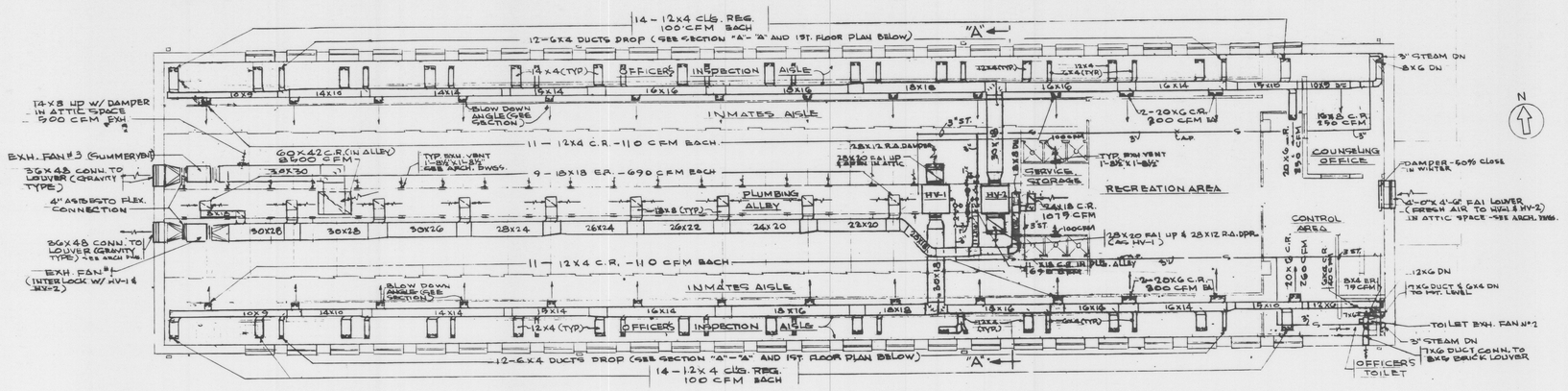


SECOND LEVEL FLOOR PLAN - HEATING & VENTILATING - BLDG. P-5

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1- ALL DUCTWORK ABOVE FIRE RATED CEILING SHALL BE COVERED WITH 1½" LIMIT FOR TWO HOUR PROTECTION

2- PROVIDE A FIRESTAT FOR EACH EXHAUST FAN

3- ROOM THERMOSTAT SHALL BE CONCEALED IN TAMPER PROOF METAL ASPIRATING BOX MOUNTED FLUSH WITH FINISH WALL. (SEE ABOVE

4- PROVIDE RUBBER IN-SHEAR ISOLATORS FOR CENTRIFUGAL FAN AND EXHAUST FANS

5- PROVIDE ½" MESH SCREEN ON ALL LOUVERS.

6- PROVIDE 12"x12" ACCESS PANEL & HAND HOLE IN DUCT TO EACH FIRE DAMPER.

7- PROVIDE ACCESS TO ALL OPERATIONAL DEVICES AND EXHAUST FANS.

8- PROVIDE ADJUSTABLE SHEAVES ON ALL HV UNITS.

9- PROVIDE FLEXIBLE CONNECTIONS ON ALL DUCT CONNECTIONS TO MOTOR DRIVEN EQUIPMENT.

SYMBOLS

- FLEXIBLE CONNECTION
- SUPPLY AIR DUCT DOWN
- EXH. AIR DUCT AND FRESH AIR DUCT DOWN
- EXISTING PIPING TO REMOVE
- EXIST. RADIATOR TO REMOVE
- B.R. — EXHAUST REGISTER
- FAI — FRESH AIR INTAKE
- GR. — GRILLE
- C.R. — CEILING REGISTER
- R.A. — RETURN AIR
- T.R. — TOP REGISTER
- LOW PRESSURE STEAM PIPE
- CONDENSATE RETURN PIPE
- GATE VALVE
- AUTOMATIC CONTROL VALVE
- PIPING UP
- PIPING DOWN
- STRAINER
- FLOAT AND THERMOSTATIC TRAP
- NEW AND EXISTING PIPING CONNECTION
- T — THERMOSTAT
- A.P. — ANCHOR POINT
- T.S.P. — TOTAL STATIC PRESSURE
- FIRE DAMPER (F.D.)

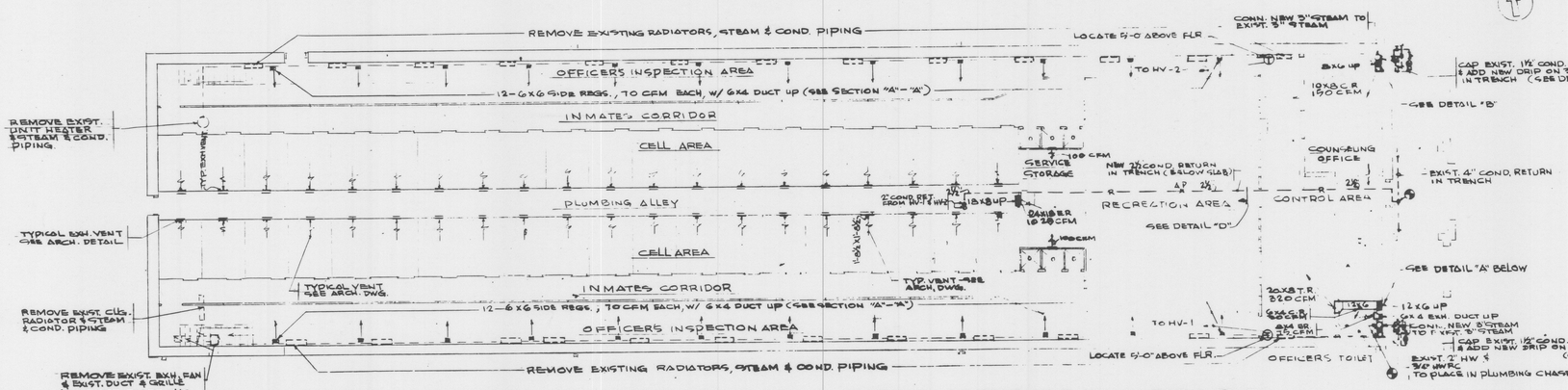
EQUIPMENT

1- HEATING AND VENTILATING UNIT (HV-1 & HV-2): 4500 CFM @ ½" EXT. S.P. 2HP. WITH STEAM HEATING COIL, CAPABLE OF HEATING 4500 CFM AND 645 MBH CAPACITY. (740 #/HR STEAM VALVE CAP. & 2220 #/HR TRAP CAP.) 43°F ENT. & 142°F LEAV. COIL WITH 15 PSIG STEAM PRESSURE FOR 50% EA. AT 0° ENTERING. (NORMALLY OPERATE

2- EXH. FAN #1: TWO SPEED IN-LINE DUCT FAN, BELT-DRIVEN, 9000 CFM MAX. @ 3/8" T.S.P. 2HP., 16" OUTLET VELOCITY, 4500 CFM MIN.

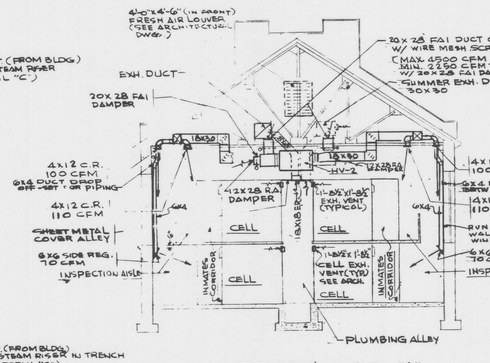
4- EXH. FAN #2: DIRECT DRIVE, UTILITY SET, 150 CFM @ ⅛" S.P., 1725 RPM MOTOR 1/8 HP

5- EXH. FAN #3: SUMMER EXH. FAN, 9000 CFM @ 3/8" S.P. 2 H.P. 16" OUTLET VELOCITY. (SWITCH ON FOR SUMMER OPERATION AND OPEN WINDOW FOR ADDITIONAL VENTILATING AIR SUPPLY.)



FIRST LEVEL FLOOR PLAN - HEATING & VENTILATING - BLDG. P-5

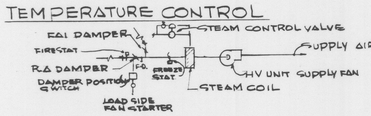
SCALE: 1/8" = 1'-0"



SECTION "A" - "A"

SCALE: 1/8" = 1'-0"

TEMPERATURE CONTROL

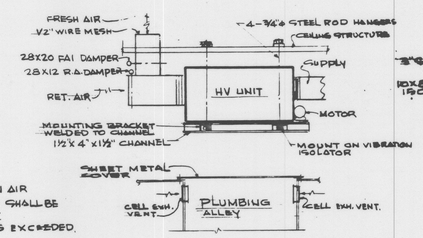


1- WHEN THE SUPPLY FAN STARTED, FRESH AIR DAMPER AND RETURN AIR DAMPER SHALL BE SET IN 50% POSITION AND THE EXHAUST FAN SHALL BE ENERGIZED WITH MIN. EXHAUST AIR (100% FOR SUMMER OPERATION).

2- FIRESTAT AND FREEZESTAT WILL STOP FAN, IF EITHER SETTING IS EXCEEDED. THEY MUST BE MANUALLY RESET.

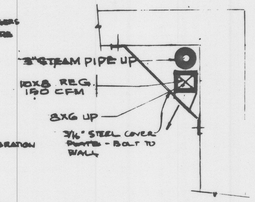
3- ROOM THERMOSTAT SHALL MODULATE STEAM CONTROL VALVE AND MAINTAIN ROOM TEMPERATURE.

4- PROVIDE INTERLOCK OF HV #1 & #2 UNITS AND EXHAUST FANS.



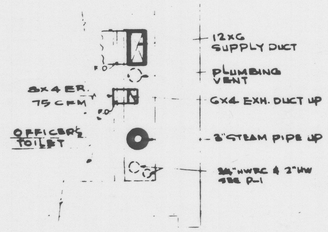
HV UNIT MOUNTING DETAIL

NOT TO SCALE



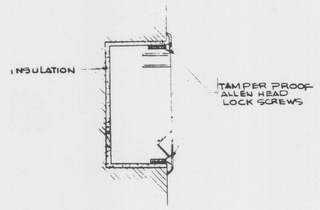
DETAIL "B"

SCALE: 1/2" = 1'-0"



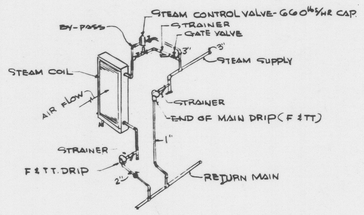
DETAIL "A"

SCALE: 1/2" = 1'-0"



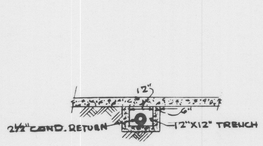
THERMOSTAT ASPIRATING BOX

NOT TO SCALE



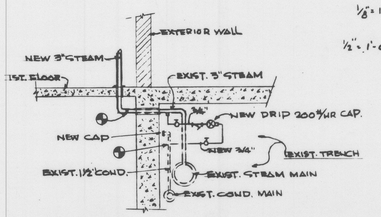
STEAM COIL PIPING

NOT TO SCALE



DETAIL "D"

NOT TO SCALE



DETAIL "C" - RISER DRIP

NOT TO SCALE

As-Built

DISTRICT OF COLUMBIA — W. E. BERGSTRAM — No. 5034 — REGISTERED PROFESSIONAL ARCHITECT

CERTIFICATION
THE PROPOSED MODIFICATIONS TO THIS EXISTING BUILDING ARE DESIGNED IN ACCORDANCE WITH ALL DISTRICT OF COLUMBIA APPLICABLE CODES AND REGULATIONS.

ASSISTANT DIRECTOR FOR BUREAU OF DESIGN AND ENGINEERING — DATE 7/26/71

DESIGNED	J.C.
DRAWN	J.C.
CHECKED	
REGISTRATION NO.	5234
DATE	6/18/71
ARCHITECT	
DATE	APR. 22 1971

REVISION	DATE	DESCRIPTION	BY	APP.
	JUL 27 1971	ISSUED FOR BIDS		

PROJECT DRAWINGS

PLANS · DIAGRAMS · SCHEDULES · DETAILS

INSTALLATION OF CELLS - BUILDING P-5
LORTON REFORMATORY · LORTON, VIRGINIA
DEPARTMENT OF CORRECTIONS

NELSON, TILGHMAN ASSOCIATES · ARCHITECTS
815 THAYER AVENUE · SILVER SPRING, MARYLAND · 20910

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF GENERAL SERVICES

HEATING & VENTILATING

DRAWING NO. HV-1

PROJECT NO. 22-115-70
DATE APRIL 12, 1971
SHEET 9 OF 10