------------|--------------------------|-----------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Signage |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Address Identification..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Security Lights..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Street Lights..... |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Drainage |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Storm Drains..... |

COMMENTS:

Some sidewalks on the east side have minor cracks.

The front main entrance limestone steps and surface has weathered and spalled and needs to be repaired and caulked.

Trees and shrubs around the building need to be trimmed and mulched.

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 State of Ohio Division of Factory and Building Inspection at the time of construction approved the buildings inspected. 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
DDAHU	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)
MCC.....	MOTOR CONTROL CENTER
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