FACILITY AUDIT REPORT

CENTRAL CLASSROOM BUILDING

#072

AUGUST 1995

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Department of Physical Facilities
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EXECUTIVE SUMMARY AND PROJECT LIST FOR
CENTRAL CLASSROOM BUILDING

It has been 8 years since the Central Classroom Building had a major remodel of the building. It was originally constructed as a central stores warehouse in 1949 and remained as such until it was renovated in 1988. The Central Classroom Building is in good structural condition. The main concern with the building is the air conditioning system's chiller and controls. The new chiller is slightly oversized and uses R-11 as a refrigerant that may need to be replaced in the near future. Also, the building air conditioning system sub cools causing condensation on duct work, which leaks on ceiling tiles and down duct chases. The exterior of the building is in need of general maintenance to assure another 25 years of service. The building should only require those major maintenance items noted below over the next ten years.

PROPOSED MAINTENANCE PROJECTS

A. Corrective Maintenance Projects:		**Control No.**
1. Replace hand rails in the two east stairwells and install new hand rails on landings in the west stairwells.	$ 8,950	2837
SUB-TOTAL	$ 8,950	

B. Building Improvement/Addition Projects:		
NONE		
SUB-TOTAL	$	

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

1. Replace Chiller in room 500M in 5 to 10 years . .	$150,000	2838
SUB-TOTAL	$150,000	

Total Cost for all Projects ..... $**158,950**

GENERAL BUILDING INFORMATION

CENTRAL CLASSROOM BUILDING #072

BUILDING ADDRESS: 2009 MILLIKIN ROAD

GROSS SQ. FT.: 85,306

NET ASSIGNABLE SQ. FT.: 54,159

MECHANICAL/CUSTODIAL AREA SQ. FT.: 31,147

YEAR OF CONSTRUCTION: 1948

YEAR OF LAST RENOVATION: 1988

NUMBER OF STORIES/BASEMENT: FOUR AND BASEMENT and PENTHOUSE

AIR CONDITIONING (Percentage): 99%

CURRENT USE: BOOKSTORE, CLASSROOMS AND ARCHITECTS OFFICES

TYPE OF CONSTRUCTION: REINFORCED CONCRETE FRAME, LOAD BEARING WALLS AND MASONRY SKIN

ESTIMATED REPLACEMENT COST: $12,081,000 *

WHEELCHAIR ACCESSIBILITY: ACCESS FROM THE EAST DOOR, MAIN ENTRANCE TO ELEVATORS AND ALL FLOORS

OVERALL BUILDING CONDITION: SATISFACTORY **

NUMBER OF EXIT STAIRWAYS: FOUR

AREA SHOP RESPONSIBILITY: NORTH AREA

* Replacement Cost assigned November 1991 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

CENTRAL CLASSROOM BUILDING #072

HEATING:
Source 6" HPS STEAM LOOP IN TUNNEL FROM POWER PLANT
Type Heating System 5" HOT WATER FROM STEAM HEAT EXCHANGERS
Steam (Line size, valve location) 3" HPS LINE IN RM 500M WITH DESUPERHEATER
Building Htg Water (line size, valve location) 5" IN 500M

VENTILATION SYSTEM:
VAV AIR HANDLING UNIT WITH 100% MAKE UP AIR FOR FREE COOLING

COOLING:
Bldg % 99 Chillers ONE AT APPROXIMATELY 265 TONS, R-11
Window Units NONE Thru-the-roof NONE Direct exp. units ONE UNIT

HVAC CONTROL SYSTEM:
VARIES PNEUMATIC AND DDC

ELECTRIC: Source Size(KVA) Primary/Secondary Switchgear & Main Disc. (Rm)
1. BUCKEYE 107/307 1000 13,200 / 480/277 048M

PLUMBING:
Water (size, valve location) 4" TO ROOM 002M AND 8" FIRE IN ROOM 046M
Gas (size, valve location) NONE
Domestic Hot Water (size, valve location) 1-1/2" IN ROOM 002M
Compressed Air (size, location) NONE

SEWERS:
Storm ONE EACH 8" ON EAST AND 12" ON WEST SIDE Sanitary 6" TO NORTH WEST

METERS:
Gas (size, location) NONE
Water (size, location) 3" DCW IN ROOM 002M
Electric (size, location) ON SWITCH PANEL IN ROOM 048M

ALARM SYSTEMS:
Fire Alarm MANUAL Panel Location ROOM 048M AND SUB PANEL IN ROOM 004M
Fire Pump YES Pump Location ROOM 046M
Sprinklers LIMITED Panel Location N/A
Other Alarms

ELEVATORS:
Number THREE Type (passenger, freight) 2 PASS, 1 PASS/FREIGHT
Manufacturer DOVER Size 2@ 57x81 INCHES AND 1@ 81x75 INCHES

EMERGENCY GENERATOR: Size NONE Location

ASBESTOS SURVEY (1986):
ASBESTOS IN THE BASEMENT, FIRST AND SECOND FLOORS, ALL REMOVED IN 1988. SOME REMAINS IN TUNNEL ENTRANCES.

CENTRAL CLASSROOM BUILDING NARRATIVE

HISTORY

The Central Classroom Building originally called Central Service Facility was constructed in 1948 and occupied in the fall of 1949 with a gross area of 78,300 SF. It was originally built as a Central Stores Warehouse. In 1988 a total renovation project and a building addition of 7,000 SF was added on the west, north and east side to accommodate a truck loading dock, a transformer and fire pump room and a entrance lobby. The new building was called The Central Classroom Building with a bookstore and architects' offices and a gross area of 85,306 SF.

The latest renovation project included a complete HVAC renovation which included a chiller and cooling tower, a new VAV distribution system and a completely new heating system serving the basement, first, second, third and fourth floors. Control upgrades and DDC remote readout to meet the present day HVAC needs were also completed.

In interviews with various occupants of the building, it was learned that they are satisfied with the basic condition and performance of the building systems.

A review of the work orders indicated that there are a normal number of maintenance calls to the building; however, some were pertinent to items listed below.

The building shell is functioning as designed, at this time, and has held up well over the 46 years since built. There are general maintenance projects which need to be completed within the next two years to repair normal wear items as noted. These items when completed will protect the structure and exterior from the elements, enhance the building's performance and create a satisfying visual environment for students, faculty, staff and visitors.

Occupancy of the building reported by The Office of University Resource Planning & Institutional Analysis in the C-1 Building Space Assignment Report dated December 31, 1994 for a Net Assignable Area of 63,221 SF is as follows: Office Services 9.2%, Mercantile 31.1%, Classrooms 24.1%, Staff offices 18.6%, Custodial/toilet 3.6%, Unfinished 2.7% and Mechanical 10.7%. Common Areas 25% of 85,306 Gross SF.

PRIMARY SYSTEMS

This structure consists of reinforced concrete perimeter footers and walls and interior footings with columns and load bearing exterior walls and beams to form the basic skeletal components of this 4-story building. There are no major signs of settlement or movement in the building foundation or structural columns and supports. However, some minor settlement cracks were noted in the area of the west wall and floor where the new addition was constructed. Also, facile cracks in attached materials were noted around columns in five areas indicating possible problems that may need to be addressed. Concrete floors, roofs and beams appear to be in good condition. The penthouse was built atop the existing roof and consists of a concrete perimeter wall with steel columns and beams.

A brick veneer was installed on the load-bearing block to form the exterior walls from the second floor and above, while stucco was installed to cover the existing

concrete walls up to the second floor. Openings on four sides from the second floor to the bottom of the roof form the openings for the steel windows that form the window sections. Limestone caps and trim on the second floor and roof parapets need to be cleaned and sealed. The penthouse walls are insulated steel siding. Storefront windows and entrance doors at the first floor mid entrance level are located on the east side.

Overall the exterior brick is in good condition, however, some spalling and some cracking due to expansion and contraction on all sides including the new entrance area need to be cleaned, sealed and monitored over the next several years. Other small areas on the existing brick need to be tuckpointed and sealed where water staining, loose mortar, cracking and/or settlement has occurred.

The fourth floor roof areas are of the flat concrete deck type, consisting of insulation board with one rubber layer and gravel ballast. The penthouse roof consists of a metal deck with insulation, and rubber roof and gravel ballast.

Some miscellaneous flashing problems with the gravel stop on the west addition were noted and needs to be repaired. Some areas are loose and some areas allow water to get behind the stucco walls.

There were indications of previous and/or active roof leaks in the rubber roof in areas of the penthouse perimeter and around the northeast skylight that needs attention. Also, walls on the east addition become wet under the limestone cap after a rain, indicating possible leaks in the cap or roof flashing.

INTERIOR SYSTEMS

The reinforced concrete skeleton and walls are divided with concrete block metal studs and drywall to form interior walls, stairwells, halls and rooms. The partitions, doors, hardware, walls, floors, and ceilings have held-up well after 8 years of use. Some wallpaper adjacent to the southwest stairwell and in several classrooms on the second and third floors needs to be repaired.

Some ceiling tiles need to be replaced where leaks have occurred and some tiles have sagged in the center due to moisture at some time, but are in good condition.

The equipment rooms have exposed concrete floors that have been sealed with epoxy coating. However, some may be leaking since water stains are apparent on the fourth floor ceiling below.

SERVICE SYSTEMS

The major service systems, domestic cold and hot water, sanitary waste, and storm drainage systems all appeared to be functioning properly.

The elevators were operating properly and meet ADA requirements. Maintenance records did not indicate any major problems.

The plumbing drainage system did not appear to have any problems. There was more than adequate water pressure at faucets on the second floor that caused splashing over the sink, therefore it is recommended that the isolation valves be adjusted. The piping appears to be copper and should hold up well. The domestic Hot Water system is tapped into the hot water from the powerhouse. The restroom fixtures were functioning properly and no replacements are needed.

The Hot Water Heating system supplies convectors located on the outside walls, under windows, fan coil units at entrances, unit heaters and preheat coils in the air handling unit. Hot water is heated and pumped through a Medium Pressure Steam (MPS) to hot water heat exchanger located in the mechanical room 500M, the Medium Pressure Steam is piped to the heat exchanger from a pressure reducing station with desuperheater in room 500M and tapped into the High Pressure Steam loop located in front of the building room 002M entering the tunnel crawl area from the south. The heating system appears to be operating properly.

The cooling system consists of a 265 Ton chiller cooled by Marley open type cooling tower. However, it did not appear that the full 795 GPM of water flow was going to the cooling tower. The chiller also appeared to be running at low demands on 95 degree cooling days, indicating an oversized unit. Chilled water pumps supply water to the air handling unit.

The air handling unit supplies air to VAV boxes, ducts and diffusers throughout the building. The cooling and ventilation system appeared to be operating properly, however, there appears to be a problem with the air handling unit housing flooring. Water leaks to the floor below appear to be under the outside air intake and below the chilled water coil condensate pan which may be leaking or water is being carried over to the unit housing floor. Several sections of duct and fittings were not insulated during construction and needs to be covered to prevent condensation and heat gains to the duct. Water is condensing on ducts and VAV boxes and leaking down chases causing ceiling stains on floors below.

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

All these units appear to be in good condition.

ELECTRICAL

The electrical power to the building is provided by one 1000 KVA 480/277 volt transformer feed from the buckeye substation circuits number 107/307.

The 1000 KVA transformer and switchgear is located in room 048M. Fused switches from the transformer feed lighting panels, motor control center panels (MCC) in rooms 500M and circuit breaker power distribution panels located throughout the building. The MCC panels contain fused switches that distribute power to mechanical equipment in or near the room. Panel sizes vary throughout the building depending on the load. At about 11.7 watts per square foot the building appears to have an adequate power supply.

The building has fluorescent light fixtures throughout while using 12 volt and fluorescent recessed can lighting for accent lighting. All areas have had newer fixtures installed during the building renovation.

SAFETY STANDARDS

The building safety systems consist of a fire pump that supplies a standpipe located in the northwest and southeast stair wells for fire department use and a limited sprinkler system on the first floor and basement. Smoke detectors in elevator lobbies and manual pull stations at exits provide local fire annunciation from the panel to all floors.

Several rooms are secured using local electronic keying and the book store exits are alarmed to limit access to the floor area from the stair wells. These doors are remotely alarmed.

A separate power source supplies power to lighted exit signs and emergency lights in the hallways and stairwells.

Automatic door openers have been installed at the main east entrance.

The elevators provide access to all floors of the building.

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, September 1986, identifies asbestos containing materials in the basement, tunnel area to and from, first and second floors of the old Central Stores Building. All asbestos within the limits of the building was removed during the 1988 renovation project.

BUILDING PERIMETER

The sidewalk on the south and north side of the building is in fair condition. The south sidewalk has several sections with spalling and holes in it and needs to be repaired. The asphalt and concrete dock area on the west side is in good condition, however, minor repairs and sealing are required on the concrete sections of the truck apron. There is a drainage problem at the east side and around the transformer well and should have drains installed.

Entrances to the building are well lighted, area and flood lighting appear to be distributed properly.

Minor Maintenance Projects (LESS THAN $5000)

INTERIOR

1. Fill cracks in concrete walls and ceilings with epoxy in the basement and first floors on west wall.
   Workorder #01-5064-179898-71
2. Fill cracks in block walls with mortar in the west side basement and first floor.
   Workorder #01-5063-014642-51
3. Seal concrete floor in the penthouse and S/W fourth floor landing.
   Workorder #01-5063-014643-46
4. Tighten and/or reinstall locking hardware on all windows.
   Workorder #01-5064-179896-66
5. Install thermal break at the drywall and the metal window frame and caulk.
   Workorder #01-5064-179898-71
6. Replace stained ceiling tiles on the fourth floor.
   Workorder #01-5064-179898-71
7. Install guard rail in west stairwells on second third and fourth floors.
   Workorder #01-5064-179898-71
8. Repair convertor heating cabinet in stairwell N/E.
   Workorder #01-5064-179887-73
9. Repair peeling wall paper second and third floor southwest corner hall.
   Workorder #01-5064-179896-66
10 Repair loose chair rails and clean lower walls in class rooms.
   Workorder #01-5064-179898-71 & 01-5063-014643-46
11 Clean carpets in third floor class rooms.
   Workorder #01-5063-014643-46
13 Repair water damaged lintel at the west window of the fourth floor.
   Workorder #01-5064-179898-71
14 Repair the skylights drywall "J" beads and install a thermal break to reduce condensation.
   Workorder #01-5064-179898-71
15 Repair leaky faucets in the restrooms.
   Workorder #01-5064-179896-66
16 Install PRV station in the DC&HW lines to prevent splashing on the second floor, set at 40 PSI.
   Workorder #1-5064-179887-73
17 Air condition the penthouse mechanical room to prevent condensation.
   Workorder #1-5064-179887-73
18 Check cooling tower performance.
   Workorder #01-5064-179896-66
19 Seal the floor of the air handling unit at the coil and intake sections.
   Workorder #01-5063-014643-46

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EXTERIOR

1. Install drain in the transformer vault.
Workorder #01-5064-179887-73
2. Caulk around the door to the switchgear room.
Workorder #01-5064-179896-66
3. Clean, paint and caulk all of the lintels over the windows.
Workorder #01-5064-179896-66
4. Fill cracks in concrete walls with epoxy.
Workorder #01-5064-179898-71
5. Repair Metal soffit over the west dock and addition.
Workorder #01-5064-179898-71
6. Repair damaged and cracked stucco and seal.
Workorder #01-5064-179898-71
7. Clean drain at the southwest stairwell.
Workorder #1-5063-014642-51
8. Replace concrete walk on the south side of the building.
Workorder #1-5063-014642-51
9. Seal joint between the building and the concrete sidewalk north and west side.
Workorder #01-5064-179898-71
10 Install car bumper blocks on the north side of the building.
Workorder #1-5063-014642-51
11 Caulk between the opening ant the fire pipes on the north side.
Workorder #01-5064-179898-71
12 Caulk between the top of the south stucco wall and the concrete of the second floor.
Workorder #01-5064-179898-71
13 Repair or seal south door to room 500M sillplate and door seals.
Workorder #01-5064-179898-71
14 Caulk open joint between brick/stucco/concrete where new work meets old, and at the stucco entrance soffit.
Workorder #01-5064-179898-71
15 Repair roof and/or counter flashing at the equipment room wall, at the southwest corner of the northeast skylight and at lower roof.
Workorder #01-5064-179898-71
16 Recaulk vertical joints in the perimeter precast copings upper and lower.
Workorder #01-5064-179898-71
17 Tuckpoint brick where required and seal.
Workorder #1-5063-014642-51
18 Level concrete walks which settled at handicap parking space north corner, 3 slabs pressure grout.
Workorder #01-5063-014642-51

BUILDING EVALUATION SUMMARY

I. BUILDING INFORMATION

FAC # 072 FACILITY NAME: CENTRAL CLASSROOM
DATE: 08/30/95 INSPECTOR: JAO
YEAR CONSTRUCTED: 1948, ADDITION IN 1988
GROSS SQ FT: 85,306 NET SQ FT: 54,159
REPLACEMENT COST $ 12,081,000 *

II. COMPONENT RATING

COMPONENT	BUILDING COMPONENT PERCENTAGE OF TOTAL COST **	BUILDING COMPONENT REPLACEMENT COST	CONDITION VALUE MULTIPLIER FOR BLDG. COMPONENT	BUILDING COMPONENT CURRENT VALUE
Foundation	6.37	769,560	0.86	661,822
Columns and Beams	10.65	1,286,627	0.86	1,106,499
Exterior Walls	7.69	929,029	0.78	724,643
Windows & Doors	3.09	373,303	0.89	332,240
Roofing	4.16	502,570	0.89	447,287
Partitions & Drs.	9.42	1,138,030	0.93	1,058,368
Wall Finishes	4.77	576,264	0.78	449,486
Floor Finishes	6.57	793,722	0.92	730,224
Ceilings & Finish	5.40	652,374	0.86	561,042
Conveying	4.04	488,072	0.90	439,265
Plumbing	8.30	1,002,723	0.92	922,505
Heating	6.64	802,178	0.92	738,004
Cooling & Vent.	7.61	919,364	0.89	818,234
Elec. Ser. & Dist	1.31	158,261	0.92	145,600
Lighting & Power	10.38	1,254,008	0.92	1,153,687
Safety Standards	3.60	434,916	0.92	400,123
TOTALS	100.00	12,081,000	0.885	10,689,029

III. BUILDING RATING SUMMARY

Overall Building Rating = 88.5%

* Replacement Cost assigned January 1991 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 # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. Footings:	N/A	Sat	Att
Individual Footings & Piers OVERSIZED IN CENTER	[ ]	[X]	[ ]
Continuous Footings AROUND PERIMETER	[ ]	[X]	[ ]
Grade Beams	[X]	[ ]	[ ]
Piles	[X]	[ ]	[ ]
Caissons	[X]	[ ]	[ ]
b. Foundation Wall Materials:			
Steel	[X]	[ ]	[ ]
Concrete Cast-in-place PERIMETER WALLS	[ ]	[ ]	[X]
Concrete Block	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Waterproofing and Underdrain:			
Coating NOT VISIBLE	[ ]	[X]	[ ]
Membrane	[X]	[ ]	[ ]
Board	[X]	[ ]	[ ]
Drain Tile 6" SHOWN ON DRAWINGS	[ ]	[X]	[ ]
d. Slab on Grade (floor):			
Plain	[X]	[ ]	[ ]
Reinforced BASEMENT	[ ]	[X]	[ ]
e. Special Substructures:			
PARTIAL TUNNEL FOR STEAM	[ ]	[X]	[ ]

B. COMMENTS:

1 BASIC STRUCTURAL COMPONENTS APPEAR TO BE IN GOOD CONDITION

2 NOTICED SOME SETTLEMENT AND LOCAL SHEAR CRACKING IN THE WEST WALL LOWER LEVEL WHERE THE WALL WAS CUT TO ACCOMMODATE THE STORAGE AREA

C. COMPONENT RATING: ($ 769,560) (86 %) = $ 661,822

Possible Value	Condition Multiplier	Component Value

COLUMNS AND BEAMS

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. Columns and Beams:	N/A	Sat	Att
Concrete-in-place THROUGHOUT THE ORIGINAL BUILDING	[ ]	[X]	[ ]
Precast Concrete OVER THE EQUIPMENT ROOM ROOF ON NORTH	[ ]	[X]	[ ]
Steel SOUTHWEST STAIR EXTENSION AND EQUIPMENT PENTHOUSE	[ ]	[X]	[ ]
Steel Fireproofing	[X]	[ ]	[ ]
Wood	[X]	[ ]	[ ]
Other COLUMN BELL AND CAP TO CONCRETE FLOOR	[ ]	[X]	[ ]
b. Floors:			
Concrete Slab REINFORCED WITH BUILT-UP SLAB AT COLUMNS	[ ]	[ ]	[X]
Precast Slab	[X]	[ ]	[ ]
Metal Deck	[X]	[ ]	[ ]
Metal Deck w/concrete fill	[X]	[ ]	[ ]
Wood	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Roof System:			
Flat LESS THAN 1/4" PER FOOT	[ ]	[X]	[ ]
Pitched	[X]	[ ]	[ ]
Concrete REINFORCED CONCRETE	[ ]	[X]	[ ]
Steel	[X]	[ ]	[ ]
Wood	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]

B. COMMENTS:

1 EXTERIOR BRICK BACKING BLOCK IS LOAD BEARING AND CARRIES A PORTION OF THE FLOOR LOAD.

2 MOST LINTELS THAT WERE CUT AND OPENINGS CUT IN THE CONCRETE ON THE WEST WALL TO FORM PASSAGES TO THE DOCK AREA AND STORE ROOMS ARE CRACKING IN SEVERAL LOCATIONS AND NEED REPAIRED AND MONITORED.

3 SOME FINELINE CRACKS IN THE FIRST FLOOR STORAGE AREA HAVE RADIATED FROM SEVERAL COLUMNS TO THE WEST WALL INDICATING SOME SETTLEMENT HAS OCCURRED.

4 WHERE VISIBLE ALL OTHER STRUCTURAL ELEMENTS APPEARED IN GOOD CONDITION.

C. COMPONENT RATING: ($1,286,627) (86 %) = $ 1,106,499

Possible Value	Condition Value	Multiplier	Component Value

EXTERIOR WALLS

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. Walls:	N/A	Sat	Att
Concrete REINFORCED TO SECOND FLOOR	[ ]	[ ]	[X]
Masonry BRICK VENEER BACKED BY LOAD BEARING BLOCK	[ ]	[ ]	[X]
Metal Siding ON 500M PENTHOUSE	[ ]	[X]	[ ]
Wood Siding	[X]	[ ]	[ ]
Other GLASS AND INSULATED GLASS PANELS	[ ]	[ ]	[X]
Other CUT LIMESTONE PANELS	[ ]	[ ]	[X]

b. Finishes:			
Stucco ON PERIMETER TO SECOND FLOOR BAND OVER CONCRETE	[ ]	[ ]	[X]
Paint	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]

B. COMMENTS:

1 SEVERAL OF THE ORIGINAL BRICKS HAVE POPPED OFF SECTIONS OF THE FACING ON THE BOTTOM OF THE BRICK ABOVE THE MORTAR JOINT WHICH MAY INDICATE A LOADING PROBLEM OR A FREEZE/THAW AND MOISTURE PROBLEM, RECOMMENDED TO CLEAN WALLS AND SEAL.

2 IT WAS ALSO NOTED THAT SOME OF THE NEWER BRICK OF THE ADDITION IS SHOWING SOME HORIZONTAL CRACKS IN INDIVIDUAL BRICKS; CLEAN AND SEAL.

3 MANY LINTELS OVER WINDOWS WERE NOT PAINTED OR CAULKED.

4 WATER WAS NOTED AT SEVERAL LOCATIONS ON EXTERIOR WALLS OF THE NEW SECTION AFTER A LONG RAIN. LEAKS IN THE PARAPET CAP NEED TO BE LOCATED AND SEALED.

5 OPEN JOINTS IN BRICK NEEDS TO BE MORTAR AND CRACKS REPAIRED AND/OR SEALED.

6 JOINTS WHERE THE NEW WALL MEETS THE OLD NEED TO BE CAULKED.

7 THE JOINT BETWEEN THE CONCRETE AND STUCCO ON THE TOP OF THE SOUTH STUCCO WALL NEEDS TO BE CAULKED WITH A 3/4" BEAD TO SHED WATER OVER THE TRIM.

8 CRACKS AND DAMAGE IN THE STUCCO NEEDS TO BE REPAIRED AND SEALED.

9 JOINTS IN THE ENTRANCE SOFFIT, WALL AND LINTEL NEED TO BE CAULKED TO PREVENT AIR INFILTRATION.

C. COMPONENT RATING: ($ 929,029) (78 %) = $ 724,643

Possible Value	Condition Value	Multiplier	Component Value

EXTERIOR WINDOWS & DOORS

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. Windows type & number:	N/A	Sat	Att
Wood	[X]	[ ]	[ ]
Steel CURTAIN WALL FROM THE SECOND TO FOURTH FLOORS	[ ]	[X]	[ ]
Alum WALL EAST ENTRANCE	[ ]	[X]	[ ]
Other 68 AWNING WINDOWS IN CURTAIN WALL	[ ]	[X]	[ ]
b. Window glazing:			
Single pane	[ ]	[X]	[ ]
Double pane ON ALL WINDOWS	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
c. Doors type & number:			
Wood	[X]	[ ]	[ ]
Steel TWO EMERGENCY EXITS, TWO PENTHOUSE AND TWO LOADING	[ ]	[ ]	[X]
Alum MAIN ENTRANCE, 3 DOUBLE	[ ]	[X]	[ ]
Other STEEL ROLL-UP AT PENTHOUSE 500M ON ROOF	[ ]	[X]	[ ]
Other FOUR STEEL PANEL ROLL-UP DOORS AT DOCKS	[ ]	[X]	[ ]
Other DOUBLE STEEL AND STEEL DOOR TO ELECTRICAL SWITCHES	[ ]	[X]	[ ]
d. Shading Devices:			
Types BLINDS	[ ]	[X]	[ ]

B. COMMENTS:

1 SOME EXIT AND EQUIPMENT DOORS NEED THE WEATHER SEALS REPAIRED.
2 SOME AWNING WINDOWS NEED THE LOCKS REPAIRED.

C. COMPONENT RATING: ($ 373,303) (89 %) = $ 332,240

Possible Value	Condition Value	Multiplier	Component Value

ROOFING

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. Roof Covering:	N/A	Sat	Att
Built-up	[X]	[ ]	[ ]
Built-up w/gravel	[X]	[ ]	[ ]
Asphalt Shingle	[X]	[ ]	[ ]
Copper	[X]	[ ]	[ ]
Glass (Skylight) SIX SKYLIGHTS ON EAST AND NORTH SIDE	[ ]	[ ]	[X]
Slate	[X]	[ ]	[ ]
Spanish Tile	[X]	[ ]	[ ]
Metal	[X]	[ ]	[ ]
Other EPDM OVER ALL SECTIONS WITH STONE BALLAST (1987)	[ ]	[ ]	[X]
c. Flashing:			
Base & Counter AT PARAPET AND PENTHOUSE	[ ]	[ ]	[X]
Cap METAL OVER SOUTHWEST STAIR, ELEVATOR AND PENTHOUSE	[ ]	[X]	[ ]
Through Wall	[X]	[ ]	[ ]
Valley & Ridge	[X]	[ ]	[ ]
Expansion Joint	[X]	[ ]	[ ]
d. Gravel Stop & Edge Strips:			
Type METAL AT SOUTHWEST STAIR AND LOWER ROOFS	[ ]	[X]	[ ]
e. Drainage:			
Gutters w/ Exterior Downspouts SOUTHWEST STAIR	[ ]	[X]	[ ]
Scuppers w/ Exterior Downspouts EMERGENCY OVERFLOW	[ ]	[X]	[ ]
Drains w/ Interior Storm Drains FOUR ON EAST AND WEST	[ ]	[X]	[ ]
f. Parapets:			
Concrete	[X]	[ ]	[ ]
Brick AROUND PERIMETER OF ORIGINAL BUILDING	[ ]	[X]	[ ]
Block	[X]	[ ]	[ ]
Precast LIMESTONE CAPS	[ ]	[ ]	[X]
Other	[X]	[ ]	[ ]
g. Insulation:			
Type ONE AND ONE HALF INCHES UNDER EPDM ROOF	[ ]	[X]	[ ]

B. COMMENTS

1 SEAL ALL OF THE JOINTS IN THE PARAPET FLASHING AND PARAPET CAPS WITHIN THE NEXT 2 TO 3 YEARS SINCE THE COAL TAR IS BEGINNING TO CRACK AND WEATHER.
2 REPAIR GRAVEL STOP/TRIM AROUND THE LOADING DOCK OF NEW SECTION.
3 LOCATE LEAKS NOTED ABOVE IN THE LIMESTONE CAPS OVER THE FRONT ENTRANCE AND REPAIR.
4 LOCATE ROOF LEAKS AROUND PENTHOUSE PERIMETER AND AT SKYLIGHT AND REPAIR.

C. COMPONENT RATING: ($ 502,570) (89 %) = $ 447,287

Possible Value	Condition Value	Multiplier	Component Value

PARTITIONS & DOORS

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. Partition Framing:	N/A	Sat	Att
Concrete Block PERIMETER LOAD BEARING AND INTERIOR WALLS	[ ]	[X]	[ ]
Glazed Block	[X]	[ ]	[ ]
Wood Stud	[X]	[ ]	[ ]
Metal Stud ROOMS IN THE INTERIOR	[ ]	[X]	[ ]
Structural Tile	[X]	[ ]	[ ]
Rated	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
b. Special partitions and Walls:			
Toilet	[ ]	[X]	[ ]
Screen Walls	[ ]	[X]	[ ]
Gate CHAIN LINK IN STORE ROOM	[ ]	[X]	[ ]
c. Wall Material:			
Plaster AROUND EXISTING COLUMNS	[ ]	[ ]	[X]
Plaster Board DRYWALL ON METAL STUDS	[ ]	[ ]	[X]
Glass STORE FRONTS IN SOME AREAS	[ ]	[X]	[ ]
Plywood	[X]	[ ]	[ ]
Paneling	[X]	[ ]	[ ]
Trim & Wainscot CHAIR RAIL IN CLASSROOMS	[ ]	[ ]	[X]
Tile/Glazed IN COMMON AREAS, BENCHES AND RESTROOMS	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
d. Interior Doors & Frames:			
Met Door/Met Frame IN ROOMS TO BE SECURED	[ ]	[X]	[ ]
Wood Door/Wood Frame FOURTH FLOOR	[ ]	[X]	[ ]
Wood Door/Metal Frame CLASSROOMS	[ ]	[X]	[ ]
Glazing 4x12 INCH LITES ON CLASSROOM DOORS	[ ]	[X]	[ ]
Rollup	[X]	[ ]	[ ]
Sliding	[X]	[ ]	[ ]
Other FOLDING DOORS AROUND BOOK STORE	[ ]	[X]	[ ]
e. Hardware:			
Door Closures	[ ]	[X]	[ ]
Lock Sets	[ ]	[X]	[ ]
Kick/Push Plates	[ ]	[X]	[ ]
Thresholds	[ ]	[X]	[ ]
Panic Devices	[ ]	[X]	[ ]
Security & Detection	[ ]	[X]	[ ]
Automatic Openers	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]

B. COMMENTS:

1 NOTED SOME CRACKS IN THE PLASTER OVER THE COLUMN IN THREE AREAS, THESE SHOULD BE PATCHED AND MONITORED FOR FURTHER MOVEMENT.

2 DRYWALL IN THE SOUTH BASEMENT STAIRWELL IS BECOMING WET AFTER HEAVY RAINS AND NEEDS TO BE REPLACED AFTER REPAIRS TO THE FLOWER BED WALLS.

C. COMPONENT RATING: ($1,138,030) (93 %) = $1,058,368

Possible Value	Condition Value	Multiplier	Component Value

WALL FINISHES

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION	N/A	Sat	Att
a. Paint ON BLOCK AND DRYWALL	[ ]	[X]	[ ]
b. Wall Coating EPOXY SPACKLED PAINT FOURTH FLOOR	[ ]	[X]	[ ]
c. Wall Coverings	[X]	[ ]	[ ]
d. Paneling			
Prefinished	[X]	[ ]	[ ]
Plank	[X]	[ ]	[ ]
e. Cork	[X]	[ ]	[ ]
f. Wallpaper IN HALLS AND BELOW CHAIR RAILS IN CLASSROOMS	[ ]	[ ]	[X]
g. Ceramic Tile IN COMMON AREAS AND ON BENCHES	[ ]	[X]	[ ]
h. Trim & Wainscot PVC BASE IN CLASSROOMS OAK ON FOURTH	[ ]	[X]	[ ]
i. Decoration	[X]	[ ]	[ ]
j. Glass DIVIDER WALLS ON FIRST FLOOR AND BASEMENT AREAS	[ ]	[X]	[ ]
k. Other	[X]	[ ]	[ ]

B. COMMENTS

1 SOME CHAIR RAILS ARE PULLING AWAY AT JOINTS, RECOMMEND USING FINISH SCREWS TO SECURE TO THE METAL STUDS.

2 WALLPAPER IN THE SOUTHWEST HALL NEAR THE EXITS IS PEELING AND NEEDS TO BE REPAIRED, WHILE WALLPAPER IN CLASSROOMS NEEDS TO BE CLEANED.

C. COMPONENT RATING: ($ 576,264) (78 %) = $ 449,486

Possible Value	Condition Value	Multiplier	Component Value

FLOOR FINISHES

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Carpet:			
Rolled IN BOOKSTORE, SOME CLASSROOMS AND FOURTH FLOOR	[ ]	[ ]	[X]
Tile	[X]	[ ]	[ ]
b. Composition:			
Epoxy	[X]	[ ]	[ ]
Synthetic	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Concrete Topping:			
Clear Sealant DOCK AREAS	[ ]	[X]	[ ]
Abrasive	[X]	[ ]	[ ]
Epoxy IN MECHANICAL ROOMS AND ROOF LANDING	[ ]	[ ]	[X]
Aggregate	[X]	[ ]	[ ]
d. Resilient:			
Vinyl Tile 12x12 HALLS AND SOME CLASSROOMS	[ ]	[X]	[ ]
Linoleum Tile	[X]	[ ]	[ ]
Vinyl	[X]	[ ]	[ ]
Rubber	[ ]	[ ]	[X]
Cork	[X]	[ ]	[ ]
e. Ceramic Tile HALLS BASEMENT, FIRST AND RESTROOMS	[ ]	[ ]	[X]
f. Masonry	[X]	[ ]	[ ]
g. Terrazzo	[X]	[ ]	[ ]
h. Wood	[X]	[ ]	[ ]
i. Metal	[X]	[ ]	[ ]

B. COMMENTS

1 THE EPOXY FLOOR COATING IS LEAKING IN SEVERAL AREAS OF THE MECHANICAL ROOMS AND HAS PEELED SOUTHWEST STAIR LANDING AND NEEDS TO BE REPAIRED.
2 SOME OF THE CERAMIC TILE AT THE ENTRANCE, ELEVATORS AND HALLS OF THE FIRST FLOOR ARE CRACKED AND NEED TO BE REPLACED.
3 SOME RUBBER STAIR TREADS ARE LOOSE AND ARE BEING REPLACED.
4 CARPET NEEDS CLEANED IN SEVERAL ROOMS ON THE THIRD FLOOR.

C. COMPONENT RATING: ($ 793,722) (92 %) = $ 730,224

Possible Value	Condition Value	Multiplier	Component Value

CEILINGS AND FINISHES

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. System Type:	N/A	Sat	Att
Exposed	[ ]	[X]	[ ]
Applied to Structure	[X]	[ ]	[ ]
Suspended MINERAL FIBER	[ ]	[ ]	[X]
b. Materials:			
Drywall	[ ]	[X]	[ ]
Plaster	[X]	[ ]	[ ]
Mineral Fiber Board 2x2, 2x4, LAY-IN, 1x1 CONCEALED SPINE	[ ]	[ ]	[X]
Metal Pan	[X]	[ ]	[ ]
Luminous Panels	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Finishes:			
Paint	[ ]	[X]	[ ]
Fabric	[X]	[ ]	[ ]
Prefinished	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
d. Openings & Inserts:			
Air Distribution	[ ]	[X]	[ ]
Lighting Fixtures	[ ]	[X]	[ ]
Access Panels	[ ]	[X]	[ ]
Skylights FOURTH FLOOR	[ ]	[ ]	[X]
Fire Protection SPRINKLERS FIRST AND SECOND FLOOR	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]

B. COMMENTS:

1 REPLACE STAINED TILES FROM PREVIOUS LEAKS.
2 REPAIR THE INTERIOR SKYLIGHT DRYWALL TRIM.
3 SOME OF THE TILES IN VARIOUS ROOMS HAVE SAGGED IN THE CENTER BECAUSE OF HIGH MOISTURE CONTENT IN THE AIR AT SOME TIME.

C. COMPONENT RATING: ($ 652,374) (86 %) = $ 561,042

Possible Value	Condition Value	Multiplier	Component Value

CONVEYING

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. Elevators:				N/A	Sat	Att
Number	THREE			[ ]	[X]	[ ]
Type	DOVER	DOVER	DOVER	[ ]	[X]	[ ]
Speed	350	350	50	[ ]	[X]	[ ]
Capacity (lbs)	3000	3000	7000	[ ]	[X]	[ ]
Dimensions	57" x 81"	57" x 81"	81" x 75"	[ ]	[X]	[ ]
Door Operation:						
Center	X	X	GATE	[ ]	[X]	[ ]
To Side				[ ]	[X]	[ ]

b. Lifts and Hoists:			
Number	[X]	[ ]	[ ]
Type	[X]	[ ]	[ ]
c. Moving Stairs and Walks:			
Number	[X]	[ ]	[ ]
Type	[X]	[ ]	[ ]
d. Conveyors:			
Number ONE IN BOOKSTORE STORAGE AREA BASEMENT TO FIRST	[ ]	[X]	[ ]
Type BELT CONVEYOR	[ ]	[X]	[ ]
e. Pneumatic Tubes:			
Number	[X]	[ ]	[ ]
Type	[X]	[ ]	[ ]

B. COMMENTS:

THE ELEVATORS WERE UPGRADED WITH NEW CARS TO MEET THE LATEST ADA CODE; HOWEVER, THE MOTORS AND CONTROLS WERE NOT CHANGED OUT AT THAT TIME.

C. COMPONENT RATING: ($ 488,072) (90 %) = $ 439,265

Possible Value	Condition Value	Multiplier	Component Value

MECHANICAL/PLUMBING

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. Services Available:	N/A	Sat	Att
Cold Water 4" INTO ROOM 002M	[ ]	[ ]	[X]
Hot Water 1-1/2" IN ROOM 002M	[ ]	[ ]	[X]
Acid Waste	[X]	[ ]	[ ]
Oxygen	[X]	[ ]	[ ]
Natural Gas	[X]	[ ]	[ ]
Vacuum	[X]	[ ]	[ ]
Distilled Water	[X]	[ ]	[ ]
Compressed Air LOCATED IN 500M	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
b. Piping & Fittings:			
Cast Iron ON SANITARY AND STORM	[ ]	[X]	[ ]
Copper Piping ON HOT & COLD WATER	[ ]	[X]	[ ]
Copper Tubing ON CONTROL AIR	[ ]	[X]	[ ]
Plastic	[X]	[ ]	[ ]
Steel ON CHILLED, HEATING, FIRE AND STEAM SERVICES	[ ]	[X]	[ ]
Glass	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
c. Water Heaters:			
Electric	[X]	[ ]	[ ]
Gas	[X]	[ ]	[ ]
Oil	[X]	[ ]	[ ]
Steam Converter	[X]	[ ]	[ ]
Other FROM POWER PLANT	[ ]	[X]	[ ]
d. Drainage:			
Storm Drains SEVERAL TO 8" ON EAST AND SOME TO 12" WEST	[ ]	[X]	[ ]
Sanitary Drainage 6" TO NORTH WEST MANHOLE	[ ]	[X]	[ ]
Combined Storm/San.	[X]	[ ]	[ ]
Floor Drains IN RESTROOMS AND EQUIPMENT ROOMS	[ ]	[X]	[ ]
e. Fixtures:			
Water Closets 25	[ ]	[X]	[ ]
Urinals 12	[ ]	[X]	[ ]
Lavatories 19	[ ]	[X]	[ ]
Showers	[X]	[ ]	[ ]
Kitchen Sinks 2	[ ]	[X]	[ ]
Service Sinks 5	[ ]	[X]	[ ]
Drinking Fountains	[X]	[ ]	[ ]
Electric Water Coolers 10	[ ]	[X]	[ ]
f. Sprinkler Systems:			
Wet LIMITED TO BASEMENT AND FIRST FLOORS	[ ]	[X]	[ ]
Dry	[X]	[ ]	[ ]
g. Standpipe Systems:			
Wet IN SOUTHEAST AND NORTHWEST STAIRWELLS	[ ]	[X]	[ ]
Dry	[X]	[ ]	[ ]
Valves LOCATED IN STAIR WELLS	[ ]	[X]	[ ]
Hose Cabinets NEXT TO STAIR WELLS	[ ]	[X]	[ ]

B. COMMENTS:

1 LAV FAUCETS IN SEVERAL RESTROOMS WERE LEAKING AND NEED TO BE REPAIRED.
2 WATER PRESSURE WAS HIGH ON THE SECOND FLOOR SPLASHING WATER OVER COUNTERS RECOMMEND THAT A PRESSURE REDUCING VALVE BE INSTALLED IN WATER SUPPLY.
3 FLUSH VALVES HAVE BEEN REPLACED WITH ELECTRONIC EYE CONTROLLED VALVES.

C. COMPONENT RATING: ($1,002,723) (92 %) = $ 922,505

Possible Value	Condition Value	Multiplier	Component Value

MECHANICAL/HEATING

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. Heat Source:			
Central Plant Steam 3" HPS LINE FROM 6 "IN TUNNEL 002M	[ ]	[X]	[ ]
Central Plant Hot Water	[X]	[ ]	[ ]
Boilers: Type	[X]	[ ]	[ ]
Size	[X]	[ ]	[ ]
Furnace: Type	[X]	[ ]	[ ]
Size	[X]	[ ]	[ ]
Heat Pump: Type	[X]	[ ]	[ ]
Size	[X]	[ ]	[ ]
b. System Type:			
Steam 3" HPS REDUCED TO MPS AND DESUPERHEATED IN RM 500M	[ ]	[X]	[ ]
Hot Water MPS TO HOT WATER CONVERTER IN 500M, 5" SUPPLY	[ ]	[X]	[ ]
Air ONE AIR HANDLER IN ROOM 500M WITH VARIABLE SPEED FAN	[ ]	[X]	[ ]
Multizone	[X]	[ ]	[ ]
Dual Duct	[X]	[ ]	[ ]
Terminal Reheat ON PERIMETER VARIABLE VOLUME BOXES	[ ]	[X]	[ ]
Variable Volume	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
c. Space Equipment:			
Radiators	[X]	[ ]	[ ]
Convectors AT WINDOWS AND IN RESTROOMS	[ ]	[X]	[ ]
2-Pipe Fan Coil AT MOST ENTRANCES	[ ]	[X]	[ ]
Unit Heaters IN STORAGE AREAS AND PENTHOUSE	[ ]	[X]	[ ]
Other	[X]	[ ]	[ ]
d. Control Type:			
Pneu	[ ]	[X]	[ ]
Electric	[ ]	[X]	[ ]
DDC	[ ]	[X]	[ ]
Manual Valves	[X]	[ ]	[ ]

B. COMMENTS:

NONE

C. COMPONENT RATING: ($ 802,178) (92 %) = $ 738,004

Possible Value	Condition Value	Multiplier	Component Value

COOLING & VENTILATING

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
a. System:			
Type VAV WITH VARIABLE SPEED FAN	[ ]	[ ]	[X]
Capacity 265 TONS TOTAL	[ ]	[X]	[ ]
b. Chillers:			
Centrifugal 265 TON R-11 CARRIER UNIT ROOM 500M INST 1989	[ ]	[ ]	[X]
Reciprocating	[X]	[ ]	[ ]
Absorption	[X]	[ ]	[ ]
c. Cooling Towers:			
Type ONE MARLEY	[ ]	[ ]	[X]
Capacity 265 TON AT 795 GPM	[ ]	[ ]	[X]
d. Condensers: TWO 5 TON ONE R-12 & ONE R-22	[ ]	[X]	[ ]
e. Space Equipment:			
Direct Expansion -			
Window units	[X]	[ ]	[ ]
Thru-the-wall	[X]	[ ]	[ ]
Single zone SPLIT SYSTEM UNIT REMOVED	[ ]	[X]	[ ]
Single zone con. vol.	[x]	[ ]	[ ]
Other	[X]	[ ]	[ ]
Air/Water -			
2-pipe fan coil	[ ]	[X]	[ ]
Unit ventilators	[X]	[ ]	[ ]
Terminal reheat ON PERIMETER VAV BOXES	[ ]	[X]	[ ]
Variable volume ON MAIN UNIT	[ ]	[ ]	[X]
Constant volume	[X]	[ ]	[ ]
Dual Duct	[X]	[ ]	[ ]
Multizone	[X]	[ ]	[ ]
f. Special Systems:			
Type	[X]	[ ]	[ ]
Capacity	[X]	[ ]	[ ]
Type	[X]	[ ]	[ ]
Capacity	[X]	[ ]	[ ]
g. Control Systems:			
Pneu	[ ]	[X]	[ ]
Electric	[ ]	[X]	[ ]
Electronic	[ ]	[X]	[ ]
h. Fans:			
Exhaust ON RETURN AIR	[ ]	[X]	[ ]
Recirculating ON AUH	[ ]	[X]	[ ]

B. COMMENTS:

1 THE 265 TON R-11 CHILLER WAS INSTALLED IN 1988, HOWEVER, THIS UNIT WILL NEED TO BE REPLACED WITHIN 10 YEARS IF R-11 REFRIGERANT BECOMES SCARCE.

2 SEAL HP DUCT LEAKS AND PLUG TEST HOLES IN ROOM 500M.

3 ROOM 110 IS WARM DUE TO THE THREE COOLERS DISCHARGING WARM CONDENSER AIR INTO THE ROOM, A EXHAUST FAN OVER THE COOLERS TO THE RETURN DUCT IS RECOMMENDED ALONG WITH INCREASING THE VAV BOX AIR FLOW TO THE SPACE.

4 IT WAS NOTED THAT LIGHT SWITCHES ON THE AIR HANDLING UNIT HOUSING WERE SWEATING CREATING A POSSIBILITY OF PRODUCING A ELECTRICAL SHOCK TO THE OPERATOR, THESE SHOULD BE MOVED AWAY FROM THE HOUSING AND A THERMAL BREAK INSTALLED, ALSO THESE CIRCUITS SHOULD BE ON A GFIC FOR FURTHER PROTECTION.

5 SEVERAL DUCTS IN THE EQUIPMENT ROOM 500M AND THE FOURTH FLOOR WERE SWEATING OR SHOWING SIGNS THEREOF, SOME OF THE CONDENSATE ON THE FIFTH FLOOR WAS DRIPPING DOWN THE CHASES, DUCT IN ROOM 500M SHOULD BE WRAPPED WHILE THOSE ON THE FOURTH FLOOR COULD BE PAINTED WITH A PLASTIC BASED PAINT SO STAINING WOULD NOT BE EVIDENT.

6 AIR CONDITIONING THE PENTHOUSE COULD RESOLVE ITEMS 5 AND SOME OF 4.

7 THE COOLING TOWER WAS NOT PROCESSING THE 795 GPM OF WATER REQUIRED AND NEEDS ADJUSTED OR REPAIRED.

8 SOME LEAKS ON THE FOURTH FLOOR APPEAR TO BE DUE TO LEAKS UNDER THE AIR HANDLING UNIT AROUND THE CHILLED WATER COILS, POSSIBLY WATER CARRYOVER AND AROUND THE FRESH AIR INTAKE, DUE TO WATER AND SNOW CARRYOVER. SEALING THE FLOORS OF THE AIR HANDLER HOUSING WITH A RUBBER BASED COMPOUND COULD CORRECT THIS PROBLEM.

C. COMPONENT RATING: ($ 919,364) (89 %) = $ 818,234

Possible Value	Condition Value	Multiplier	Component Value

ELECTRICAL/SERVICE & DISTRIBUTION

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

(a)Service:

Substation BUCKEYE 107/307 CIRCUITS
Primary Voltage 13,800 VOLTS
Transformer:

Manufacture	Type	KVA	Secondary Voltages
WEST	OIL	1000	480/277 RM 048M

(b)Distribution System:

Panelboard (type) CIRCUIT BREAKER
Voltage 208/120
Amperage VARIES BETWEEN 200 AND 400 AMPS
Conduit STEEL
Conductor COPPER
Wire (type) VARIES
Armored Cable ON LIGHT DROPS
Other

(c)Emergency System:

General or (type & capacity) BATTERIES ON LIGHTS

B. COMMENTS:

1 ALL MECHANICAL EQUIPMENT IS OPERATED FROM 480 VOLT POWER.

C. COMPONENT RATING: ($ 158,261) (92 %) = $ 145,600

Possible Value	Condition Value	Multiplier	Component Value

ELECTRICAL/LIGHTING & POWER

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

a. Lighting (lamp type):	N/A	Sat	Att
Fluor ALL AREAS	[ ]	[X]	[ ]
Incand	[X]	[ ]	[ ]
HID YARD AND AREA LIGHTING	[ ]	[X]	[ ]
Other 12 VOLT HID ACCENT LIGHTING IN SEVERAL AREAS	[ ]	[X]	[ ]
Other FLUORESCENT RECESSED CAN TYPE ACCENT LIGHTING	[ ]	[X]	[ ]
b. Receptacles & Switches:			
Type & Capacity 120V @ 20A	[ ]	[X]	[ ]
c. Special:			
Baseboard Heat	[X]	[ ]	[ ]
Lightning Protection	[ ]	[X]	[ ]
Communication & Alarm	[ ]	[X]	[ ]
Data Systems	[ ]	[X]	[ ]

B. COMMENTS:

NONE

C. COMPONENT RATING: ($1,254,008) (92 %) = $1,153,687

Possible Value	Condition Value	Multiplier	Component Value

SAFETY STANDARDS

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

	N/A	Sat	Att
(a)Exits:			
Stair Construction:			
concrete BLOCK WITH DRYWALL	[ ]	[X]	[ ]
steel STAIRS	[ ]	[ ]	[X]
wood	[X]	[ ]	[ ]
Number of exits SEVEN	[ ]	[X]	[ ]
(b)Fire Rating:			
Construction Type: I X II III IV V VI			
Building Height: 70 FOOT ft., FIVE stories			
(c)Extinguishing Systems:			
Portable THROUGHOUT BUILDING	[ ]	[X]	[ ]
Standpipe IN SOUTHEAST AND NORTHWEST STAIRWAYS	[ ]	[X]	[ ]
Hose Cabinets OUTSIDE STAND PIPE STAIRWAY	[ ]	[X]	[ ]
Sprinklers LIMITED ON FIRST FLOOR AND BASEMENT	[ ]	[X]	[ ]
Suppression	[X]	[ ]	[ ]
Other	[X]	[ ]	[ ]
(d)Detection & Alarm Systems:			
Manual Alarm PULL STATIONS AT EXITS	[ ]	[X]	[ ]
Annunciator BELLS IN HALLWAYS	[ ]	[X]	[ ]
Smoke Detectors AT ELEVATORS	[ ]	[X]	[ ]
(e)Lighting Systems:			
Exit Signs ON EMERGENCY CIRCUIT AND BATTERY	[ ]	[X]	[ ]
Exit Lighting "	[ ]	[X]	[ ]
Emergency Lighting "	[ ]	[X]	[ ]
Emergency Generator	[x]	[ ]	[ ]

B. COMMENTS:

1 LANDINGS AT EXTERIOR WALL AND WINDOWS HAVE A SIZABLE HOLE IN FRONT OF THE WINDOW, A GUARD RAIL NEEDS TO BE INSTALLED AT 6 LOCATIONS ON THE WEST STAIRWELLS.

2 THE HAND RAILS IN THE EAST STAIRS ARE LOOSE AT SEVERAL ANCHORS, SOME CONNECTORS ARE MISSING OR DO NOT MATCH WITH ADJACENT SECTIONS.

C. COMPONENT RATING: ($ 434,916) (92 %) = $ 400,123

Possible Value	Condition Value	Multiplier	Component Value

BUILDING PERIMETER EVALUATION

FAC # 072 DATE 08/30/95 INSPECTOR: JAO

A. SYSTEM DESCRIPTION

1. Building Access:	N/A	Sat	Att
Driveway SOUTH, WEST AND NORTH	[ ]	[X]	[ ]
Loading Dock FOUR TRAILER BAYS ON WEST AND TWO WOOD	[ ]	[ ]	[X]
Sidewalks			
Front BRICK PAVERS	[ ]	[X]	[ ]
Side SOUTH AND NORTH CONCRETE	[ ]	[ ]	[X]
Rear FROM NORTHWEST EXIT	[ ]	[X]	[ ]
Steps			
Front	[X]	[ ]	[ ]
Side AT SOUTH STAIRWAY EXIT	[ ]	[X]	[ ]
Rear	[X]	[ ]	[ ]
Handicap Ramp	[X]	[ ]	[ ]

2. Lawn and Landscaping:			
Lawn NONE	[X]	[ ]	[ ]
Shrubs EAST	[ ]	[X]	[ ]
Trees EAST	[ ]	[X]	[ ]
Undesirable Insect COCKROACH PROBLEM IN 002 & 004M	[ ]	[X]	[ ]
Bedding Material	[ ]	[X]	[ ]
Watering System EXTERIOR HOSE BIBBS	[ ]	[X]	[ ]

3. General Site Information:			
Signage	[ ]	[X]	[ ]
Address Identification	[ ]	[X]	[ ]
Security Lights ON WALLS AND ROOF	[ ]	[X]	[ ]
Street Lights	[ ]	[X]	[ ]
Drainage	[ ]	[ ]	[X]
Storm Drains	[ ]	[X]	[ ]

B. COMMENTS:

1 CONCRETE WALK ON SOUTH SIDE IS SPALLING AND NEEDS TO BE REPAIRED.

2 SOUTHWEST STAIRWELL EXIT DRAIN NEEDS TO BE PRESSURE CLEANED.

3 DRAINAGE NEEDS INSTALLED IN THE HIGH VOLTAGE SWITCH AREA WHERE WATER PONDS IN FRONT OF THE SWITCH OPERATORS.

4 SIDEWALKS ON THE NORTH SIDE NEED TO BE CAULKED WHERE EXPANSION JOINTS HAVE DETERIORATED AND ARE HOLDING WATER SO MOSS GROWS.

5 DEAD COCKROACHES FOUND ON FLOOR OF ROOMS 002M 002J AND 004M.

6 CRACKS IN ALL OF THE CONCRETE WALLS BOTH AT THE DOCK AREA AND AT THE FLOWER BEDS NEEDS TO BE CAULKED WITH EPOXY.

7 RAIN WATER BUILDS UP INSIDE THE PLANTERS ON THE NORTH AND SOUTH OF THE ENTRANCE. AFTER HEAVY RAINS THE WATER SEEPS THROUGH THE WALLS IN SOUTH STAIRWELL, CAUSING THE DRYWALL TO DETERIORATE. DRAINS SHOULD BE INSTALLED IN THE CONCRETE WALLS TO DRAIN THE FLOWER BEDS.

The Ohio State University
Department of Physical Facilities
BUILDING AUDIT METHODOLOGY

l. 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 University Resource Planning & Institutional Analysis for each OSU building. This building replacement cost is allocated to each building component to provide an estimated value for each component. Project cost estimates will exceed the building component values in most situations because of tear-out, handling and site limitations that occur in building component replacement projects.

5. DATA USAGE

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

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

6. LIMITATIONS

(1) All inspections are visual and do not include physical tests,

instrumentation or metering measurements, sampling, or monitoring.

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

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

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

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

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

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

(b) Includes exterior building walls and attached items.

(c) Includes the first step up at all entries. Ramps outside the buildings are included; the steps and walks up to the ramps are not included.
(d) Blinds, drapes, light bulbs, and movable furniture are not included.

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

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

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

ABBREVIATIONS

A/C.....AIR CONDITIONING
AHU.....AIR HANDLING UNIT
ATT.....ATTENTION
BLDG.....BUILDING
BUR.....BUILT UP ROOF
COND.....CONDENSATE WATER
CAV.....CONSTANT AIR VOLUME
DD.....DUAL DUCT AIR HANDLING SYSTEM
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 SYSTEM
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 SYSTEM
N/A.....NOT APPLICABLE
PSI.....POUNDS PER SQUARE INCH
RM.....ROOM
SAT.....SATISFACTORY
SF.....SQUARE FEET
S/P.....STAND PIPE
SR.....STEAM RETURN LINE
SS.....STEAM SUPPLY LINE
SY.....SQUARE YARDS
TR.....TERMINAL REHEAT AIR HANDLING SYSTEM
V.....VOLTS
VAV.....VARIABLE AIR VOLUME

APPENDIX

Building Floor Plans

C-1 Building space Assignments