

FACILITY AUDIT REPORT
RESEARCH CENTER #73
1314 KINNEAR ROAD BUILDING #126

APRIL 1997

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**EXECUTIVE SUMMARY AND PROJECT LIST FOR
RESEARCH CENTER AND 1314 KINNEAR ROAD**

The two buildings were built in 1947 for Ohlen Bishop Manufacturing Company in 1947. Building #126 is now known as the Research Center and building #73 now identified as the 1314 Kinneare Road Building. Building #73 was a manufacturing facility and building #126 was the office facility of this complex. There was a small addition on the north side of building #73 which was labeled as a paint house and another small building further north, known as the power house. The power house now contains five boilers that produce steam to heat the buildings in the research complex. The University purchased these buildings in 1954 and converted the buildings to a research facility. There are numerous projects suggested for these buildings to make them viable for continued occupancy. The most urgent of these projects is the replacement of the steam distribution system.

PROPOSED MAINTENANCE PROJECTS

A. Corrective Maintenance Projects: Control No.

Renovate restrooms in buildings #73 and #126.	\$ 73,000	1658
Repair cracks in brick veneer and concrete blocks.	75,000	
Replace steam distribution system.	360,000	1665
SUB-TOTAL	\$ 508,000	

B. Building Improvement/Addition Projects:

Carpet rooms 103 and 106 in building #126	\$ 17,000	3138
Install elevator in building #126	150,000	849
SUB-TOTAL	\$ 167,000	

C. Building Component Replacements expected within the next 5 to 10 years:

Replace ceilings in building #126	\$ 55,000	1667
Replace windows in building #73	173,000	1722
Replace windows in building #126	66,000	1723
Replace the chillers, pumps and water lines	400,000	
Replace domestic water lines in both buildings	449,000	
SUB-TOTAL	\$1,143,000	

TOTAL COST FOR ALL PROJECTS **\$1,818,000**

GENERAL BUILDING INFORMATION

RESEARCH CENTER AND 1314 KINNEAR RD., #73 & #126

BUILDING ADDRESS: 1314 KINNEAR ROAD

GROSS SQ. FT.: 136,312

NET ASSIGNABLE SQ. FT.: 90,883

MECHANICAL/CUSTODIAL AREA SQ. FT.: 3,269

YEAR OF CONSTRUCTION: 1947

YEARS OF ADDITIONS: NONE

YEAR OF LAST RENOVATION: 1959

NUMBER OF STORIES/BASEMENT: 1 and 2

AIR CONDITIONING (Percentage): 65%

CURRENT USE: E.H.S. OFFICES, VARIOUS RESEARCH PROJECTS

TYPE OF CONSTRUCTION: STEEL FRAME WITH BRICK VENEER AND CONCRETE BLOCKS

ESTIMATED REPLACEMENT COST (ERC): \$18,098,000*

WHEELCHAIR ACCESSIBILITY: ACCESS THROUGH EAST ENTRANCE OF BUILDING #73 WITH NO ACCESS TO BUILDING #126.

OVERALL BUILDING CONDITION: SATISFACTORY **

NUMBER OF EXIT STAIRWAYS: ONE

NUMBER OF EXITS: 12

AREA SHOP RESPONSIBILITY: WEST

* Replacement Cost assigned June 1996 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

RESEARCH CENTER AND 1314 KINNEAR ROAD, #73 AND #126

HEATING:

Source BOILERS LOCATED IN THE POWER HOUSE

Type Heating System STEAM

Main Steam Feed (Line size, valve location) 5@ FROM BOILER HOUSE

Building Htg. Water (line size, valve location) N/A

VENTILATION SYSTEM:

OUTSIDE AIR TO THE AIR HANDLING UNITS, EXHAUST FANS AND THRU-WALL UNITS

COOLING:

BLDG % 65 Chillers 2 RECIPROCATING

Window Units 1 Thru-the-wall 9 Direct exp. units 29

HVAC CONTROL SYSTEM: PNEUMATIC AND ELECTRIC

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

1. BUCKEYE	750	13,200/480	#126	1513
2. BUCKEYE	750	13,200/480	# 73	1100A
3. BUCKEYE	225	13,200/208/120	# 73	1100A

PLUMBING SERVICES:

Water (size, valve location) 6@ , ROOM 1541

Gas (size, valve location) 3@ GAS HOUSE WEST OF BUILDING

Domestic Hot Water (size, valve location) STEAM CONVERTER IN BUILDING #126

Compressed Air (size, location) 1@ ROOM 1819A AND 1@ ROOM 1529A

SEWERS: Storm 24 @ 6@ Sanitary 2 @ 6@ Combined Storm/San. NONE

METERS:

Gas (size, location) 3@ AT NORTHWEST CORNER OF BUILDING #73

Water (size, location) 6@ , ROOM 1541

Electric (size, location) 1513 AND 1100A

ALARM SYSTEMS:

Fire Alarm, Main Panel Room 104, Remote Panel Location Room

Fire Pump @ NONE Pump Location, Room

Sprinklers, Valve Location Room N/A, 100%, Partial, Limited

Horns/Strobes, Bells in Halls, Rooms

Other Alarms SMOKE DETECTORS IN DUCTS

ELEVATORS:

Number NONE Type (passenger, freight) N/A

Manufacturer N/A Size N/A

EMERGENCY GENERATOR: Size NONE Location N/A

ASBESTOS SURVEY (1986): FOUND IN PIPE INSULATION.

NARRATIVE OF THE RESEARCH CENTER AND 1314 KINNEAR ROAD

HISTORY

The Research Complex was built in 1947 as a manufacturing facility that produced saw blades. The original owner of the buildings was the Ohlen Bishop Manufacturing Company. In 1954, The Ohio State University purchased the property to house the Research Foundation in what is now known as building #126 and to use building #73 to accommodate various research activities. The buildings were officially named *The Ohio State University Research Center* by the Board of Trustees in April 1955. The buildings have had many different occupants over the years. The front building (#126) was occupied by the Research Foundation until 1991 at which time this department moved to its Kenny Road location. The back building (#73) has been occupied by many research related entities. Currently the front office building is occupied by Physical Facilities personnel and by the Labor Research Department. The one story building (#73) is occupied by nine different research projects, although much of the building remains vacant.

A review of the work orders indicated that there are more than a normal number of emergency calls and but above normal maintenance calls to the buildings. The maintenance calls relate mostly to the steam condensate lines.

There are eleven major projects identified for this building. There are also some minor projects recommended in this report that will enhance the building's appearance.

In an interview with the building coordinator, it was learned that the occupants are not satisfied with the overall condition and performance of the building. There are constant leaks in the plumbing and heating lines that cause disruptions and possible damage to expensive lab equipment. During this audit several leaks were observed in the steam condensate lines.

Occupancy of the building reported by The Office of University Resource Planning & Institutional Analysis in the C-1 Building Space Assignment Report, dated June 1996, lists a net assignable area of 12,482 SF for building #126. Building use by room category is 90% offices and 10% mechanical/custodial. For building #73, the C-1 report lists a net assignable area of 75,436 SF. Building use by room category is 53% laboratories, 43% office and 4% mechanical/custodial.

PRIMARY SYSTEMS

The Research Buildings are built on individual interior footings and piers, with cast-in-place concrete footings and piers at the perimeter of the buildings. The buildings have steel beams that support steel joists for the roof in building #73 and concrete floors and roof in building #126. There are some settlement cracks and there appears to be some bowing in the south wall of building #73. These items will need to be observed over time to ascertain if there are basic structural problems with the buildings.

The exterior consists of brick veneer with limestone trim at the windows of building #126. The north wall of building #73 consists of concrete blocks. The brick veneer has many cracks that need to be sealed to prevent further damage to the exterior of both buildings. The concrete wall on the north side of building #73 shows signs of water damage from the ground to the fourth level blocks. The

mortar needs to be repaired and the wall repainted.

The built-up roofs on both buildings were replaced in 1995 with a Carlisle single ply EPDM roof and appears to be in good condition. The roof also has four sloping walls that consist of reinforced translucent glass that served as skylights for building #73, when it was a manufacturing facility. The skylights are now visible only from the corridors of building #73. There are some gutter leaks on the north side of building #73. An exterior down spout on the south side of building #73 needs to be reattached to the scupper in the parapet wall. The seams of the parapet cap need to be recaulked.

The buildings have their original steel windows. The steel casements have rusted and deteriorated to the point that they need to be replaced. The single-glazed, hopper and awning style windows operate poorly and some do not close entirely. The windows in building #73 extend above the ceilings in many of the offices. These windows should be replaced by smaller, double-pane windows that are more energy efficient. The east entrance door and frame to building #126 is rusted out and needs to be replaced. The remainder of the doors are serviceable for now.

SECONDARY SYSTEMS

The interior partitions of building #126 are composed of plastered walls and painted structural tile walls. The plaster has deteriorated in several locations but most notably in the south stairwell leading to the basement. These walls need to be repaired and repainted. The ceilings in this building consist of the original tiles applied to wood furring strips. These tiles should be replaced in kind. The floor covering is primarily vinyl tiles with some terrazzo floors at the south entrance which extends partway down the corridors and up the steps to the second floor. The tiles in room 103 and 106 are in poor condition and should be replaced with carpeting.

The partitions in building #73 consist of a variety of materials but are mainly wood studs with drywall. There are some metal partitions in the southeast area of the building as well as some asbestos masonite walls. The wall finishes vary with age of last renovation or repainting. None of the finishes are in urgent need of repair. The insulation around the exposed duct work in the corridors need to be repaired. The ceilings are mainly 2=x4= suspended ceiling tiles. There are some stained tiles that should be replaced. The ceilings in the corridors are exposed and receive some light from the corrugated skylight panels. The floor coverings are mainly vinyl tiles with carpeting in various offices. The corridor floors are sealed concrete. Again, the conditions of the floors vary with age but are mainly the responsibility of the occupants.

The metal fire doors in both buildings are in good condition. The only problem noted was in building #73, where one door did not close completely. This door was in the corridor next to room 903.

SERVICE SYSTEMS

The buildings have no elevator and a project has been identified, but not funded, to install an elevator in building #126.

Several of the major service systems need to be replaced. The domestic water lines are also at an age where they need to be replaced. The restroom fixtures

are at an age where they need to be replaced. The restroom also need to upgraded to accommodate wheelchair access. There is an unfunded project to renovate the restrooms. The domestic hot water is supplied by steam converter located in building #126

The steam distribution system is in constant need of repair from leaks that occur throughout the system and the system should be replaced.

The buildings currently have 29 DX units, 9 thru-the-wall units and two chillers to provide the cooling requirements to the different areas. One of the chillers is located in building #126 and serves the first floor and the basement area. The second floor is cooled by the thru-the-wall units. The other chiller and the various DX units serve the various departments in building #73. Because of the different requirements by the various departments housed in these facilities, the varied systems do meet the current occupants= requirements. There is a project in the bid stage to replace the chiller that provides chilled water for air handling units in building #73 and building #126. This project is the first stage of what is intended to be a centralized chilled water system located in what is known as the Power House. This building currently houses the five boilers that produce the steam for the heating systems for all the buildings located in the complex.

The second floor of building #126 is heated by thru-the-wall units. The first floor and the basement are heated by finned tube radiators that are located at the perimeter. The lines to these radiators show signs of deterioration by the leaks that occur on a regular basis especially on the west rooms on the first floor. These lines should be replaced with the steam distribution replacement project. Building #73 is heated with a number of different HVAC systems that are tailored to the specific needs of the various research organizations in the building. The building is heated at the perimeter by a finned tube system. The finned tube system is augmented with heat provided by reheat coils in the air handling units. There were few complaints about the heating or cooling in the buildings. There were several complaints about the excessive heat in the ladies restroom 127T.

The Research Center and the 1314 Kinnear Road building have no digital control system and all controls are pneumatic and electric.

ELECTRIC

The electrical power to the buildings is provided by two 750 KVA transformers and one 225 KVA transformer. These transformers are connected to the Buckeye Substation. The switch gear is located off room 1100A and room 1513 in building #73. There are 300 amp panels that supply both buildings. There were no signs of or complaints about inadequate electric service to the buildings.

The building has mainly 40 watt fluorescent light fixtures with limited 32 watt fixtures in newly renovated areas. Incandescent lighting is used in limited areas. There are an adequate number of convenience and lab outlets throughout the building.

SAFETY STANDARDS

Emergency lights and lighted exit signs are provided by battery packs in the building #73. There are no emergency lights or lighted exit signs in building #126. There is no emergency generator. The buildings are equipped with manual

fire alarm systems and portable fire extinguishers. Building #073 also has four hose cabinets but they are equipped with 1 1/2" lines which are too small for fire department connections. If these cabinets are to be maintained then they need to be fitted with 2" lines. The buildings are equipped with fire alarms. There are no sprinklers in the buildings.

An automatic door opener has been installed at the east entrance of building #126, which gives access to the back offices of building #126 and to building #73. There is no elevator to give access to the basement or the other two floors of building #126.

ASBESTOS

The Ohio Board of Regents Facilities Asbestos Inspection and Risk Assessment Program's report: Inventory of Friable Asbestos Containing Material in Buildings of the Ohio State University (Main and Branch Campuses) and the Recommendations for Corrective Action by PEI Associates, Sept. 1986 identifies asbestos containing materials in pipe insulation and in heat exchanger insulation. During minor renovation in 1991, some floor tiles containing asbestos were removed from areas 200, 601 and 2001.

BUILDING PERIMETER

There is a driveway on the east side of the building that has some cracks in the blacktop which should be repaired. The asphalt sidewalk on the south side building #73 has been torn up in several places because of recent storm drain work. These sections need to be replaced. Also, the lawn in this area needs to be restored. The sidewalk on the west side of building #073 should be raised as it is flooded and rendered useless during rain storms. There is a bare spot in the lawn to west of building #126 that should be repaired.

Entrances to the building are well lighted. Area and street lighting appear to be distributed properly. There are building signs at Kinnear Road and at building entrances.

Maintenance Projects (Less than \$5000)

1. Repair plaster and repaint basement stairwell in #126.
Work order #01-5064-275120-69
2. Repair insulation on exposed ducts in corridors of #73.
Work order #01-5064-275123-69
3. Rehang fire door in corridor of #73
Work order #01-5064-275126-72
4. Rehang door to room 127T in #126.
Work order #01-5064-275132-72
5. Repaint canopy at east entrance to #126.
Work order #01-5064-275133-69
6. Replace door and repaint trim at east entrance to #126.
Work order #01-5061-002128-20
7. Repair gutter leaks on north side of #73.
Work order #01-5064-275134-73
8. Recaulk seams in parapet cap.
Work order #01-5064-275135-73
9. Repair cracks in driveway.
Work order #01-5063-024852-51
10. Repair sidewalk on east side of #126.
Work order #01-5063-024853-51
11. Repair lawn on south side of #126.
Work order #01-5063-024854-51

BUILDING EVALUATION SUMMARY

I. BUILDING INFORMATION

FAC # 73 & 126 FACILITY NAME: RESEARCH BUILDING & 1314 KINNEAR RD
 DATE: 4/97 INSPECTOR: AJR
 YEAR CONSTRUCTED: 1947
 GROSS SQ FT: 136,312 NET SQ FT: 90,883
 REPLACEMENT COST \$ 18,098,000 *

II. COMPONENT RATING

COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST **	BUILDING COMPONENT REPLACEMENT COST	BUILDING COMPONENT CONDITION VALUE MULTIPLIER	BUILDING COMPONENT CURRENT VALUE
Foundation	5.95	1,077,037	0.86	926,335
Columns and Beams	13.22	2,392,156	0.86	2,057,438
Exterior Walls	9.52	1,723,259	0.74	1,273,031
Ext. Windows & Doors	4.66	842,734	0.45	376,442
Roofing & Flashing	3.13	566,862	0.96	542,982
Partitions & Doors	9.96	1,802,620	0.61	1,105,666
Wall Finishes	3.13	566,862	0.58	330,693
Floor Finishes	5.74	1,039,246	0.51	533,508
Ceilings & Finishes	8.21	1,485,177	0.50	742,626
Conveying	0.00	0	0.00	0
Plumbing	2.48	449,710	0.48	215,873
Heating	10.02	1,813,957	0.48	870,747
Cooling and Vent.	7.73	1,398,259	0.47	652,553
Elect. Serv. & Dist.	1.98	359,012	0.68	244,145
Lighting and Power	12.28	2,222,097	0.68	1,511,128
Safety Standards	1.98	359,012	0.68	244,145
TOTALS	100.00	18,098,000	0.64	11,627,311

II. BUILDING RATING SUMMARY

Overall Building Rating = 64%

* Replacement Cost assigned June 1996 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 # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
a. Footings:			
Interior/Exterior footings <u>CONCRETE SPREAD FOOTERS</u>	[]	[X]	[]
Interior Footings/Bearing Walls _____	[X]	[]	[]
Perimeter Footings <u>CONCRETE</u>	[]	[X]	[]
Grade Beams _____	[x]	[]	[]
Piles _____	[X]	[]	[]
Caisson _____	[X]	[]	[]
b. Foundation Wall Materials:			
Concrete Cast-in-place _____	[X]	[]	[]
Concrete Block _____	[]	[X]	[]
Stone _____	[X]	[]	[]
Brick _____	[X]	[]	[]
Other _____	[X]	[]	[]
c. Waterproofing and Underdrain:			
Coating _____	[X]	[]	[]
Membrane _____	[X]	[]	[]
Board _____	[X]	[]	[]
Drain Tile <u>4@</u>	[]	[X]	[]
d. Ground/Basement Floor Slab:			
Plain _____	[X]	[]	[]
Reinforced _____	[]	[X]	[]
e. Special Substructures: _____	[X]	[]	[]

B. COMMENTS:

NO PROBLEMS WERE OBSERVED WITH THE FOUNDATION.

C. COMPONENT RATING: (\$ 1,077,000) (86 %) = \$ 926,300
 Possible Condition Component
 Value Value Multiplier Value

COLUMNS AND BEAMS

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
a. Columns and Beams:			
Reinforced Concrete _____	[X]	[]	[]
Precast Concrete _____	[X]	[]	[]
Steel <u>COLUMNS AND BEAMS</u> _____	[]	[X]	[]
Fireproofing <u>IN AREA 2000 OF #73</u> _____	[]	[X]	[]
Wood _____	[X]	[]	[]
Other _____	[X]	[]	[]
b. Loadbearing Wall Materials:			
Concrete Cast-in-place _____	[X]	[]	[]
Concrete Block _____	[X]	[]	[]
Stone _____	[X]	[]	[]
Brick _____	[X]	[]	[]
Other _____	[X]	[]	[]
c. Floor Joists:			
Concrete _____	[X]	[]	[]
Steel Trusses _____	[]	[X]	[]
Wood _____	[X]	[]	[]
Other _____	[X]	[]	[]
d. Floor Decks:			
Concrete Slab _____	[]	[X]	[]
Precast Slab _____	[X]	[]	[]
Metal Deck w/concrete fill _____	[X]	[]	[]
Wood _____	[X]	[]	[]
e. Roof Joists:			
Concrete _____	[X]	[]	[]
Steel Trusses _____	[]	[X]	[]
Wood _____	[X]	[]	[]
g. Flat Roof System:			
Concrete Deck _____	[X]	[]	[]
Precast Slab _____	[X]	[]	[]
Metal Deck w/concrete fill _____	[X]	[]	[]
Metal Deck _____	[]	[X]	[]
Wood Deck _____	[X]	[]	[]
Insulation <u>2@ CEL-O-THERM</u> _____	[]	[X]	[]

B. COMMENTS:

THERE WERE NO PROBLEMS NOTED WITH THE COLUMNS OR BEAMS.

C. COMPONENT RATING: (\$ 2,392,200) (86 %) = \$ 2,057,400
 Possible Condition Component
 Value Value Multiplier Value

EXTERIOR WALLS

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Exterior Walls:

	N/A	Sat	Att
Concrete <input type="checkbox"/> CIP <input type="checkbox"/> PRECAST	[X]	[]	[]
Concrete Block <u>NORTH WALL OF #73</u>	[]	[]	[X]
Brick <input type="checkbox"/> Masonry <input checked="" type="checkbox"/> Veneer	[]	[]	[X]
Slab Veneer	[X]	[]	[]
Window/Curtainwall	[X]	[]	[]
Metal Siding	[X]	[]	[]
Other <u>SOME TRANSITE ASBESTOS</u>	[]	[X]	[]

b. Wall Lintels Over Openings:

Concrete <input type="checkbox"/> PRECAST <input type="checkbox"/> CIP	[X]	[]	[]
Limestone	[X]	[]	[]
Brick Masonry	[X]	[]	[]
Steel	[]	[X]	[]
Wood	[X]	[]	[]
Other	[X]	[]	[]

c. Wall Trim:

Limestone <u>ON BUILDING #126</u>	[]	[X]	[]
Brick	[X]	[]	[]
Marble	[X]	[]	[]
Wood	[X]	[]	[]
Other	[X]	[]	[]

d. Finishes:

Plain	[]	[X]	[]
Stucco	[X]	[]	[]
Paint <u>ON NORTH WALL OF BUILDING #73</u>	[]	[]	[X]
Other	[X]	[]	[]

e. Exterior Wall Backing System:

Concrete	[X]	[]	[]
Concrete Block <u>BUILDING #126</u>	[]	[X]	[]
Brick Masonry	[X]	[]	[]
Steel Girts	[X]	[]	[]
Metal Studs	[X]	[]	[]
Wood Studs	[X]	[]	[]

B. COMMENTS:

THERE ARE CRACKS IN THE BRICK VENEER THAT NEED TO BE SEALED. THE NORTH WALL ON BUILDING #73 NEEDS TO BE POINTED AND REPAINTED. SOUTH WALL OF BUILDING #73 IS BOWED OUT ABOUT 2". THIS WILL NEED TO BE CHECKED FROM TIME TO TIME FOR FURTHER MOVEMENT.

C. COMPONENT RATING: (\$ 1,723,300) (74 %) = \$ 1,273,000
 Possible Condition Component
 Value Value Multiplier Value

ROOFING

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Roof Covering/Square Feet:

		N/A	Sat	Att
Built-up <input type="checkbox"/> Asphalt <input type="checkbox"/> Coal Tar	SF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Built-up w/gravel <input type="checkbox"/> Asphalt <input checked="" type="checkbox"/> Coal Tar	140 SF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Asphalt Roll	SF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asphalt Shingle	SF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copper	SF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	7,032 SF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other EPDM GLUED	94,476 SF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

b. Flashing/Lineal Feet:

Materials: <input type="checkbox"/> Cu <input type="checkbox"/> Galv <input checked="" type="checkbox"/> Al <input type="checkbox"/> EPDM <input type="checkbox"/> Asph <input type="checkbox"/> PVC		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Base & Cap/Counter	3,372/1,590 LF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Reglet/Through Wall	1,590 LF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Valley/Hip/Ridge	LF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pitch Pockets		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c. Gravel Stop & Edge Strips/Lineal Feet:

Type <input type="checkbox"/> SS <input type="checkbox"/> Galv <input checked="" type="checkbox"/> Al <input type="checkbox"/> Cu <input type="checkbox"/> PVC	911 LF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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d. Drainage:

Gutters w/ Exterior Downspouts	575 LF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scuppers w/ Exterior Downspouts		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Drains w/ Interior Storm Drains		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Overflow <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

e. Parapets/Lineal Feet:

Concrete	LF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brick/Masonry	536 LF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other	LF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

f. Parapet Caps:

Metal <input type="checkbox"/> SS <input type="checkbox"/> Galv <input type="checkbox"/> Al <input type="checkbox"/> Cu <input type="checkbox"/> PVC	LF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limestone	536 LF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Precast	LF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

h. Roof accessories:

Equipment Curbs	84	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equipment Frames	13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Expansion Joints	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lightning Protection		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B. COMMENTS

A NEW ROOF WAS INSTALLED IN 1995 AND IS IN GOOD CONDITION. THE GUTTER ON THE NORTH SIDE OF BUILDING #73 HAS A LEAK AND THE DOWNSPOUT ON THE SOUTH WALL OF #73 NEEDS TO BE REATTACHED TO THE SCUPPER.

C. COMPONENT RATING: (\$ 566,900) (96 %) = \$ 543,000
 Possible Condition Component
 Value Value Multiplier Value

WALL FINISHES

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Wall Finishes:

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Paint _____	[]	[]	[X]
Vinyl Wall Coverings _____	[X]	[]	[]
Paneling Prefinished <u>LIMITED IN BUILDING #126</u> _____	[]	[X]	[]
Cork _____	[X]	[]	[]
Wallpaper _____	[X]	[]	[]
Ceramic Tile <u>IN RESTROOMS</u> _____	[]	[X]	[]
Marble _____	[X]	[]	[]
Stone _____	[X]	[]	[]
Trim & Wainscot _____	[]	[X]	[]
Glass _____	[X]	[]	[]
Other _____	[X]	[]	[]

B. COMMENTS

THE WALL FINISHES IN BUILDING #126 NEED TO BE REPAIRED AND REPAINTED.

C. COMPONENT RATING: (\$ 566,900) (58 %) = \$ 330,700
 Possible Condition Component
 Value Value Multiplier Value

FLOOR FINISHES

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Carpet:			
Rolled <u>LIMITED IN BUILDING #73</u> 4,520 SF	[]	[X]	[]
Tile _____	[X]	[]	[]
b. Concrete Topping:			
Clear Sealant <u>THROUGHOUT BUILDING #73</u> 29,400 SF	[]	[X]	[]
Antislip _____	[X]	[]	[]
Epoxy _____	[X]	[]	[]
d. Resilient			
Vinyl Composition Tile <u>PREDOMINANTLY IN BOTH BUILDINGS</u>	[]	[]	[X]
Vinyl/Plastic Tile _____	[X]	[]	[]
Asphalt Tile _____	[X]	[]	[]
Linoleum Tile _____	[X]	[]	[]
Vinyl Roll _____	[X]	[]	[]
Rubber _____	[X]	[]	[]
e. Ceramic Tile [] Mosaic [] Quarry _____	[X]	[]	[]
f. Masonry [] Marble [] Granite [] Slate [] Brick _____	[X]	[]	[]
g. Terrazzo [] Marble [X] Granite <u>FRONT ENTRANCE OF #126</u>	[]	[X]	[]
h. Wood [] Tiles [] T&G Hardwood [] Planking _____	[X]	[]	[]
h. Pedestal [] Vinyl Tiles [] Grills [] Supply Air [] Vent. [X] _____	[X]	[]	[]
I. Base Molding:			
Vinyl _____	[]	[X]	[]
Wood <u>IN #126</u>	[]	[X]	[]
Terrazzo <u>IN #126</u>	[]	[X]	[]
Ceramic Tile _____	[X]	[]	[]
Masonry _____	[X]	[]	[]
Other <u>RUBBER</u>	[]	[X]	[]

B. COMMENTS

THE TILE FLOORS IN BUILDING ROOMS 103 AND 106 OF BUILDING #126 SHOULD BE REPLACED WITH CARPETING.

C. COMPONENT RATING: (\$ 1,039,200) (51 %) = \$ 533,500
 Possible Condition Component
 Value Value Multiplier Value

CEILINGS AND FINISHES

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. System Type:

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Exposed <u>APPROXIMATELY 1/3RD OF BUILDING #73</u>	[]	[X]	[]
Applied to Structure <u>IN BUILDING 126</u>	[]	[]	[X]
Suspended Stud _____	[X]	[]	[]
Suspended Steel Grid _____	[X]	[]	[]
Suspended Aluminum Grid <u>IN BUILDING #73 AND #126</u>	[]	[X]	[]
2x4 Lay-in _____	[]	[X]	[]
2x2 Lay-in _____	[X]	[]	[]
Concealed Spline _____	[X]	[]	[]
Other _____	[X]	[]	[]

b. Materials:

Drywall _____	[X]	[]	[]
Plaster _____	[X]	[]	[]
Mineral Fiber Board <u>STAINED TILES</u>	[]	[]	[X]
Fiberglas Board _____	[X]	[]	[]
Cementous Fiber Board _____	[X]	[]	[]
Metal Tile _____	[X]	[]	[]
Other _____	[X]	[]	[]

c. Finishes:

Paint _____	[X]	[]	[]
Prefinished <u>[X]Paint</u> []vinyl []Fabric	[]	[X]	[]
Other _____	[X]	[]	[]

d. Openings & Inserts:

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

B. COMMENTS:

THE CEILING TILES IN BUILDING #126 ARE IN POOR CONDITION AND NEED TO BE REPLACED.

C. COMPONENT RATING: (\$ 1,485,200) (50 %) = \$ 742,600
 Possible Condition Component
 Value Multiplier Value

CONVEYING

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Elevators:

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

b. Elevators:

Manufacturer _____			
Number _____	[X]	[]	[]
Type _____	[X]	[]	[]
Speed _____	[X]	[]	[]
Capacity (lbs) _____	[X]	[]	[]
Dimensions _____	[X]	[]	[]
Door Operation:			
Center _____	[X]	[]	[]
To Side _____	[X]	[]	[]

c. Lifts and Hoists:

Number _____	[X]	[]	[]
Type _____	[X]	[]	[]

d. Conveyors:

Number _____	[X]	[]	[]
Type _____	[X]	[]	[]

B. COMMENTS:

THERE IS NO ELEVATOR IN THE TWO STORY BUILDING #126. THERE IS AN UNFUNDED PROJECT TO INSTALL AN ELEVATOR IN THIS BUILDING.

C. COMPONENT RATING: (\$ 00) (00 %) = \$ 00
 Possible Condition Component
 Value Value Multiplier Value

MECHANICAL/PLUMBING DOMESTIC

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Services Available:

	N/A	Sat	Att
Cold Water <u>6@ ON NORTH AND 2 1/2@ ON WEST SIDE</u>	[]	[X]	[]
Backflow Valve _____	[]	[]	[X]
Hot Water _____	[]	[X]	[]
Natural Gas <u>3@ WEST SIDE</u>	[]	[X]	[]
Other <u>COMPRESSED AIR</u>	[]	[X]	[]

b. Piping & Fittings:

Cast Iron _____	[]	[X]	[]
Copper Pipe _____	[]	[X]	[]
Copper Tubing _____	[X]	[]	[]
Steel _____	[]	[X]	[]
Galv. Steel _____	[]	[]	[X]
Other _____	[X]	[]	[]

c. Water Heaters:

Gas _____	[X]	[]	[]
Steam Converter/Tank <u>IN #126</u>	[]	[X]	[]
Electric <u>FOR DOMESTIC HOT WATER</u>	[]	[X]	[]
Central Hot Water _____	[X]	[]	[]

d. Drainage:

Storm Drains <u>24 @ 6@</u>	[]	[X]	[]
Sanitary Drainage <u>2 @ 6@</u>	[]	[X]	[]
Floor Drains _____	[]	[X]	[]

e. Fixtures: Number

Water Closets <u>26</u>	[]	[]	[X]
Urinals <u>9</u>	[]	[]	[X]
Lavatory Sinks <u>19</u>	[]	[]	[X]
Kitchen Sinks <u>2</u>	[]	[]	[X]
Service Sinks <u>2</u>	[]	[]	[X]
Showers <u>EMERGENCY SHOWER AND EYE WASH</u>	[]	[]	[X]
Electric Water Coolers <u>5</u>	[]	[X]	[]

f. Sprinkler Systems:

<u>[]Wet []Dry</u>	[X]	[]	[]
Halon _____	[X]	[]	[]
Other _____	[X]	[]	[]

g. Standpipe Systems:

<u>[X]Wet []Dry</u>	[]	[X]	[]
Fire Hose Valves <u>[]2.5@ [X]1.25@</u>	[]	[X]	[]

d. Underground Tanks

Fuel Oil Tank _____	[X]	[]	[]
Other _____	[X]	[]	[]

B. COMMENTS:

THE PLUMBING SYSTEM IS NEAR THE END OF ITS LIFE CYCLE AND SHOULD BE REPLACED. THERE IS AN UNFUNDED PROJECT TO RENOVATE THE RESTROOMS IN BOTH BUILDINGS.

C. COMPONENT RATING: (\$ 449,700) (48 %) = \$ 215,900
 Possible Condition Component
 Value Value Multiplier Value

MECHANICAL/PLUMBING LABS

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Services Available:

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Cold Water _____	[]	[X]	[]
Backflow Valve _____	[]	[]	[X]
Hot Water _____	[]	[X]	[]
Acid Waste _____	[X]	[]	[]
Oxygen _____	[X]	[]	[]
Natural Gas _____	[]	[X]	[]
Vacuum _____	[X]	[]	[]
Distilled Water _____	[X]	[]	[]
Compressed Air <u>2@</u> _____	[]	[X]	[]
Steam _____	[]	[X]	[]
Other _____	[X]	[]	[]

b. Piping & Fittings:

Cast Iron _____	[X]	[]	[]
Duriron Pipe _____	[X]	[]	[]
Copper Pipe _____	[]	[X]	[]
Plastic/PVC/CPVC _____	[X]	[]	[]
Steel _____	[X]	[]	[]
Galv. Steel _____	[]	[X]	[]
Glass _____	[X]	[]	[]
Other _____	[X]	[]	[]

c. Lab Water Heaters:

Gas _____	[X]	[]	[]
Steam Converter/Tank _____	[]	[X]	[]
Steam Instantaneous _____	[X]	[]	[]
Central Hot Water _____	[X]	[]	[]

d. Underground Tanks

Neutralization Tank _____	[X]	[]	[]
Other _____	[X]	[]	[]

e. Lab Fixtures:

Lab Sinks _____	[]	[X]	[]
Emergency Showers _____	[]	[X]	[]
Eye Wash _____	[]	[X]	[]
Other _____	[X]	[]	[]

B. COMMENTS:

THERE ARE VARIOUS LABS IN BUILDING #73.

MECHANICAL/HEATING

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
a. Heat Source:			
Central Plant Steam _____	[X]	[]	[]
Central Plant Hot Water _____	[X]	[]	[]
Boilers: Type <u>CLEAVER-BROOKS, FIVE UNITS, GAS FIRED</u>	[]	[X]	[]
Size <u>185,000 BTU/HR/EA</u>	[]	[X]	[]
Furnace/s: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]
Heat Pump/s: Type _____	[X]	[]	[]
Size _____	[X]	[]	[]
b. Building Heating System Type:			
Steam <u>6@ HIGH PRESSURE</u>	[]	[]	[X]
Hot Water <u>2 1/2@ HWS/R AND 2@ HWS/R IN #126</u>	[]	[]	[X]
Warm Air _____	[]	[X]	[]
c. Air Handling Units:			
Multizone [X]Preheat []Heating []Reheat _____	[]	[X]	[]
Dual Duct []Preheat []Heating []Reheat _____	[X]	[]	[]
Make-up Air [X]Preheat [X]Heating []Reheat _____	[]	[X]	[]
Variable Volume Air []Preheat []Heating []Reheat _____	[X]	[]	[]
Constant Volume Air [X]Preheat [X]Heating []Reheat _____	[]	[X]	[]
Other _____	[X]	[]	[]
d. Air Filters:			
35% Prefilter [X]Multi []DDAHU [X]MUAHU []VAVAHU [X]CAV _____	[]	[X]	[]
85% Bagfilter []Multi []DDAHU []MUAHU []VAVAHU [X]CAV _____	[]	[X]	[]
Postfilter []Multi []DDAHU []MUAHU []VAVAHU []CAV _____	[X]	[]	[]
Other _____	[X]	[]	[]
e. Space Heating Equipment:			
Radiators <u>FINNED TUBE</u>	[]	[X]	[]
Convectors _____	[]	[X]	[]
Unit Heaters _____	[]	[X]	[]
Reheat Coils _____	[X]	[]	[]
VAV Boxes _____	[X]	[]	[]
CAV Boxes _____	[X]	[]	[]
DD Boxes _____	[X]	[]	[]
Fan Coil <u>4-PIPE UNITS</u>	[]	[X]	[]
Other <u>STEAM HEAT COILS IN THRU-THE-WALL UNITS</u>	[]	[X]	[]
f. Control Type:			
[X]Pneu [X] Electric []DDC [] DDC Upgrade _____	[]	[X]	[]

B. COMMENTS:

BUILDING #73 IS HEATED BY RADIATORS, CONVECTORS AND HEATING COILS IN AIR HANDLING UNITS. BUILDING #126 IS HEATED BY 4-PIPE FAN COIL UNITS. THE STEAM DISTRIBUTION SYSTEM IS PAST ITS LIFE EXPECTANCY AND SHOULD BE REPLACED.

C. COMPONENT RATING: (\$ 1,814,000) (48 %) = \$ 870,700
 Possible Condition Component
 Value Value Multiplier Value

COOLING & VENTILATING

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. System/Capacity:			
Water <u>287 TONS FROM 2 UNITS</u>	[]	[X]	[]
DX <u>157 TONS FROM 29 UNITS</u>	[]	[X]	[]
b. Chillers Capacity/Year/Refrigerant/Manufacturer:			
Centrifugal <u>TONS/ 19 / R- /</u>	[X]	[]	[]
Reciprocating <u>287 TONS/ 1959/ R-12 / CARRIER & TRANE</u>	[]	[]	[X]
Absorption <u>TONS/ 19 / R- /</u>	[X]	[]	[]
Screw <u>TONS/ 19 / R- /</u>	[X]	[]	[]
c. Condenser Side:			
Type/Capacity <u>[]CW [X]DX 157 TONS</u>	[]	[X]	[]
d. Air Handling Units:			
Multizone <u>[X]CW []DX [X]HUMD</u>	[]	[X]	[]
Dual Duct <u>[]CW []DX []HUMD</u>	[X]	[]	[]
Make-up Air <u>[]CW []DX []HUMD</u>	[X]	[]	[]
Variable Volume <u>[]CW []DX []HUMD</u>	[X]	[]	[]
Constant Volume <u>[X]CW [X]DX [X]HUMD</u>	[]	[X]	[]
Other _____	[X]	[]	[]
e. Additional Air Filters:			
Postfilter <u>[]Multi []DDAHU []MUAHU []VAVAHU []CAV</u>	[X]	[]	[]
Other <u>[]HEPA []BAG []CARTRIDGE []CHARCOAL</u>	[X]	[]	[]
f. Direct Expansion: Number			
Window units <u>1</u>	[]	[X]	[]
Thru-the-wall <u>9 IN BUILDING #126</u>	[]	[]	[X]
Single zone <u>DX UNITS</u>	[]	[X]	[]
Other <u>ROOF TOP UNITS</u>	[]	[X]	[]
g. Distribution Boxes:			
VAV <u>[]REHEAT</u>	[]	[X]	[]
CAV <u>[]REHEAT</u>	[X]	[]	[]
DDAHU <u>[]REHEAT</u>	[X]	[]	[]
Fan Coil <u>[]REHEAT</u>	[]	[X]	[]
h. Special Systems:			
Type _____	[X]	[]	[]
Capacity _____	[X]	[]	[]
i. Control Systems:			
<u>[X]Pneu [X] Electric []DDC [] DDC Upgrade</u>	[]	[X]	[]
j. Fans:			
Exhaust <u>40</u>	[]	[X]	[]
Recirculating <u>4</u>	[]	[X]	[]

B. COMMENTS:

THE CHILLERS ARE SCHEDULED TO BE REPLACED WITHIN THE NEXT YEAR AS WELL AS THE CHILLED WATER COILS IN AIR HANDLING UNITS.

C. COMPONENT RATING: (\$ 1,398,300) (47 %) = \$ 652,600
 Possible Condition Component
 Value Value Multiplier Value

ELECTRICAL/SERVICE & DISTRIBUTION

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Service:

Substation: Buckeye, McCracken Power Plant AEP
 Primary Voltage: 13,200 Volts, 4,160 Volts
 Switch Gear Circuit No.: 105/205
 Transformer:

Manufacturer	Type	KVA	Secondary Voltages	Room #
<u>ALLIES CHALMERS</u>	<u>DRY</u>	<u>750</u>	<u>480/277</u>	<u>1513</u>
<u>ALLIES CHALMERS</u>	<u>DRY</u>	<u>750</u>	<u>480/277</u>	<u>1100A</u>
<u>WEST</u>	<u>DRY</u>	<u>225</u>	<u>208/120</u>	<u>1100A</u>

b. Distribution System: Room 1100 Room 1513

1. Motor Control Center (MCC) Room 110M Room

Panelboard Fused, Circuit Breakers
 Voltage 480/3, 277/3, 208/3, 240/1
 Amperage 1200A, 800A, 600A, 300A, 200A

2. Lighting Room _____ Room

Panelboard Fused, Circuit Breakers
 Voltage 480/3, 277/3, 208/3, 240/1
 Amperage 1200A 250A, 200A, 150A, 100A

3. Building Power Room _____ Room

Panelboard Fused, Circuit Breakers
 Voltage 480/3, 277/3, 208/3, 240/1
 Amperage 1200, 250A, 200A, 150A, 100A

4. Isolated Ground Power (IGP) Room _____ 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 MIT
 Conductors: Copper, Aluminum,
 Wire: PVC, Romex, Armored Cable(BX)

d. Emergency System:

Battery backup Room
 Emergency Panel Room
 UPS Room

e. Emergency Generator:

Manufacturer NONE Diesel Gasoline NG
 Size N/A KVA, N/A Volts, Location, Room # N/A

B. COMMENTS:

THE BUILDING OCCUPANTS HAD NO COMPLAINTS ABOUT THE ADEQUACY OF THE POWER IN THE BUILDINGS.

C. COMPONENT RATING: (\$ 359,000) (68 %) = \$ 244.100
 Possible Condition Component
 Value Value Multiplier Value

ELECTRICAL/LIGHTING & POWER

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Lighting (lamp type):	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Fluor 40 watt _____	[]	[X]	[]
Fluor 32 watt _____	[]	[X]	[]
Fluor Can _____	[X]	[]	[]
Incandescent <u>AT ENTRANCES</u> _____	[]	[X]	[]
HID [X]Mercury []HPS []Metal Halide OUTSIDE LIGHTS _____	[]	[X]	[]
Low Voltage (12V) _____	[X]	[]	[]
Other _____	[X]	[]	[]

b. Lighting Levels

Halls _____	[]	[X]	[]
Rooms _____	[]	[X]	[]
Mechanical Rooms _____	[]	[X]	[]

c. Fixture Condition

Fixtures _____	[]	[X]	[]
Bulbs _____	[]	[X]	[]
Fixture Lens _____	[]	[X]	[]

d. Receptacles & Switches:

Wall Outlet _____	[]	[X]	[]
IGP Wall Outlet _____	[X]	[]	[]
GFIC Breakers _____	[X]	[]	[]
Switches _____	[]	[X]	[]
Cover Plates _____	[]	[X]	[]

c. Special:

Lightning Protection _____	[X]	[]	[]
UPS _____	[X]	[]	[]
Communication []Clock []Public Address []Bells _____	[X]	[]	[]
Alarm [X]Fire []Security _____	[]	[X]	[]
Telecommunication [X]Phones [X]Data []Cable TV _____	[]	[X]	[]
Data Systems _____	[]	[X]	[]
Fiber Optics _____	[]	[X]	[]

B. COMMENTS:

THE LIGHTING LEVELS IN THE CORRIDORS OF BUILDING #73 WERE LOW, BUT NOT ALL OF THE BUILDING IS OCCUPIED.

C. COMPONENT RATING: (\$ 2,222,100) (68 %) = \$ 1,511,100
 Possible Condition Component
 Value Value Multiplier Value

SAFETY STANDARDS

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Exits:	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Stair Construction:			
concrete _____	[X]	[]	[]
steel <u>WITH TERRAZZO TREADS</u> _____	[]	[X]	[]
wood _____	[X]	[]	[]
Number of Exit Stairs <u>1</u>	[]	[X]	[]
Number of Other Exits <u>15</u>	[]	[X]	[]

b. Fire Rating:
 Construction Type: []IA/B []IIA/B []IIC [X]IIIA []IIIB []IV []V A/B
 Building Height: 28= & 20= ft., 2 & 1 stories

c. Extinguishing Systems:	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Portable _____	[]	[X]	[]
Standpipe _____	[]	[X]	[]
Hose Cabinets <u>4</u>	[]	[X]	[]
Sprinklers _____	[X]	[]	[]
Gas Suppression _____	[X]	[]	[]
Other _____	[X]	[]	[]

d. Detection & Alarm Systems:	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Pull Stations _____	[]	[X]	[]
Bells _____	[]	[X]	[]
Horns _____	[X]	[]	[]
Strobes _____	[X]	[]	[]
Annunciator Panel _____	[X]	[]	[]
Smoke Detectors:			
Halls _____	[X]	[]	[]
Elevators _____	[X]	[]	[]
Rooms _____	[X]	[]	[]
Equip Rooms _____	[X]	[]	[]
Ducts _____	[]	[X]	[]

e. Lighting Systems:	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Exit Signs <u>[X]BATTERY</u> []EMC _____	[]	[X]	[]
Exit Lighting <u>[X]BATTERY</u> []EMC _____	[]	[X]	[]
Emergency Lighting <u>[X]BATTERY</u> []EMC _____	[]	[X]	[]
Emergency Generator <u>NONE</u> _____	[X]	[]	[]

f. Lightning Protection: _____ [X] [] []

B. COMMENTS: EXIT LIGHTING IS PROVIDED BY BATTERIES IN BUILDING #73 ONLY.

C. COMPONENT RATING: (\$ 359,000) (68 %) = \$ 244,100
 Possible Condition Component
 Value Value Multiplier Value

BUILDING PERIMETER EVALUATION

FAC # 73 & 126

DATE APRIL 97

INSPECTOR: AJR

A. SYSTEM DESCRIPTION

a. Building Access:	<u>N/A</u>	<u>Sat</u>	<u>Att</u>
Driveway _____	[]	[]	[X]
Loading Dock _____	[]	[X]	[]
Sidewalks			
Front <u>SOUTH SIDE HAS MISSING SECTIONS</u> _____	[]	[]	[X]
Side _____	[]	[X]	[]
Rear _____	[]	[X]	[]
Steps			
Front _____	[]	[X]	[]
Side _____	[]	[X]	[]
Rear _____	[]	[X]	[]
Ramp _____	[X]	[]	[]

b. Lawn and Landscaping:			
Lawn <u>SOUTH SIDE OF #73 AND WEST OF #126 NEEDS REPAIRING</u> _____	[]	[]	[X]
Shrubs _____	[]	[X]	[]
Trees _____	[]	[X]	[]
Undesirable Insect _____	[X]	[]	[]
Bedding Material _____	[]	[X]	[]
Watering System _____	[X]	[]	[]
Pedestrian Barrier []WOOD POSTS []STEEL POSTS _____	[X]	[]	[]

c. General Site Information:			
Signage <u>AT KINNEAR ROAD AND ON BUILDINGS</u> _____	[]	[X]	[]
Address Identification <u>ON SIGN</u> _____	[]	[X]	[]
Security Lights _____	[]	[X]	[]
Street Lights _____	[]	[X]	[]
Drainage _____	[]	[X]	[]
Storm Drains _____	[]	[X]	[]

B. COMMENTS:

THE BLACKTOP SIDEWALK ON THE SOUTH SIDE OF BUILDING #73 HAS BEEN CUT IN SEVERAL PLACES CAUSED BY THE INSTALLATION OF A NEW STORM DRAIN. THIS CONSTRUCTION ALSO DAMAGED THE LAWN IN THIS AREA.

The Ohio State University
Department of Physical Facilities
BUILDING AUDIT METHODOLOGY

1. BUILDING AUDIT PROGRAM OBJECTIVE

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

2. BUILDING AUDIT APPROACH

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

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

3. DATA ORGANIZATION

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

4. COST ESTIMATES

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

5. DATA USAGE

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

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

6. LIMITATIONS

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

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

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

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

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

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

(a) Includes general repainting and redecorating, wholesale replacement of building and system components. on going maintenance, replacement and renovation projects are not included.

(b) Includes exterior building walls and attached items.

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

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

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

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

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

ABBREVIATIONS

A/C.....	AIR CONDITIONING
AHU.....	AIR HANDLING UNIT
ATT.....	ATTENTION
BLDG.....	BUILDING
BUR.....	BUILT UP ROOF
CAV.....	CONSTANT AIR VOLUME
COND.....	CONDENSATE WATER
CIP.....	CAST IN PLACE
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
EMC.....	EMERGENCY CIRCUIT
EWC.....	ELECTRIC WATER COOLER
FPM.....	FEET PER MINUTE
GPM.....	GALLONS PER MINUTE
HID.....	HIGH INTENSITY DISCHARGE LIGHT
HPS.....	HIGH PRESSURE STEAM (125 PSI)
HVAC.....	HEATING, VENTILATING AND AIR CONDITIONING
KV.....	KILOVOLTS
KVA.....	KILOVOLTS AMPS
KW.....	KILOWATTS
LC.....	LIQUID COOLED
LF.....	LINEAL FEET
LPS.....	LOW PRESSURE STEAM (15 PSI)
MPS.....	MEDIUM PRESSURE STEAM (50 PSI)
MZCV.....	MULTIZONE CONSTANT VOLUME AIR HANDLING
N/A.....	NOT APPLICABLE
PSI.....	POUNDS PER SQUARE INCH
RM.....	ROOM
RTU.....	ROOF TOP UNIT (HEATING OR A/C)
SAT.....	SATISFACTORY
SF.....	SQUARE FEET
S/P.....	STAND PIPE
SR.....	STEAM RETURN LINE
SS.....	STEAM SUPPLY LINE
SY.....	SQUARE YARDS
T&G.....	TONGUE AND GROVE
TR.....	TERMINAL REHEAT
V.....	VOLTS
VAV.....	VARIABLE AIR VOLUME