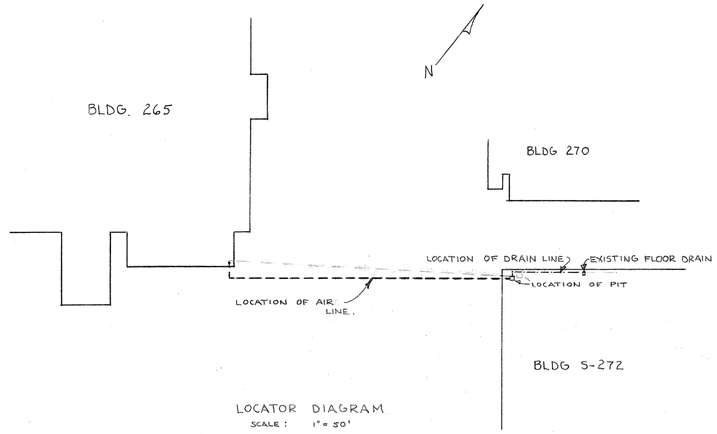
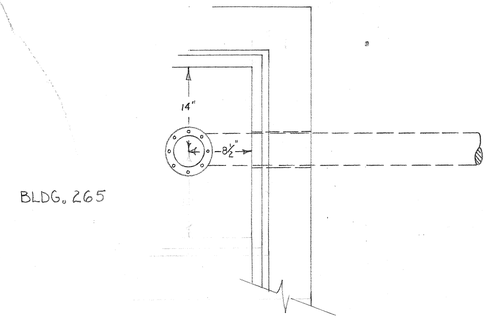
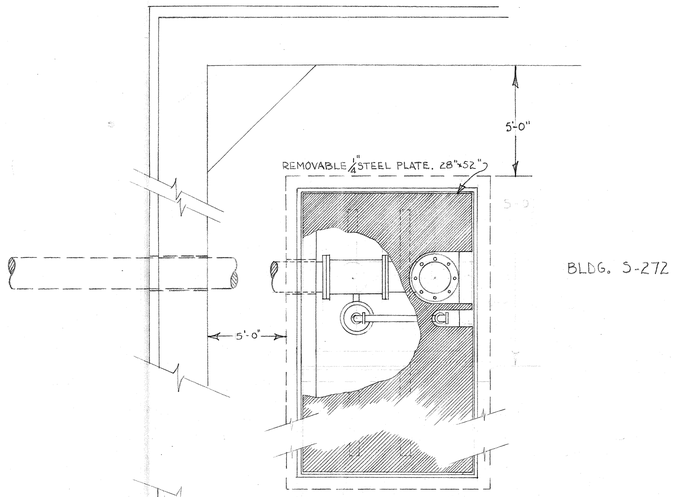


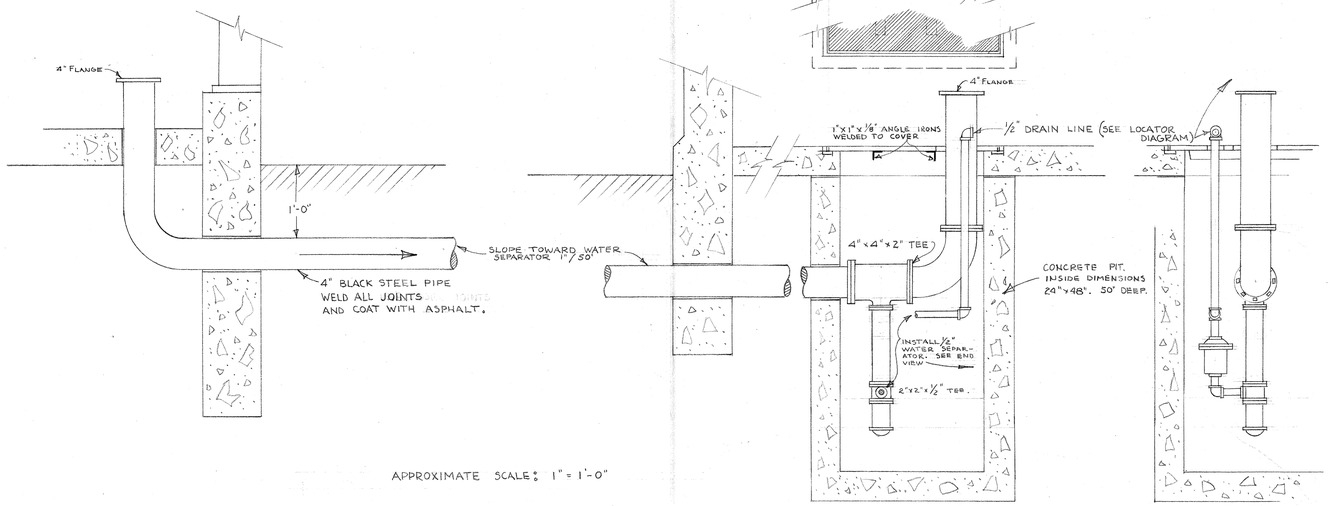
LOCATOR DIAGRAM
SCALE : 1" = 50'



BLDG. 265



BLDG. S-272



APPROXIMATE SCALE: 1" = 1'-0"

NOTES.

WATER SEPARATOR TO BE EQUAL TO ARMSTRONG NO. 213 INVERTED BUCKET TRAP. INCLUDE BUCKET VENT SCRUBBING WIRE.

RUN ½" DRAIN LINE ALONG NORTHWEST WALL OF BLDG. S-272 FROM SEPARATOR PIT TO EXISTING FLOOR DRAIN AS SHOWN.

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR MATERIEL AREA
OFFICE OF AIR INSTALLATIONS

HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY: HEATH & CHAPMAN
DRAWN BY: CHAPMAN 4-14-54
TRACED BY:
CHECKED BY — DATE: JOHNSON 15 APR '54
APPROVED BY — DATE:

4" AIR LINE BETWEEN BLDGS. 265 AND S-272

SUBMITTED: [illegible] — APPROVAL RECOMMENDED: [illegible] — APPROVED: Charles D. Rieger
APPROVED: [illegible] DATE: 16 APR 1954
APPROVED: Earl J. Romfelt, BAE, DATE: 16 Apr 54
APPROVED: [illegible] ME DATE: 19 Apr 54

PROJECT NO: 7624

DRAWING NUMBER
54-2995

SHEET 1 OF 1 — SCALE: NOTED

Robt. McDonnell EDS 21 Apr 54

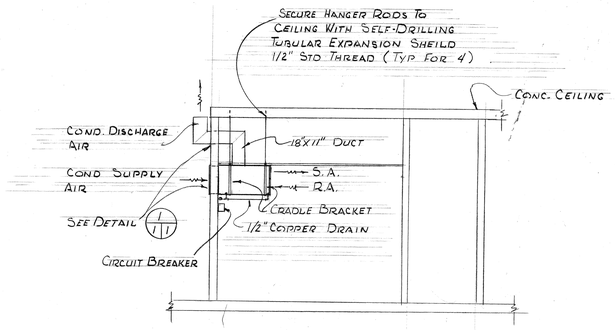
19

PHOTO BLUE

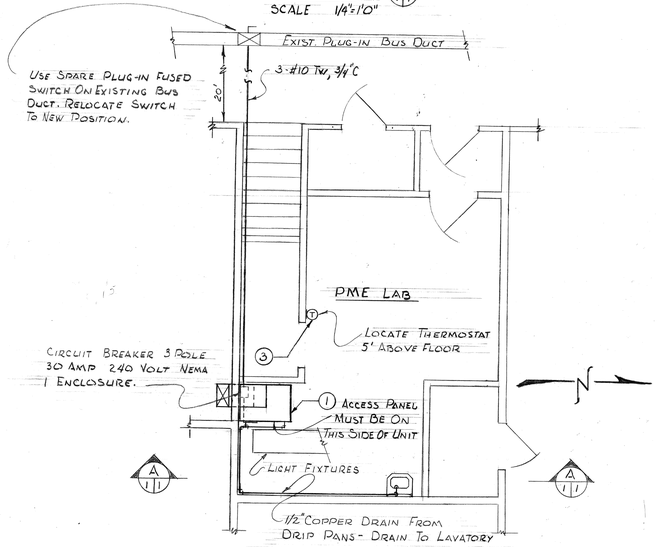
265-54-5

116-720 M

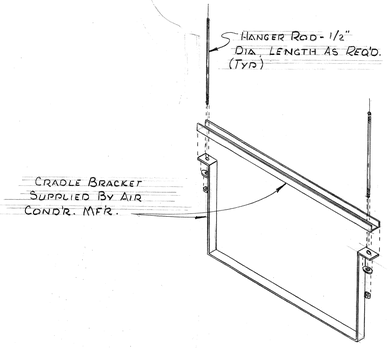
19



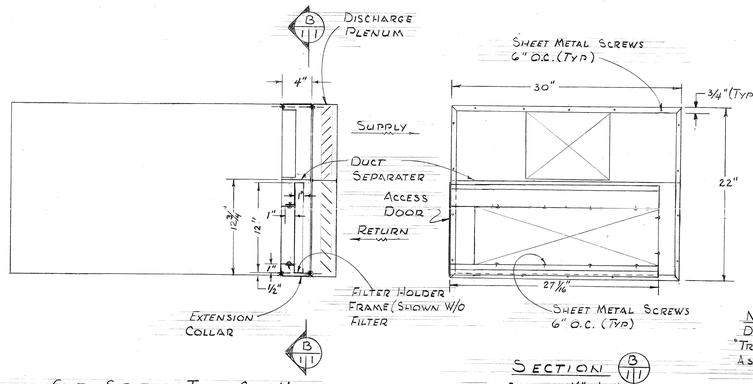
SECTION A III
SCALE 1/4"=1'0"



PLAN PME LAB - CENTER OF BLDG 265
SCALE 1/4"=1'0"



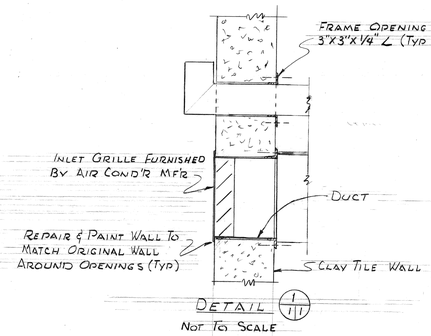
CRADLE BRACKET - DETAIL
NOT TO SCALE



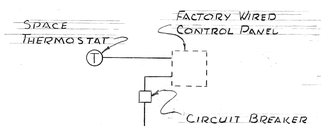
CUT SECTION THRU ℄ OF UNIT
SCALE 1½"=1'-0"

SECTION B III
SCALE 1½"=1'-0"

NOTE:
DIMENSIONS SHOWN ARE FOR "TRANE" UNIT SPECIFIED. MODIFY AS REQ'D FOR UNIT SUBMITTED.



DETAIL 1/III
NOT TO SCALE



CONTROL DIAGRAM
NOT TO SCALE

EQUIPMENT SPECIFICATION

(1) PACKAGE AIR CONDITIONER SHALL CONSIST OF A COMPRESSOR, COOLING COIL, AIR COOLED CONDENSER, FAN MOTORS & DRIVES, OPERATING CONTROLS, CRADLE BRACKETS, FREE DISCHARGE PLENUM & OUTDOOR INLET GRILLE.

COOLING CAPACITY SHALL BE 19600 BTUH @ 73 °F EDB, 57 °F EWB. & 870 CFM TO EVAPORATOR & 85°F AIR TO CONDENSER COIL.

CONTROLS SHALL BE MOUNTED IN A FACTORY WIRED CONTROL PANEL WITHIN THE UNIT AND SHALL INCLUDE HIGH PRESSURE CUTOUT WITH THERMOSTATIC RESET, COMPRESSOR PROTECTION CUTOUT W/ RESET, LOW PRESSURE CUT OUT, & MAGNETIC STARTER.

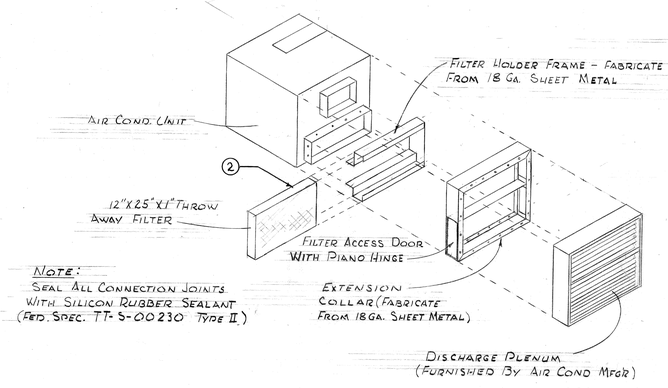
COMPRESSOR SHALL BE OF THE HERMETIC TYPE WITH A HOLDING CHARGE OF R-22.

MINIMUM MOTOR SIZES SHALL BE:
COMPRESSOR - 2 HP/208/3℘/60~ @ 1800 RPM (FLA=8.7, LRA=47)
COND. FAN - 1/3 HP/208/1℘/60~ @ 1725 RPM (FLA=2.6, LRA=15.3)
EVAP. FAN - 1/4 HP/208/1℘/60~ @ 1725 RPM (FLA=2.2, LRA=11.5)

UNIT SHALL BE "TRANE" SH-203 OR APPROVED EQUAL.

(2) FILTER SHALL BE 12"X25"X1" FIBERGLASS THROW-AWAY TYPE.

(3) SPACE THERMOSTAT SHALL BE TWO POSITION W/ RANGE 60°F-90°F, MAKING ON TEMPERATURE RIZE.
UNIT SHALL BE "HONEYWELL" T87C1153 OR APPROVED EQUAL.



NOTE:
SEAL ALL CONNECTION JOINTS WITH SILICON RUBBER SEALANT (FED. SPEC. TT-S-00230 TYPE II)

EXPLODED ISOMETRIC
NOT TO SCALE

AS-CONSTRUCTED

Work Request # 277-9

HIL 110-9

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR MATERIEL AREA
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY L. P. Davis	AIR CONDITION PME LAB BLDG 265 MECH; ELEC. PLANS, SECTIONS & DETAILS
DRAWN BY L. P. Davis	
TRACED BY	
CHECKED BY DATE	
APPROVED BY DATE	

SUBMITTED: R. D. Johnson, Br. Chief
APPROVAL RECOMMENDED: [illegible], Chief, Engr. Div.
APPROVED: [illegible], Chief, AFEE 2/17/69

APPROVED DATE: H. Tomlinson, MEMP 13 MAR 69
APPROVED DATE: [illegible], Chief, AFEE 18 Mar. 69
APPROVED DATE: [illegible], OOITG 13 May 69

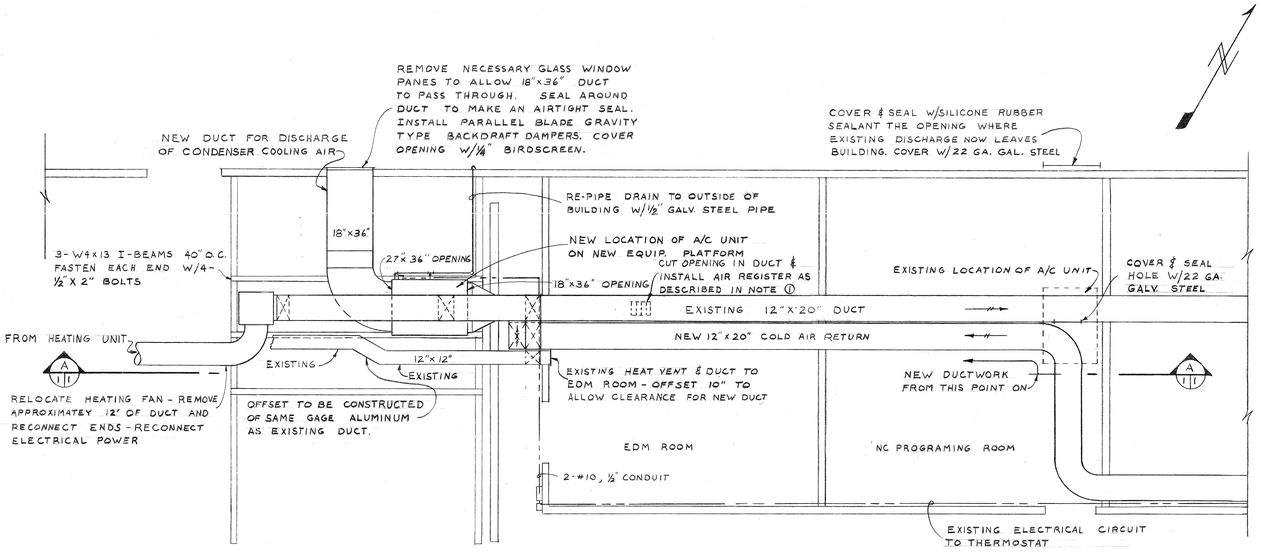
WORK ORDER NO. 29, WORK REQUEST 277-9
PROJECT NO: HIL 110-9
DRAWING NUMBER 69-6831
SHEET 1 OF 1 SCALE NOTED

100

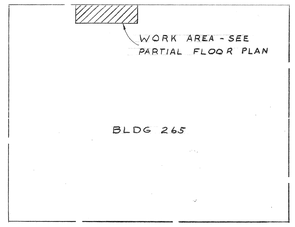
265-69-M/E

M 116-66

265



PARTIAL FLOOR PLAN
SCALE 1/4" = 1'

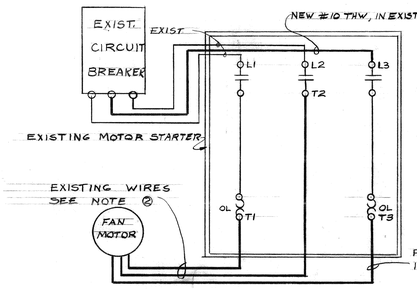


BLDG PLAN
NOT TO SCALE

① NOTE:
WHERE A/C SUPPLY DUCT IS REMOVED, COVER OPENING W/12"x20" AIR REGISTER. REGISTER SHALL HAVE INDIVIDUALLY ADJUSTABLE HORIZONTAL LOUVERS AND MULTI-SHUTTER TYPE DAMPERS. DAMPERS SHALL BE INSTALLED SO AS TO EXTRACT AIR FROM THE DUCT WHEN DAMPERS ARE OPEN. SEAL AROUND EDGES OF REGISTER WITH SILICONE RUBBER SEALANT TO MAKE AIR TIGHT.

SPECIFICATIONS

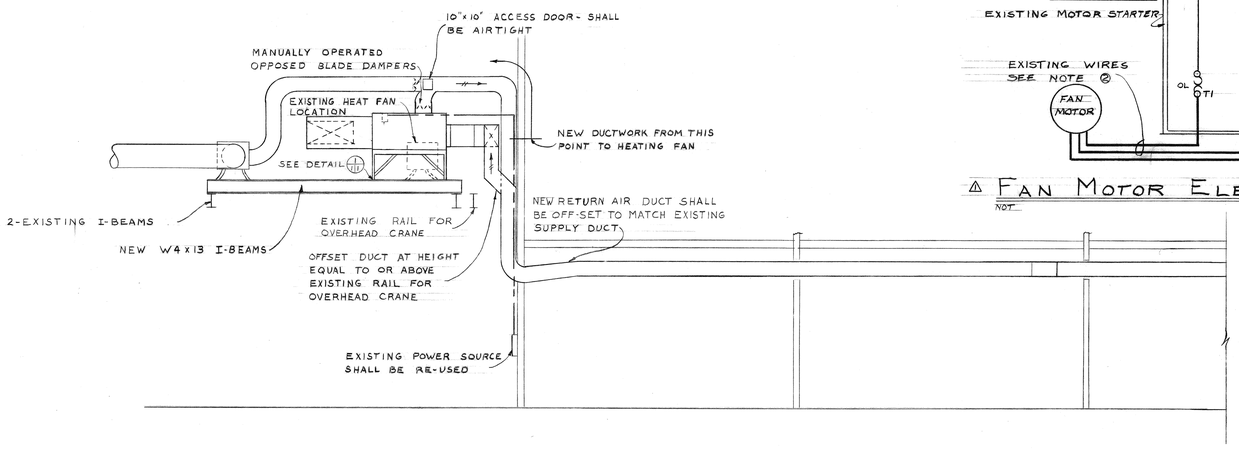
1. DAMAGES FROM DEMOLITION & INSTALLATION SHALL BE REPAIRED BY CONTRACTOR AT NO EXPENSE TO THE GOVERNMENT. CLEAN-UP OF DEBRIS SHALL BE DONE CONCURRENTLY WITH THE WORK. AFTER COMPLETION OF PROJECT, WORK AREA SHALL BE CLEANED UP AND LEFT AS FOUND.
2. EXISTING DUCTWORK & ELECTRICAL CONDUIT WHICH WILL NOT BE INTEGRATED AS PART OF NEW SYSTEM SHALL BE REMOVED BY CONTRACTOR.
3. UNLESS OTHERWISE SPECIFIED MATERIAL REMOVED BECOMES THE PROPERTY OF THE CONTRACTOR.
4. CONTRACTOR SHALL REMOVE EXISTING 2"x6" ∠ EQUIPMENT PLATFORM AND CONSTRUCT NEW PLATFORM AS SPECIFIED.
5. CONTRACTOR SHALL CLEAN ALL SURFACES OF THE NEW STRUCTURAL I-BEAMS WITH MINERAL SPIRITS THEN PAINT W/ONE COAT RED LEAD PRIME PAINT AND TWO COATS OF ALUMINUM PAINT.
6. WHEN NEW I-BEAMS ARE IN PLACE A WOODEN PLATFORM SHALL BE CONSTRUCTED ON AND FASTENED TO THE I-BEAMS. PLATFORM SHALL BE CONSTRUCTED OF 2x8 PLANKS.
7. DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA DUCT MANUAL FOR LOW VELOCITY SYSTEMS.
8. ALL DUCTWORK SHALL BE CONSTRUCTED OF 24 GA. GALVANIZED STEEL, UNLESS OTHERWISE SPECIFIED.
9. JOINTS IN DUCTS SHALL BE SUBSTANTIALLY AIRTIGHT.
10. WHERE SQUARE ELBOWS ARE USED AIR DEFLECTORS SHALL BE INSTALLED TO INSURE SMOOTH AIR FLOW.
11. DUCT HANGER SUPPORTS SHALL BE NOT LESS THAN 1"x1/16" THICK GALVANIZED STRAP-IRON HANGERS SPACED NO MORE THAN 8' APART.
12. TO PROVIDE MAXIMUM AIR FLOW CONTRACTOR SHALL STEAM CLEAN OR WIPE CLEAN WITH SOLVENT ALL FAN BLADES.
13. CONTRACTOR SHALL REPLACE DRIVE PULLEY ON FAN MOTOR WITH A NEW PULLEY HAVING A PITCH DIAMETER OF 3" AND A SHAFT DIAMETER OF 5/8". EXISTING V-BELT SHALL BE REUSED. EXISTING DRIVE PULLEY SHALL BE GIVEN TO THE CONTRACTING OFFICER.
14. ELECTRICAL WORK SHALL CONFORM TO N.E.C.
15. RE-USE EXISTING THERMOSTAT. EXTEND WIRING AND CONDUIT AS NECESSARY TO RECONNECT TO UNIT IN NEW LOCATION.
16. CONTRACTOR SHALL VISIT JOBSITE PRIOR TO SUBMITTING A BID TO BECOME FAMILIAR WITH PROJECT.
17. TECHNICAL PROVISIONS OF THIS PROJECT ARE NOTED HEREON.



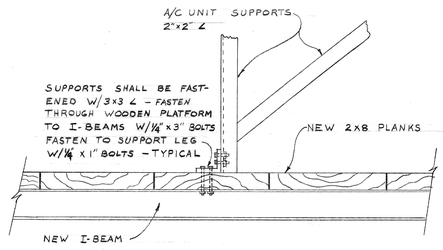
ELECTRICAL NOTES

1. CONTRACTOR SHALL MOUNT GOVERNMENT FURNISHED, 3-PHASE MOTOR & PROVIDE 3-PHASE SERVICE TO THE MOTOR. (EXIST. SERVICE IS 1-PHASE.) THE PULLEY ON THE EXISTING MOTOR SHALL BE REINSTALLED ON NEW MOTOR.
2. EXISTING WIRES FROM T1 & T2 ARE MADE-UP OF #10, 12, & 14 THW, SPLICED AT VARIOUS INTERVALS. CONTRACTOR SHALL REMOVE THESE WIRES AND PULL NEW #10-THW WIRES IN EXISTING CONDUIT.

⚠ FAN MOTOR ELECTRICAL DIAGRAM
NOT TO SCALE



ELEVATION - SECTION A 1/1
SCALE 1/4" = 1'



DETAIL 1 1/1
NOT TO SCALE

REVISION	DATE	DESCRIPTION	BY
2	05SEP75	"AS BUILT"	HD
⚠	4 AUG 75	PROVIDE 3-PHASE ELECTRICAL SERVICE	NAS

DEPARTMENT OF THE AIR FORCE
OGDEN AIR MATERIEL AREA
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY NAS
DRAWN BY NAS
DATE 21 MARCH '75
CHECKED BY DATE
APPROVED BY DATE Don Goodro 24 MAR 75

RELOCATE AIR CONDITIONER BLDG 265

CHIEF ENGINEERING DESIGN		CHIEF CONSTRUCTION MANAGEMENT		CHIEF ENGINEERING BRANCH	26 MAR 75
DATE		APPROVED BASE CIVIL ENGINEER	30 MAR 75	GROUND SAFETY	3/25/75
DATE		PLANS & PROGRAMS BRANCH	1 APR 75	FIRE DEPARTMENT	3/24/75
USING AGENCY	26 MAR 75	OPERATIONS & MAINT. BRANCH	27 MAR 75	BIOENVIRONMENTAL	3/25/75

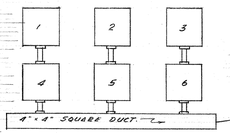
PROJECT NO. HIL 271-5
DRAWING NO. 75-8040
SCALE NOTED
SHEET 1 OF 1

APPROVED CORROSION CONTROL
Norris Alfred M. Napier Dates 25 Mar 75

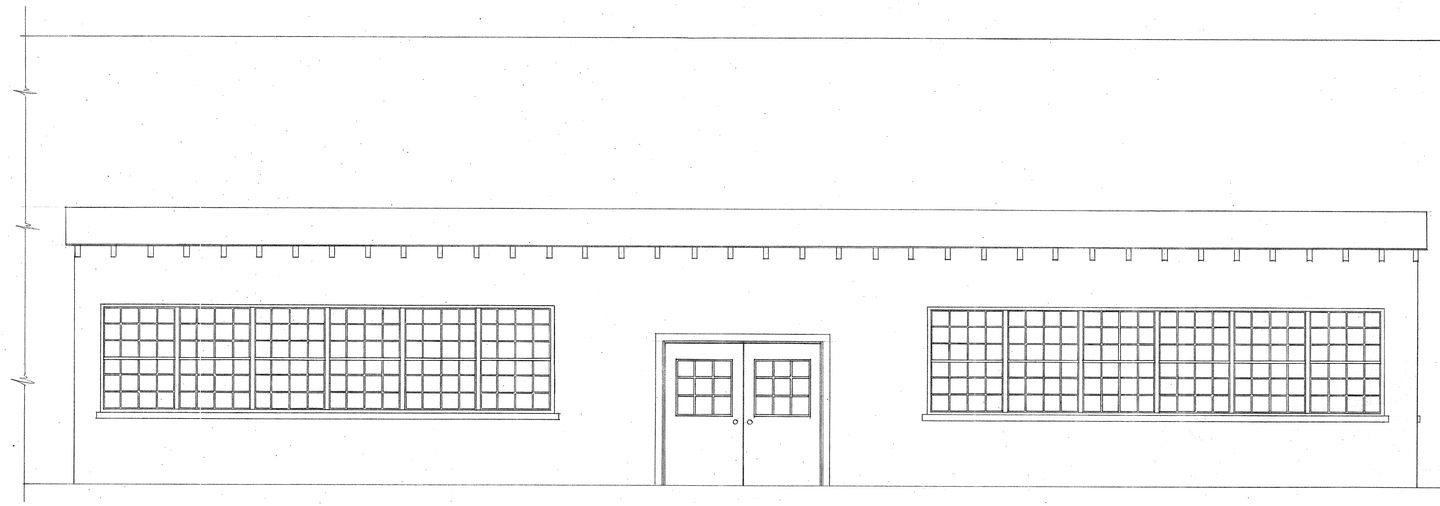
M 116-84 205

PANEL SWITCHES - NUMBERED

1- MAGNETIC STARTER - 3 H.P. - 220 VOLT - 3 PHASE - 3 POLE - TYPE CR 7006 # 0
2- MAGNETIC STARTER - 7½ H.P. - 220 VOLT - 3 PHASE - 3 POLE - TYPE CR 7006 # 2
3- MAGNETIC STARTER - 10 H.P. - 220 VOLT - 3 PHASE - 3 POLE - TYPE CR 7006 # 2
4- SAFETY SWITCH - 30 AMP - 3 POLE - 220 VOLT - TYPE A - # 12 WIRE T.W. - FUSETRON PROTECTION - TO 3 H.P. MOTOR.
5- SAFETY SWITCH - 60 AMP - 3 POLE - 220 VOLT - TYPE A - # 8 WIRE T.W. - FUSETRON PROTECTION - TO 7½ H.P. MOTOR.
6- SAFETY SWITCH - 60 AMP - 3 POLE - 220 VOLT - TYPE A - # 8 WIRE T.W. - FUSETRON PROTECTION TO 10 H.P. MOTOR
7. ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE

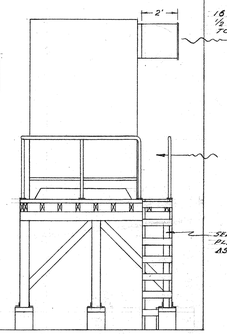


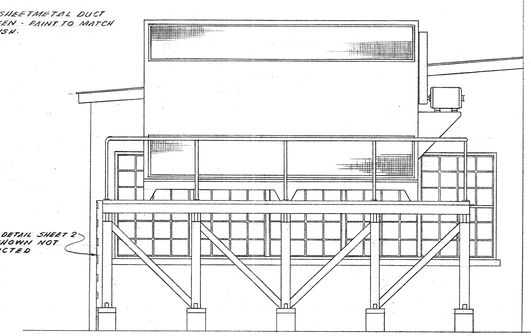
ELECTRIC POWER PANEL



SOUTH ELEVATION - COMPRESSOR ROOM - BLDG 111

SCALE 1/4" = 1'-0"



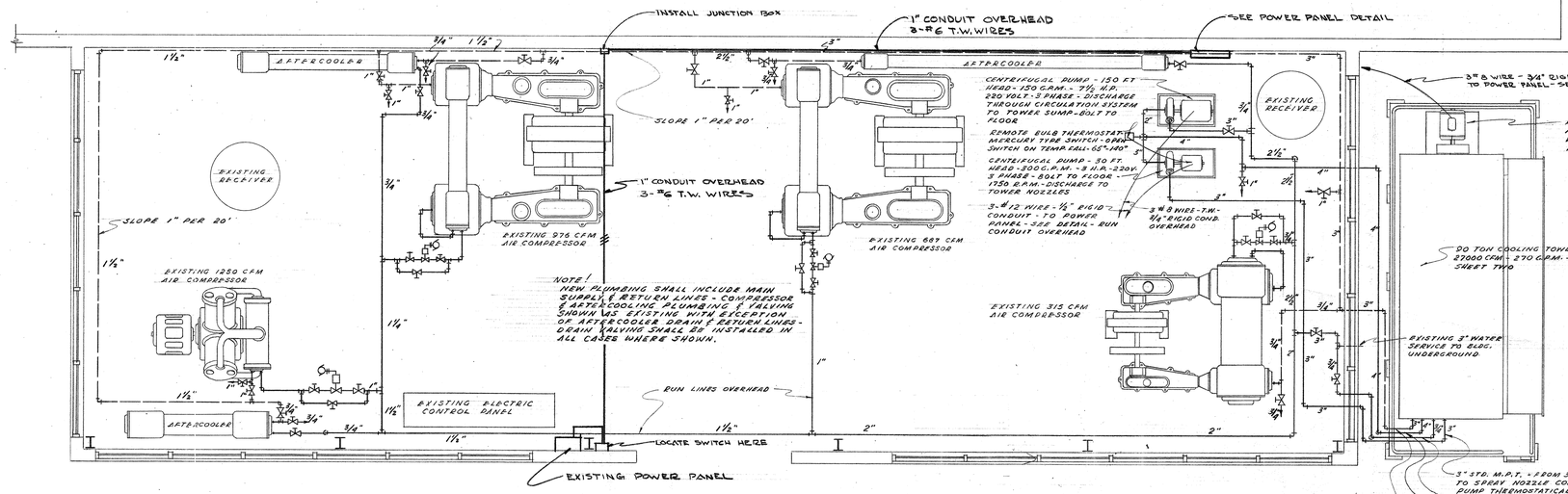


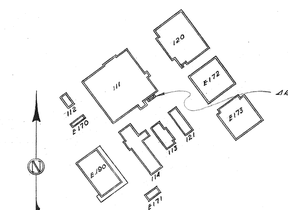
EAST ELEVATION - COMP. RM.

SCALE 1/4" = 1'-0"

PIPING SYMBOLS

- COLD WATER SUPPLY LINES TO CIRCULATING PUMP & TOWER
- CIRCULATING WATER RETURN LINE FROM COMPRESSORS & AFTERCOOLERS TO TOWER SUMP TANK
- MOTORIZED VALVE - TEMPERATURE CONTROLLED - EXISTING
- GATE VALVE - SCREWED - BRONZE
- GATE VALVE - SCREWED - BRONZE - CONNECT AERON TO NEAREST OPEN DRAIN FOR WINTER OPERATION - PROVIDE OPEN FUNNEL TYPE.





LOCATION PLAN

SCALE 1" = 400'-0"

EQUIPMENT LAYOUT - COMPRESSOR ROOM - BUILDING 111

SCALE 1/8" = 1'-0"

REVISION	DATE	DESCRIPTION	BY
1	NOV. 3, 53	RELOCATE POWER SERVICE LINE	V.R.M.

DEPARTMENT OF THE AIR FORCE
OGDEN AIR MATERIEL AREA
OFFICE OF AIR INSTALLATIONS

HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY	M.R.H. Jr. E.R.M.A.
DRAWN BY	ARMSTRONG 6-19-53
TRACED BY	
CHECKED BY / DATE	6-19-53
APPROVED BY / DATE	6-19-53

COOLING TOWER INSTALLATION - COMPRESSOR ROOM - BLDG. - 111

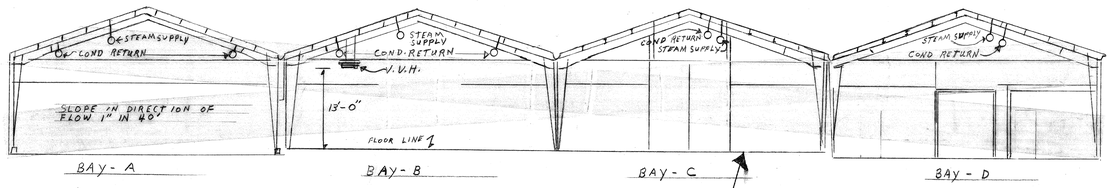
SUBMITTED	APPROVAL RECOMMENDED	APPROVED
APPROVED / DATE		
APPROVED / DATE	19 June 53	PROJECT NO.
APPROVED / DATE	19 June 53	DRAWING NUMBER 53-2630
APPROVED / DATE	19 June 53	SHEET 1 OF 2 — SCALE NOTED

222
PHOTO BLUE

265-53-C

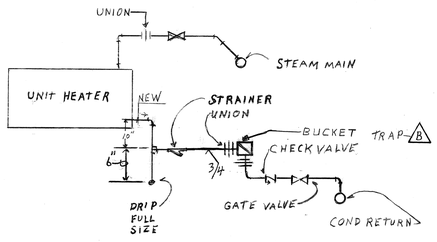
116-14 M

BLDG 365

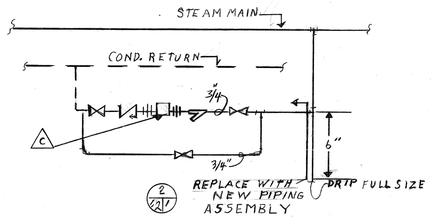


A/1 SECTION BLDG. 39
NO SCALE

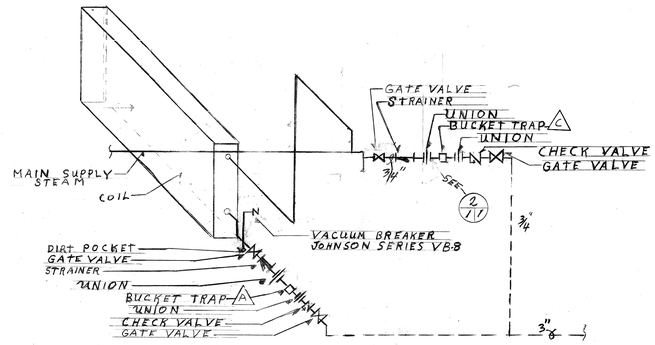
NIC



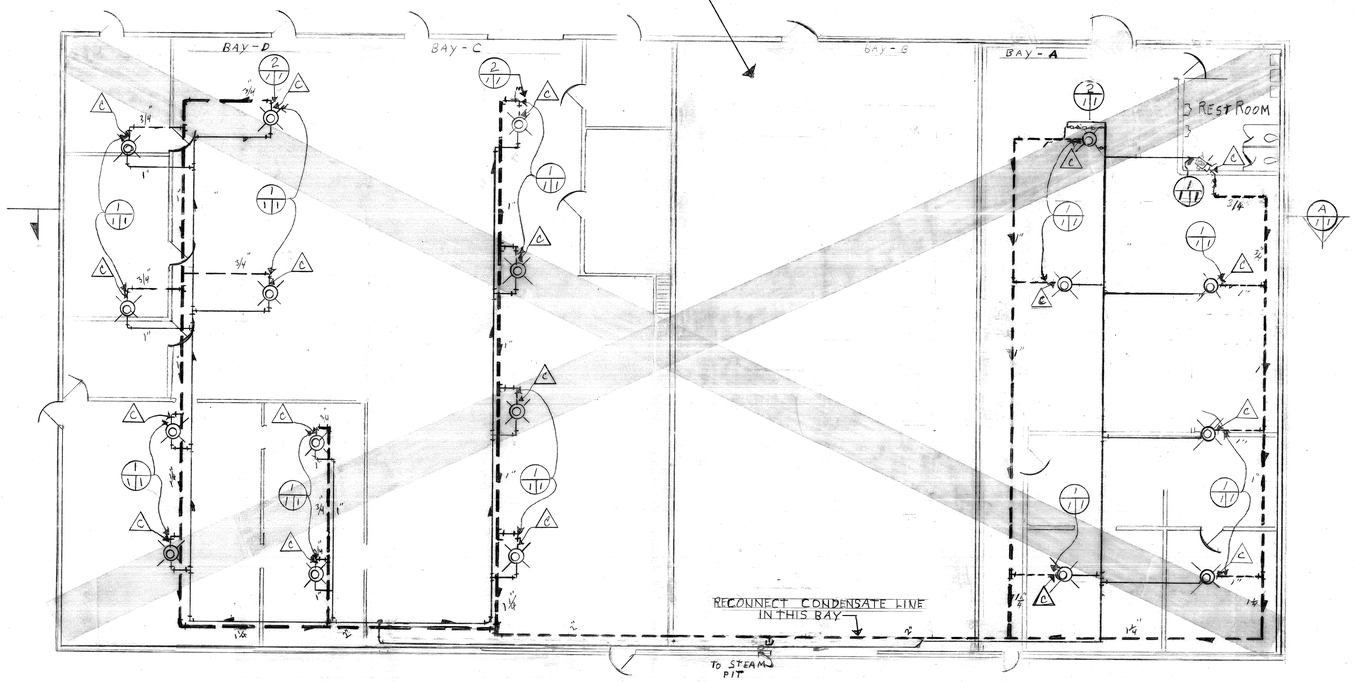
1/2/1 TYPICAL UNIT HEATER CONNECTION
NO SCALE



2/2/1 TYPICAL DRIP & BY-PASS ASSEMBLY
NO SCALE



4/2/1 TYPICAL HEATING COIL NONFREEZE TYPE CONECTION
NO SCALE



HEATING SYSTEM BLDG. 39
SCALE 1/8" = 1'-0"

GENERAL NOTES

1. THE CONTRACTOR SHALL REMOVE ALL ABANDONED STEAM AND CONDENSATE PIPES.
2. THE CONTRACTOR SHALL REMOVE ALL ACTIVE CONDENSATE PIPES, VALVES, TRAPS, STRAINERS, UNIONS, DRIP, AND BY-PASS ASSEMBLIES.
3. SLOPE ALL CONDENSATE PIPE IN DIRECTION OF FLOW MINIMUM OF 1" per 40'.
4. THE CONTRACTOR SHALL COORDINATE THE WORK WITH THE BUILDING SUPERVISORS & CONSTRUCTION MANAGEMENT: DEEC

REVISION	DATE	DESCRIPTION	BY
	2-5-81	"AS BUILT"	MSm

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE, OGDEN, UTAH

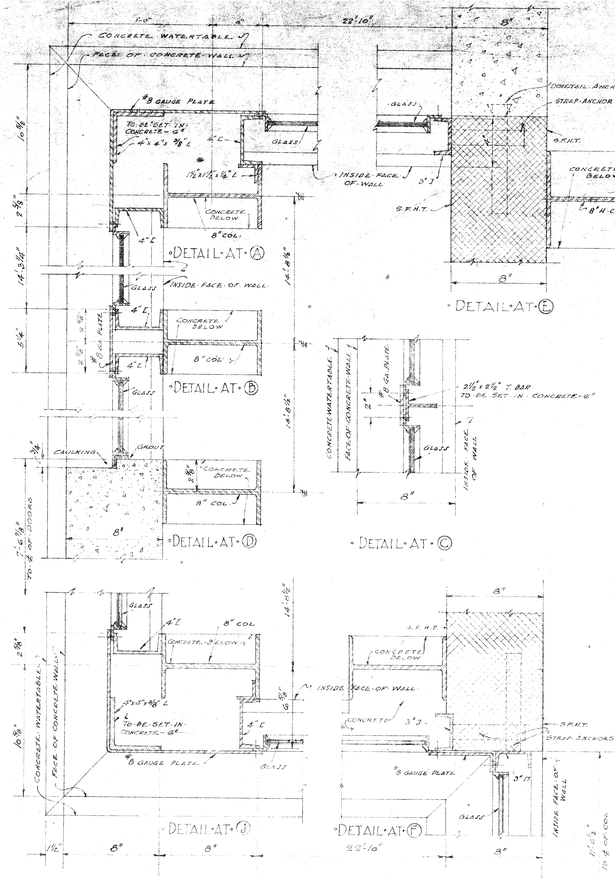
DESIGNED BY JENNINGS
DRAWN BY JENNINGS
DATE 11 DEC 1979
CHECKED BY DATE
APPROVED BY DATE

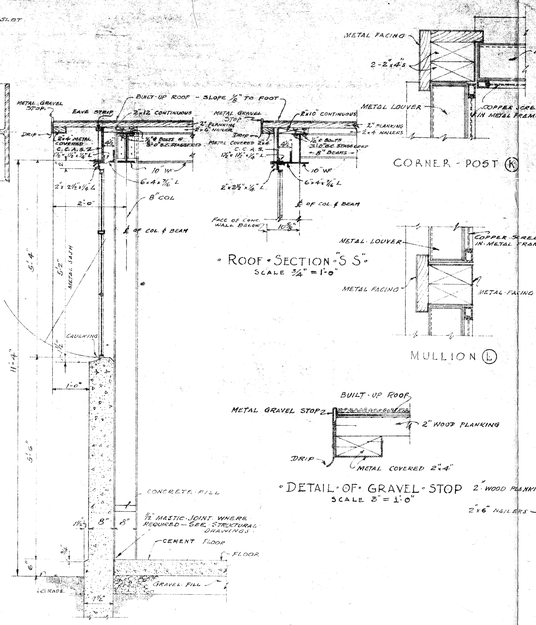
REPAIR CONDENSATE SYSTEM, BLDG. 265
PLANS & DETAILS

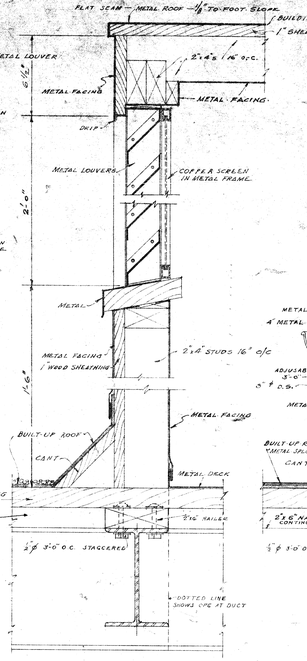
CHIEF ENGINEERING DESIGN: Robert K. McKenzie 5 Mar 80
CHIEF CONSTRUCTION MANAGEMENT: [illegible]
CHIEF ENGINEERING BRANCH: McFarland 20 Mar 80

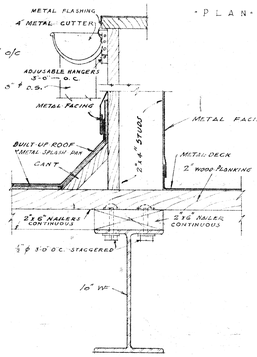
ENVIRONMENTAL REVIEW DATE: Keith D. Jones 13 March 80	APPROVED-BASE CIVIL ENGINEER DATE: [illegible] 16 Mar 80	SPEC DATE: [illegible] 18 MAR 80	PROJECT NO. MX-221-0
ENERGY CONSERVATION REVIEW DATE: [illegible] 20 Mar 80	CORROSION ENGINEER DATE: [illegible] 19 Mar 80	FIRE DEPARTMENT DATE: [illegible] 12 MAR 80	DRAWING NO. 80/9182
USING AGENCY DATE: [illegible] 20 Mar 80	PHYSICAL HANDICAP REVIEW DATE: [illegible] 20 Mar 80	BIOENVIRONMENTAL DATE: [illegible] 04 Jan 80	SCALE AS NOTED
			SHEET 1 OF 2

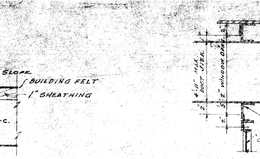
205

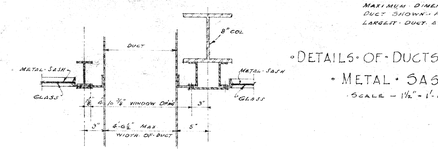


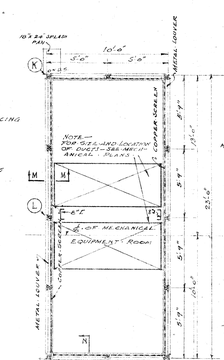


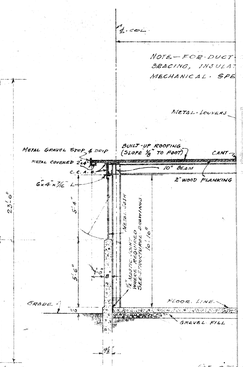






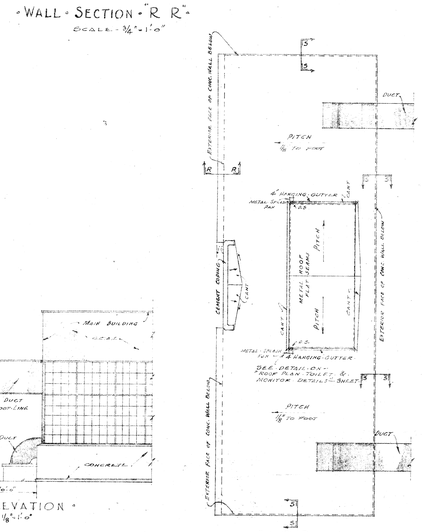






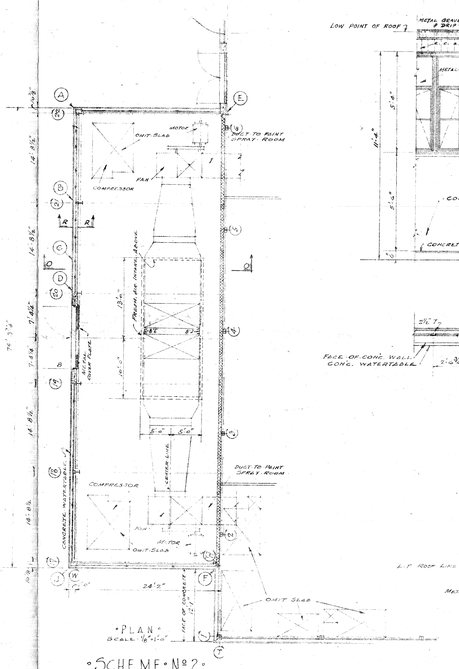


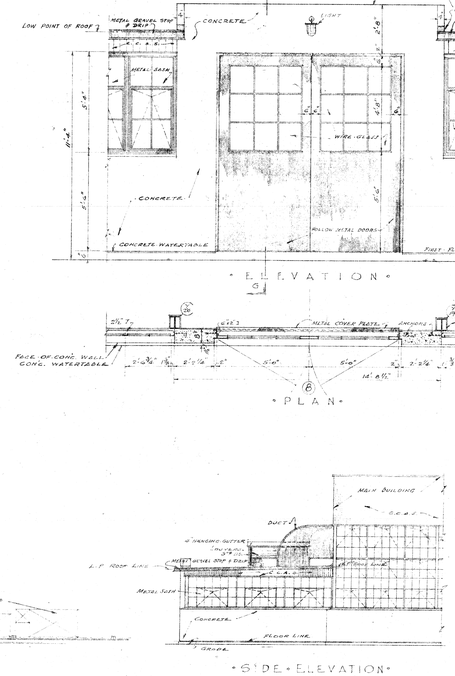
WALL DETAILS
SCALE - 3" = 1'-0"



PLANS AND ELEVATIONS OF SCHEME No 1 AND SCHEME No 2 FOR MECHANICAL EQUIPMENT ROOM
SCALE - AS NOTED

DETAILS OF FRESH AIR INTAKE
SCALE - 3" = 1'-0"





LEGEND

MATERIAL		ABBREVIATIONS
	CONCRETE	CONC = CONCRETE
	METAL	P.S. = PLYWOOD SHEATHING
	ROOFING TILE	COL = POSITION
	WOOD	FIN = FINISH
	CORRUGATED CEMENT ASBESTOS SIDING	GA = GAUGE
	GRAVEL	MJ = MASTIC JOINT
	EARTH	DEPT = SHORTHAND HOUSEKEEPING
	BRICK	STRUCTURAL GENERAL
		PROJECT TYPE
		FLOOR LINE
		NP = NOSE PIECE

SCALE
AS NOTED
REVISIONS

FOR TECHNICALITY SUBSCRIPTS

APPROVED
DATE

CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL

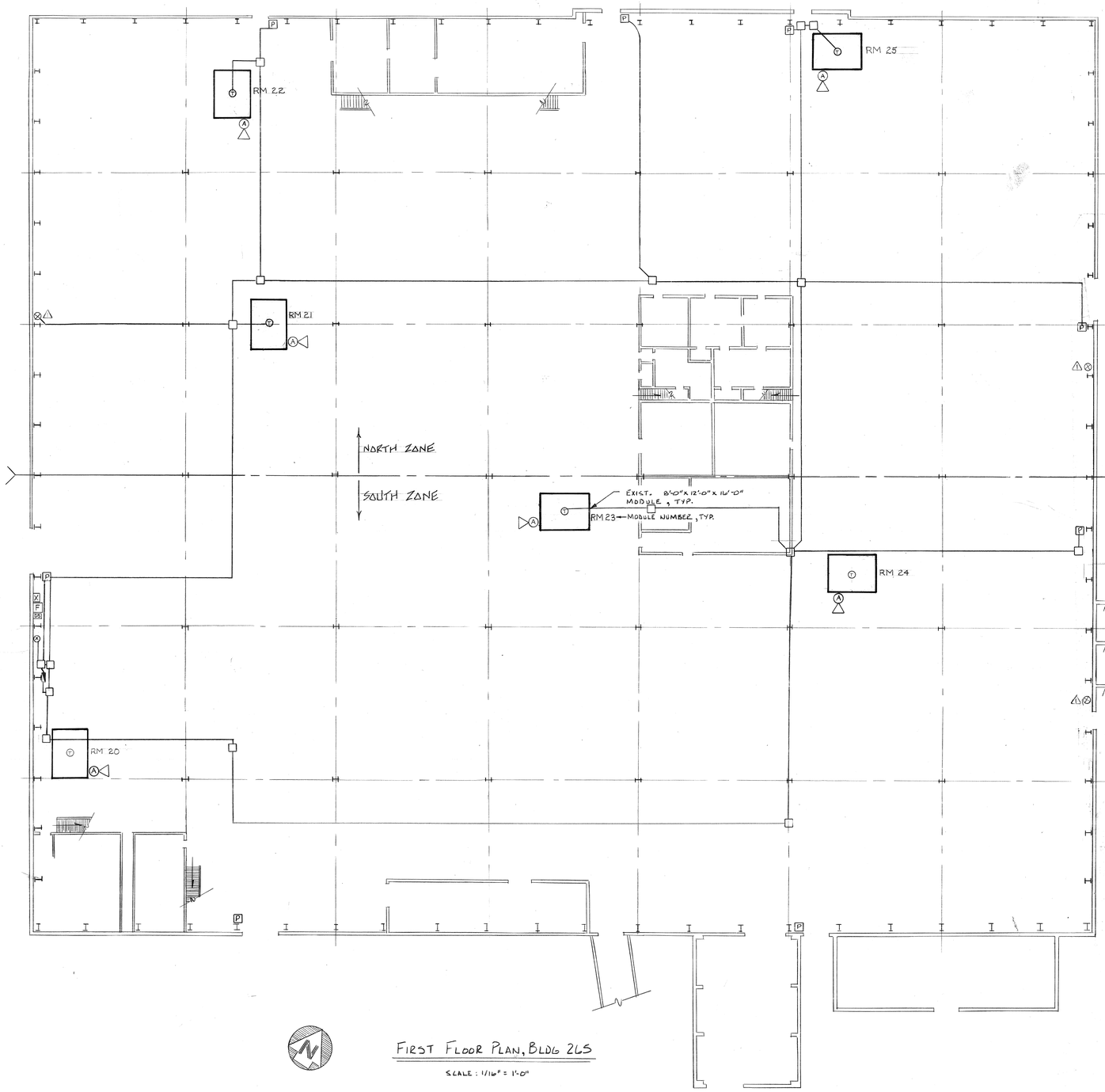
ENGINE REPAIR SHOP
MECHANICAL EQUIPMENT ROOM & DETAILS

DRAWN BY	CHECKED BY	APPROVED BY DIRECTION	DATE
JMS	JMS		
TRACED BY	DATE		PLAN NUMBER
ADDED BY	DATE		601/550

117-5

265

MONSEN ENG. 1906 5-81 MC 2371a



FIRST FLOOR PLAN, BLDG 265

SCALE: 1/16" = 1'-0"

SYMBOL LEGEND

- (T) HEAT DETECTOR, 135° FIXED TEMPURATURE - RATE OF RISE.
- EXISTING LIGHTING PANEL
- DS NEW DISCONNECT SWITCH
- F NEW FIRE ALARM PANEL
- X NEW TRANSMITTER
- (X) EXISTING TRANSMITTER & FLOWSWITCH LOCATION △
- (A) AUDIO/VISUAL ALARM WITH PROJECTOR
- P NEW PULL STATION

NOTES

1. The contractor shall provide qualified personnel, supervision, inspection, transportation, labor, test equipment, parts and material to provide and test a class A fire protection system for the six modular offices shown on the drawing, and integration of the existing water flow detection system to the new fire panel.

2. The contractor will install a four zone fire alarm panel (Honeywell W940/A or equal) with a maintenance free 24 hour 24 VDC battery backup, capable of powering alarms for a minimum of 5 minutes. New panel must have integral battery charger, but battery may be located in seperate cabinet. Fire alarm panel will provide two zones for heat detectors, and one zone for the sprinkler system. Fire panel will also provide power for 6 audio/visual alarms (Notifier AV-32 with series 34 horn or equal) located on the walls of the office modules shown. When any of the heat detectors are activated all 6 alarms must sound. Heat detectors will be Pyrotronics DT-135CPF or equal. Also install 8 Notifier BNG or equal pull stations.

3. The circuits for the heat detectors will be four wire class A, using #14 AWG THW copper wire. The wiring will be supervised for opens, shorts and ground faults with an end of line resistor (EOLR) located inside fire panel.

4. The circuits for the audio/visual alarms will be two #12 AWG THW copper wires, line supervised for opens and shorts, with an EOLR to be located after the last alarm in the circuit.

△5. The contractor will remove the existing sprinkler water flow detectors and the Honeywell TZ-2 transmitters and reconnect new detectors to the Dorado. The contractor will remove the TZ-2s from the wall and turn it over to the contracting officer. See note 11.

6. The contractor shall install a new Dorado 136 transmitter, with integral 24hr battery backup, and supply a receiver card compatable with the Honeywell Delta 2000. The new Dorado will be capable of transmitting three class A supervised signals. The existing government telephone line from Building 265 to the Delta 2000 will be used.

7. Unless otherwise noted all wiring will be encased in EMT conduit. All wire will be THW copper. Flexible metal conduit may be used in areas where the use of EMT is impractical. Flexible metal conduit runs will not exceed 36 inches.

8. Electrical power will be supplied from the feeder of the electrical panel indicated on the drawing. If the splices can be made to comply with the exception to NEC section 373-8, tap off the feeder inside the panel. Tap off the feeder to the panel with copper THW conductors of an ampacity not less than 1/3 that of the feeder conductors and not smaller then #12 AWG. Enclose the new wires in rigid steel conduit. Wire run from the feeder tap to the fused disconnect switch will not exceed 25 feet. The disconnect switch will be of a locking type so that the switch may not be turned off without a key. Three keys to the switch box will be turned over to the contracting officer. The fuse size is dependent upon the wire size selected for the feeder tap and will be determined by contractor using 1981 National Electrical Code criteria.

9. All work will conform to National Fire Protection Association (NFPA) standards: No. 70 1981 National Electrical Code; No. 72A 1981 Local Protective Signaling Systems; No. 72D 1981 Proprietary Signaling System; and No. 72E 1981 Automatic Fire Detectors.

10. All equipment will be listed for its intended use by Underwriters' Laboratories Inc., (UL).

11. Before disconnecting any existing fire protection equipment contractor shall contact the contracting officer or his appointed representative in time to coordinate with the fire department.

12. Three copies of wiring diagrams, operating and maintenance manuals, repair manuals and AS BUILT drawings will be supplied to the contracting officer by the contractor before final acceptance of the work.

13. Five material submittal packages are required after bid acceptance. See Note 15.

14. Contractor will conduct an operational test of the fire protection system that will include, but not be limited to, the following criteria:

a. Coordinate scheduling of tests with Contracting Officer so that fire department and using agency are made aware of test times and the order of testing.

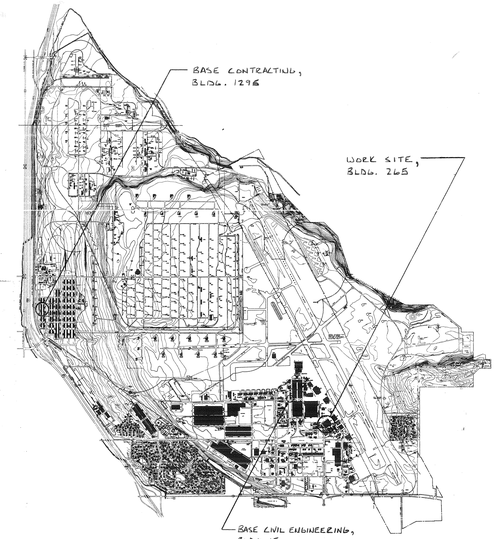
b. Demonstrate that a trouble signal is sent to the fire department whenever any of the pull station/heat detector circuits are opened.

c. Demonstrate, by shorting the appropriate terminals of each heat detector and by activating an alarm from each pull station, that all audio/visual alarms are activated; that the indicator lamp for the detector being tested comes on; and that an alarm signal indicating the correct zone is received by the Fire Department.

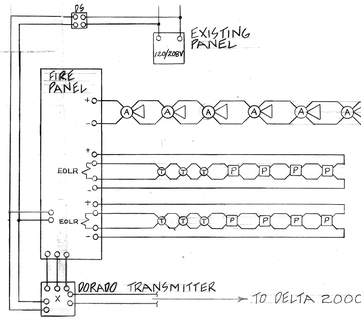
d. Demonstrate, by shorting out the appropriate terminals of the sprinkler riser flow switch, that an alarm signal indicating that the sprinkler system has been activated is received by the Fire Department, and that all audio/visual alarms are activated.

e. Disconnect input power to the fire panel and Dorado transmitter, and operate on battery power for 24 hours. During the 24 th hour of this test, initiate four alarm conditions, and ensure that the audio/visual alarms are activated and that the correct signals are received by the Fire Department.

15. As soon as possible after contract award, but in no case more than 30 days thereafter, the Contractor shall submit to the contracting officer shop drawings or descriptive literature covering the installation of the materials and/or equipment as listed hereinafter. Submit on the following: (List is only considered as a minimum.) Disconnect Switch; Fire Alarm Panel and System Drawings; Fire Alarm Transmitter; Heat Detector; Pull Stations; and Audio/Visual Alarms.



LOCATION OF WORK



FIELD WIRING CONFIGURATION

REVISION	DATE	DESCRIPTION	BY
	19NOV85	"AS BUILT" (NO CHANGES)	KSM
△	4 AUG 83	ADD REMOVAL & REPLACEMENT OF THREE MORE FLOWSWITCHES	J. Jager

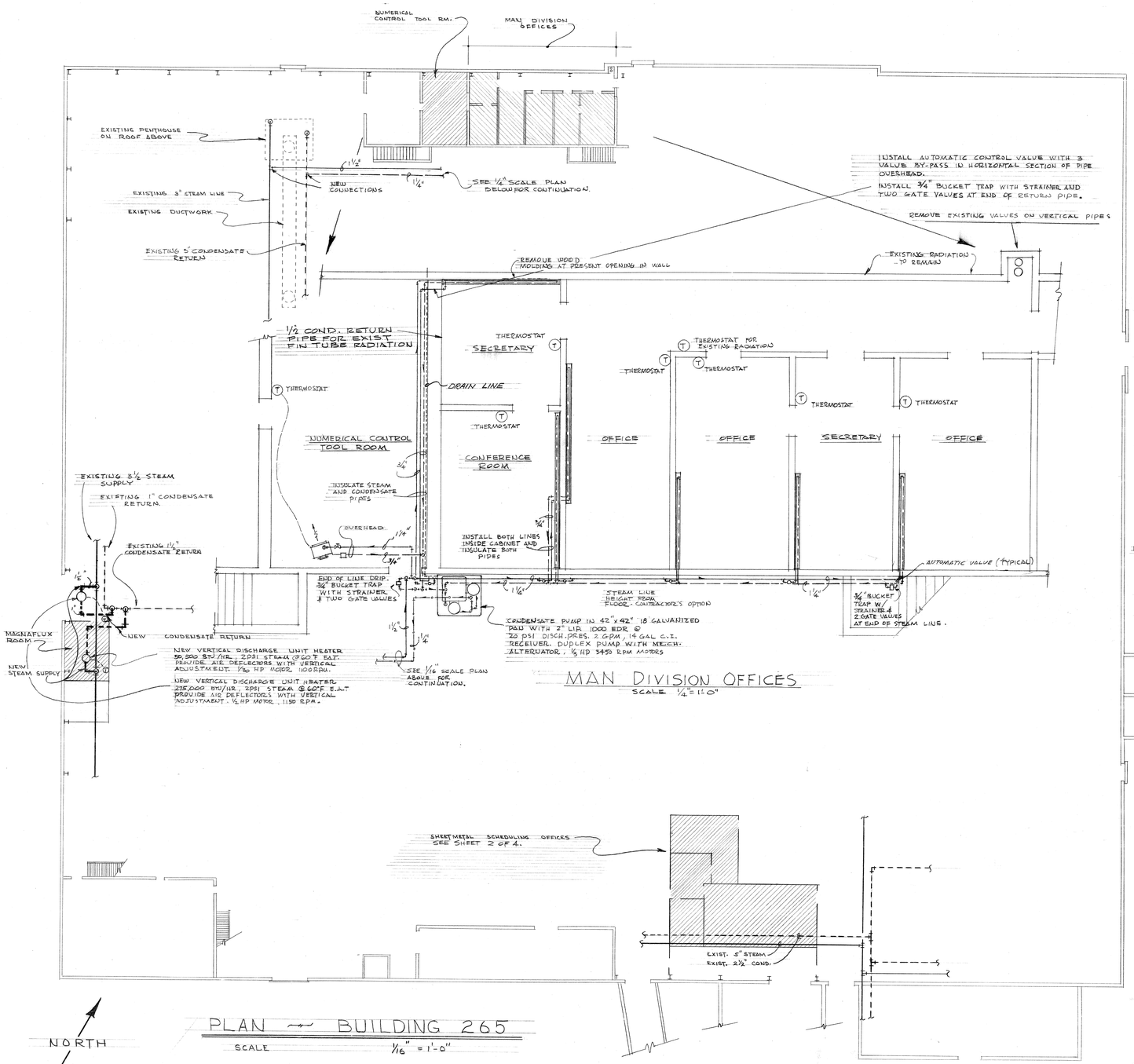
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE, OGDEN, UTAH

DESIGNED BY JAGER
DRAWN BY JAGER
DATE 26 July 1982
CHECKED BY / DATE
APPROVED BY / DATE

HEAT DETECTORS
BLDGS. 265 AND 507

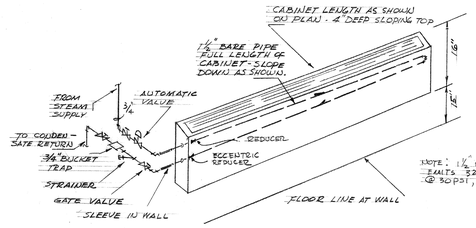
DEM / DATE	CHIEF ENGINEERING DESIGN / DATE	CHIEF CONSTRUCTION MANAGEMENT / DATE	CHIEF ENGINEERING BRANCH / DATE
ENVIRONMENTAL REVIEW / DATE	APPROVED BASE CIVIL ENGINEER / DATE	GROUND SAFETY / DATE	PROJECT NO. HIL L8-1
ENERGY CONSERVATION REVIEW / DATE	CORROSION ENGINEER / DATE	FIRE DEPARTMENT / DATE	DRAWING NO. 82-9678
USING AGENCY / DATE	PHYSICAL HAZARD REVIEW / DATE	BIOENVIRONMENTAL / DATE	SCALE NOTED
			SHEET 1 OF 2

265

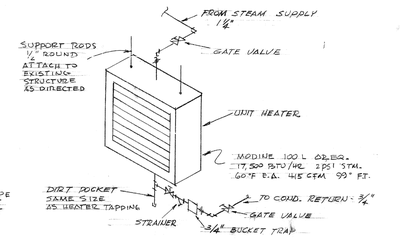


MAN DIVISION OFFICES
SCALE 1/4" = 1'-0"

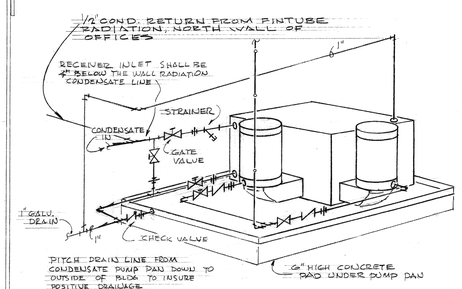
PLAN — BUILDING 265
SCALE 1/16" = 1'-0"



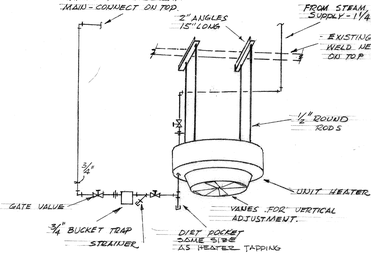
DETAIL - FIN-TUBE CABINET W/BARE PIPE
NOT TO SCALE



DETAIL - UNIT HEATER
N. C. TOOL ROOM
NOT TO SCALE



SCHEMATIC PIPING - CONDENSATE PUMP
NOT TO SCALE



DETAIL - UNIT HEATER
MAGNAFLUX ROOM
NOT TO SCALE

NOTE: ALL STEAM LINES TO INSULATED. CONDENSATE LINES TO BE INSULATED WHERE SHOWN.
TEMPERATURE CONTROL SYSTEMS TO BE 24 VOLT.
CAPACITIES OF ALL BUCKET TRAPS TO BE 600 LBS/HR @ 30 PSI.

REVISION	DATE	DESCRIPTION	BY
1	12JUN73	"AS BUILT"	tp

DEPARTMENT OF THE AIR FORCE
OGDEN AIR MATERIEL AREA
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY ANA, KH, GEW
DRAWN BY ANA GEW
DATE 5 MAY 1972
CHECKED BY — DATE

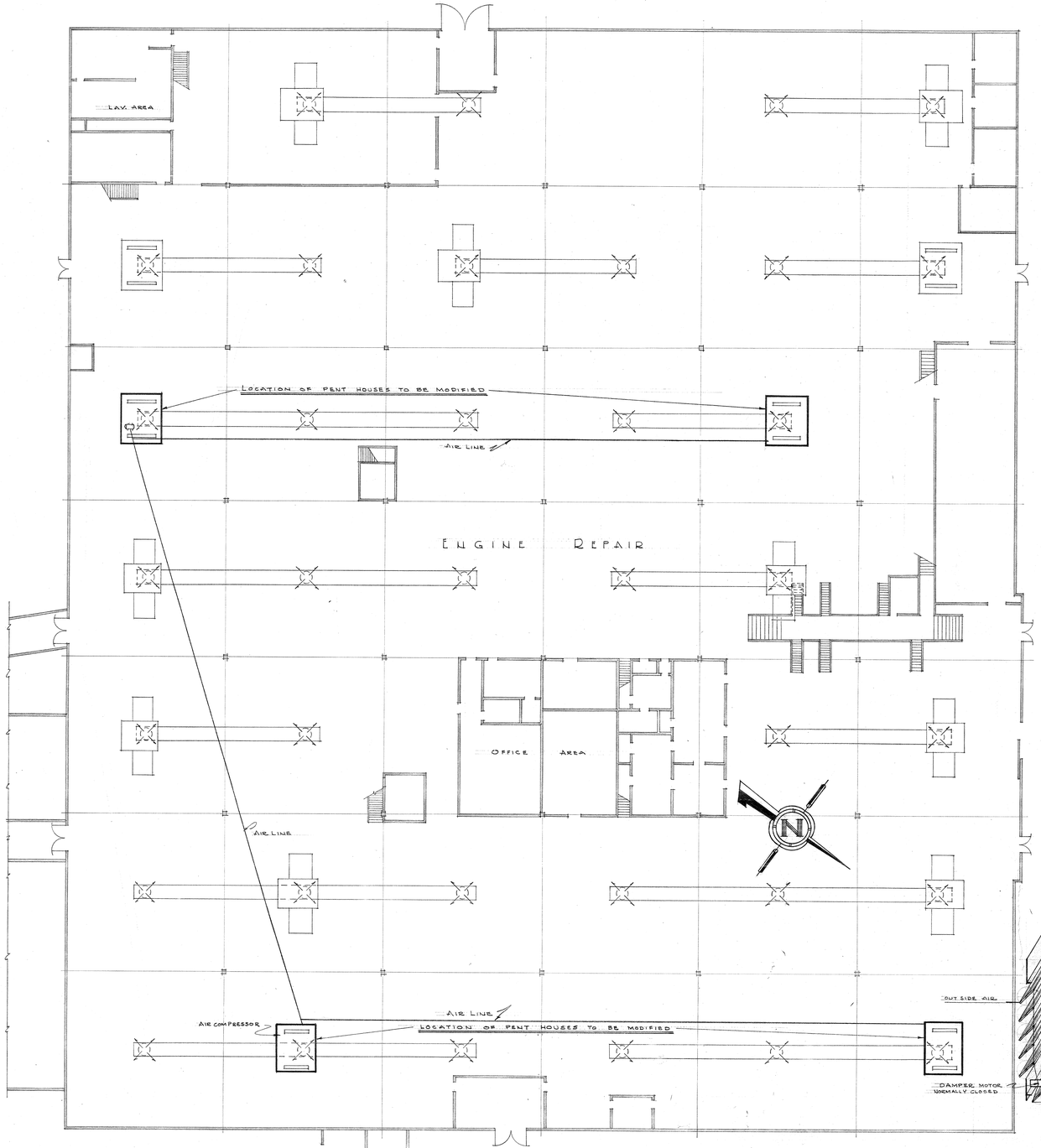
ALTER HEATING SYSTEM
BLDG. 265
MECHANICAL PLANS & DETAILS

	SUBMITTED	APPROVAL RECOMMENDED	APPROVED
	Robinson DEFE	Dodd DEFE	Washington DEF 6 May 72
APPROVED	Ward SEG 16 May 72	WORK ORDER NO. / PROJECT NO.	HIL 130-3
APPROVED	Bolton AMM 17 May 72	DRAWING NUMBER	72-7438
APPROVED	Allen DEF 18 May 72	SHEET 1 OF 4	SCALE NOTED

APPROVED Civil ENGINEER — DATE 23 May 72	APPROVED KE Nelson DEPDO — DATE 25 May 72		
APPROVED — DATE	APPROVED H. Simpson MAINSP — DATE 25 MAY 72		
APPROVED A.W. Owens DFS — DATE 25 May 72	APPROVED Cindy Henderson DEDM — DATE 17 May 72		

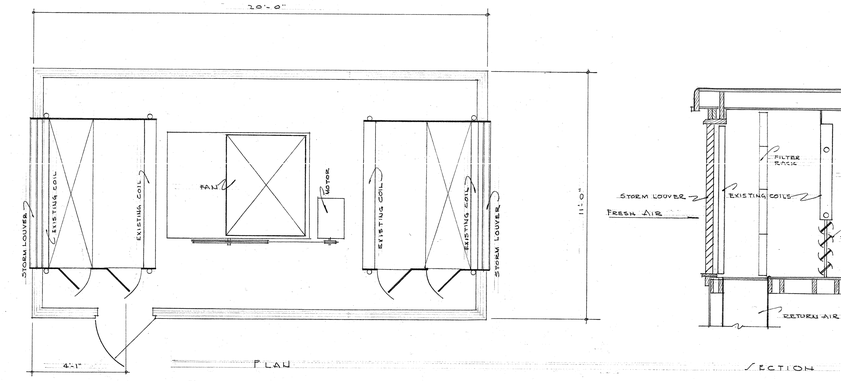
M 116-75

205



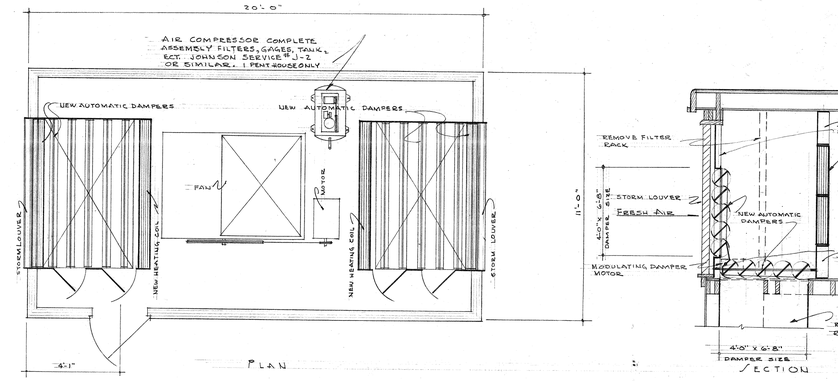
HEATING PLAN OF BUILDING NUMBER S-265

SCALE 1/16" = 1'-0"



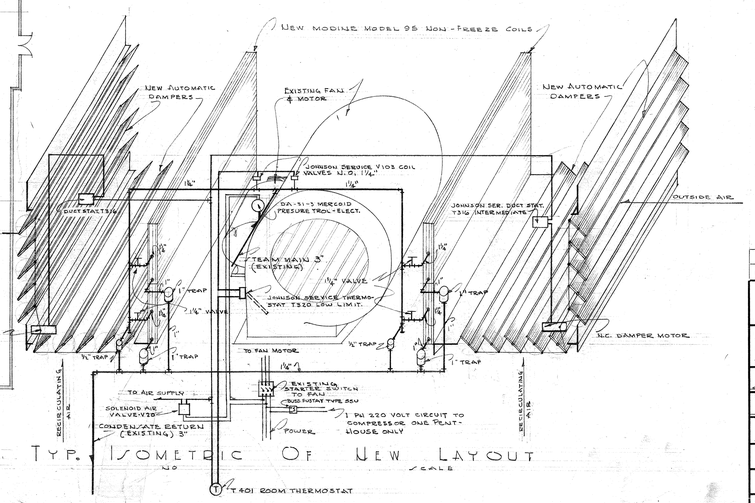
EXISTING LAY OUT OF PENT HOUSES

SCALE 3/8" = 1'-0" (TYPICAL)



NEW LAY OUT OF PENT HOUSES

SCALE 3/8" = 1'-0" (TYPICAL)



NEW ISOMETRIC OF NEW LAYOUT

NO SCALE

GENERAL NOTES:

1. SEAL ALL JOINTS BETWEEN NEW CONSTRUCTION & EXISTING CONSTRUCTION.
2. CONNECT NEW COILS TO EXISTING STEAM LINES.
3. PAINT ALL NEW OR MODIFIED CONSTRUCTION.
4. REMOVE ALL EXISTING PIPE, FITTINGS, VALVES, COILS & FILTER RACKS & RETURN TO GOVT. STOCK.

DESIGN CHECK

CIVIL	H. Cook	18 July 55
MECHANICAL	[illegible]	19 July 55
STRUCTURAL	Lead	19 July 55
ELECTRICAL	REQ	14 July 55
ARCHITECTURAL	[illegible]	18 July 55
DESIGN CHIEF	[illegible]	19 July 55

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR MATERIAL AREA
OFFICE OF INSTALLATIONS

HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY Heath & Jack
DRAWN BY W.E. JACKSON JUNE 2, 1955
TRACED BY
CHECKED BY — DATE
APPROVED BY — DATE

SUBMITTED — APPROVAL RECOMMENDED — APPROVED

APPROVED — DATE — PROJECT NO. 2772

APPROVED — DATE

APPROVED — DATE

REPLACEMENT OF HEATING SYSTEM BLDG. NO — 265

DRAWING NUMBER 55-3262

SHEET 1 OF 1 SCALE 1/16" = 1'-0"

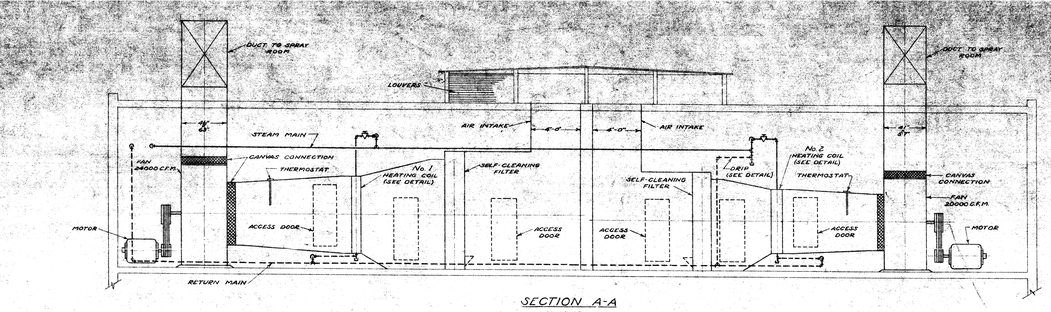
466

BALT LAKE BLUE

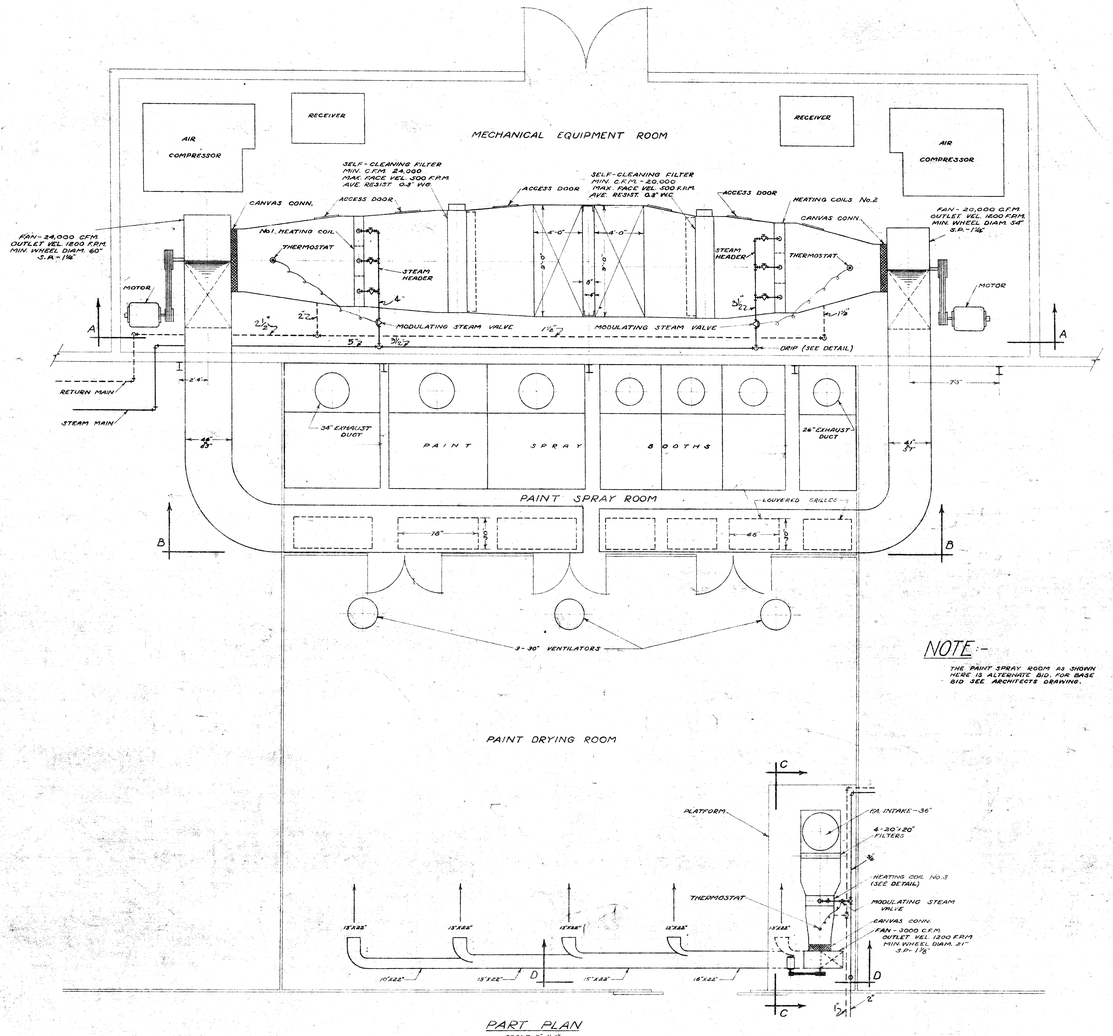
265-55-M

AIR

116-721 M

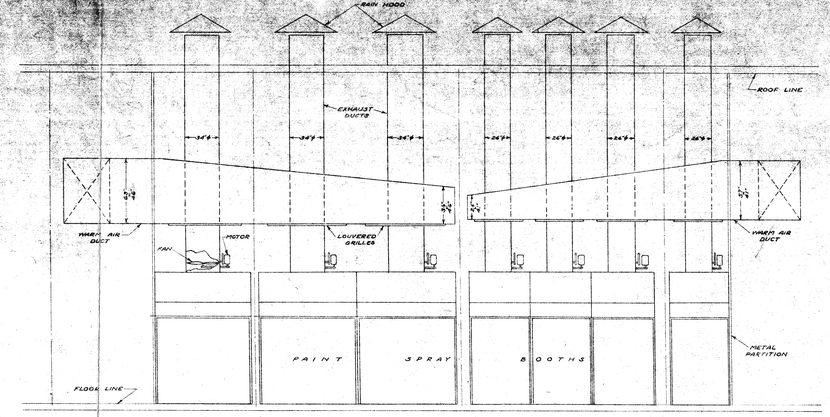


SECTION A-A
SCALE ¼"-1'-0"

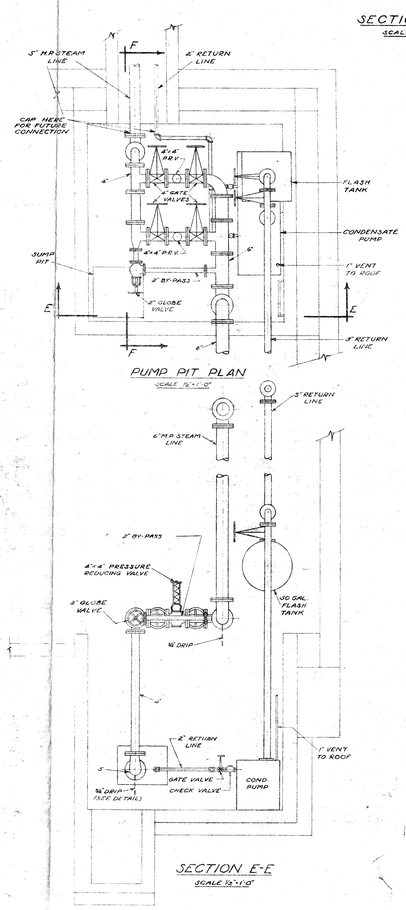


NOTE:-
THE PAINT SPRAY ROOM AS SHOWN HERE IS ALTERNATE BID FOR BASE BID SEE ARCHITECTS DRAWING.

PART PLAN
SCALE ⅜"-1'-0"

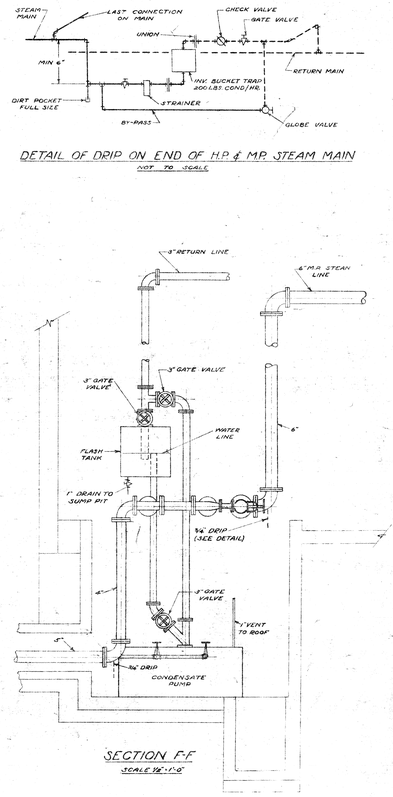


SECTION B-B
SCALE ¼"-1'-0"



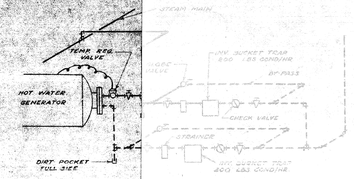
PUMP PIT PLAN
SCALE ¾"-1'-0"

SECTION E-E
SCALE ¾"-1'-0"

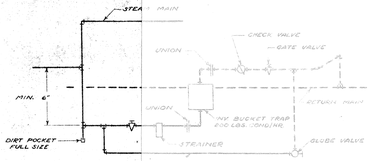


SECTION F-F
SCALE ¾"-1'-0"

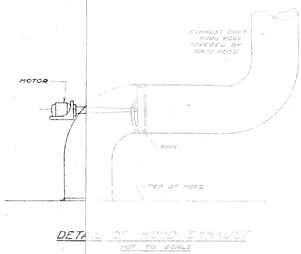
DETAIL OF DRIP ON END OF H.P. & M.P. STEAM MAIN
NOT TO SCALE



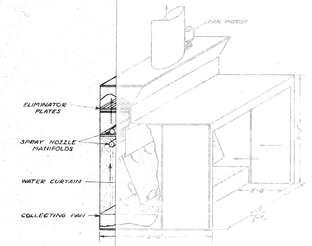
DETAIL OF H.W. GENERATOR CONNECTIONS
NOT TO SCALE



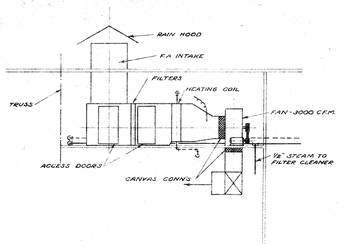
DETAIL OF RISE & DRIP ON H.P. & M.P. STEAM MAIN
NOT TO SCALE



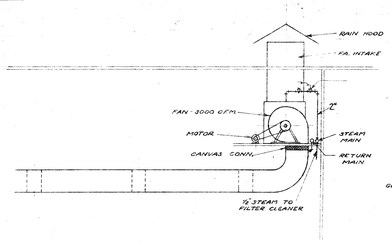
DETAIL OF RAIN HOOD
NOT TO SCALE



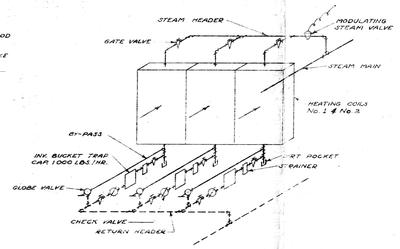
PAINT SPRAY BOOTH
NOT TO SCALE



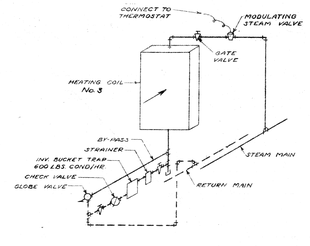
SECTION C-C
SCALE ¾"-1'-0"



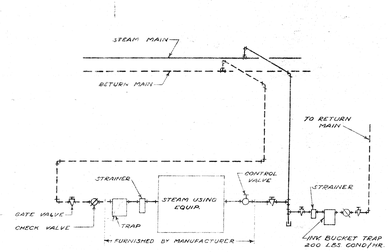
SECTION D-D
SCALE ¾"-1'-0"



DETAIL OF HEATING COIL CONNECTIONS
NOT TO SCALE



DETAIL OF HEATING COIL CONNECTIONS
NOT TO SCALE



DETAIL OF EQUIPMENT CONNECTIONS
NOT TO SCALE

SCALE
AS NOTE
REVISION

CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL

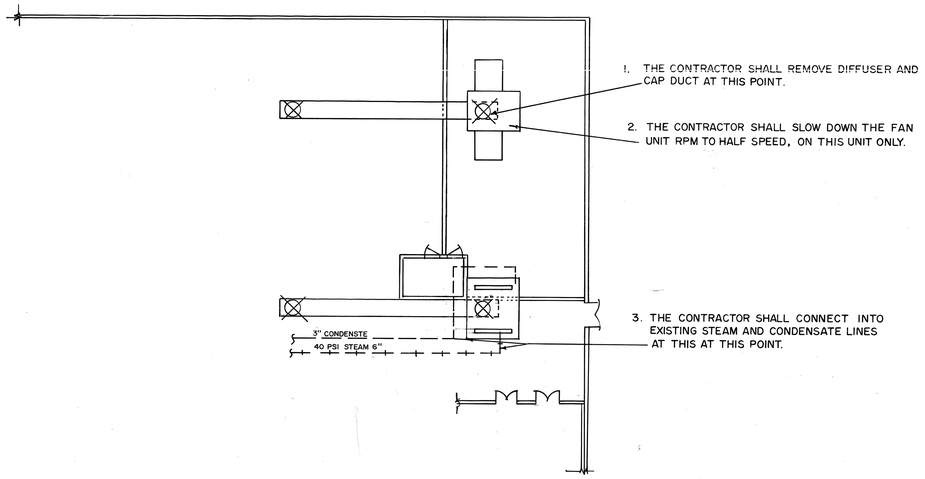
ENGINE REPAIR SHOP
HEATING & VENTILATING DETAILS

DESIGNED BY | CHECKED | APPROVED BY DIRECTION | DATE
DRAWN BY | TRACED BY | PLAN NUMBER

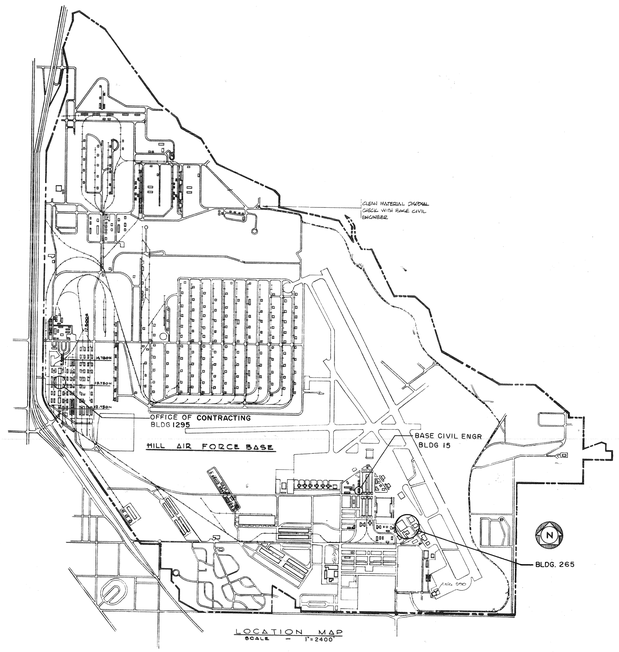
117-15

265

M 117-15



EXISTING HEAT & VENT UNIT



LOCATION MAP
SCALE - 1"=2400'

EQUIPMENT SPECIFICATIONS

1. The air conditioning unit shall be a Roof Top System with economizer. The unit shall have a net cooling capacity of 171000 BTU/H at 95°F OSA. The unit shall be equipped with a steam coil rated at 40 PSIG steam entering air 60°F, leaving air 160°F with a heating capacity of 200 MBH. The unit shall be 480 Volts, 3 PH power. The outdoor and return air dampers shall be motorized and operated through the room thermostat to automatically use outdoor air for free cooling when outdoor air temperature is at acceptable levels. Motor operated dampers shall close to full closed position when indoor fan shuts down. The unit shall be supplied with a central control panel and night setback panel.

2. Steam trap shall be inverted bucket and have a minumum capacity of 600 lbs per hour, with press. difference of 5 PSI and operate at 40 lbs pressure. **CFM capacity shall be 6000 CFM. Mod. SFCBC 15- Mfg. Trane Company.**

3. Diffusers: Square ceiling diffusers series SH.4 with OBD 15" X 15" 600 CFM, Frame 23T - Bar, Mfg. Krueger Manufacturing Company.

4. Return air grille size 22 X 22 perforated return, Frame 24 Snap-In Tee Bar. Model C1190, Mfg. Krueger Manufacturing Company.

CONTROL SEQUENCE

The Roof Top Air Conditioning Unit shall have all unit controls factory - installed. supply air, outside air, and fire stat sensors shall be provided for mounting remotely. Controls shall operate to maintain the desired supply air temperature. The supply air temperature shall be reset based on outside ambient temperature. The reset ratio shall be 1.5 to a maximum of 5 above setpoint. Terminal strip hookups shall be provided at the condensing unit for interface with an air side economizer cycle. The room thermostats shall be wall - mounted and shall control air conditioning **and the steam valve to maintain room temperature.**

Night setback shall cycle the fan unit to maintain 55°F room temperature during the off-duty hours.

GENERAL NOTES:

1. The contractor shall insulate all new steam and condensate pipe.

2. The contractor shall replace insulation on existing steam and condensate pipe where he makes connection.

3. The contractor shall insulate the supply and return duct work.

4. The contractor shall keep the area clean and free rubble at end of each work day.

5. The contractor shall comply with all current regulations of The Occupational Safety and Health Act.

6. The contractor shall comply with all OSHA and EPA standards while replacing asbestos insulation on steam and condensate pipes. SEB and Civil Engineering Environmental office (Keith Davis) will be notified if insulation to be removed on steam and condensate pipes contains asbestos. Fiberglass shall be used as insulation for pipes.

OFFICIAL USE ONLY

25 MAR 1993

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE — OGDEN, UTAH

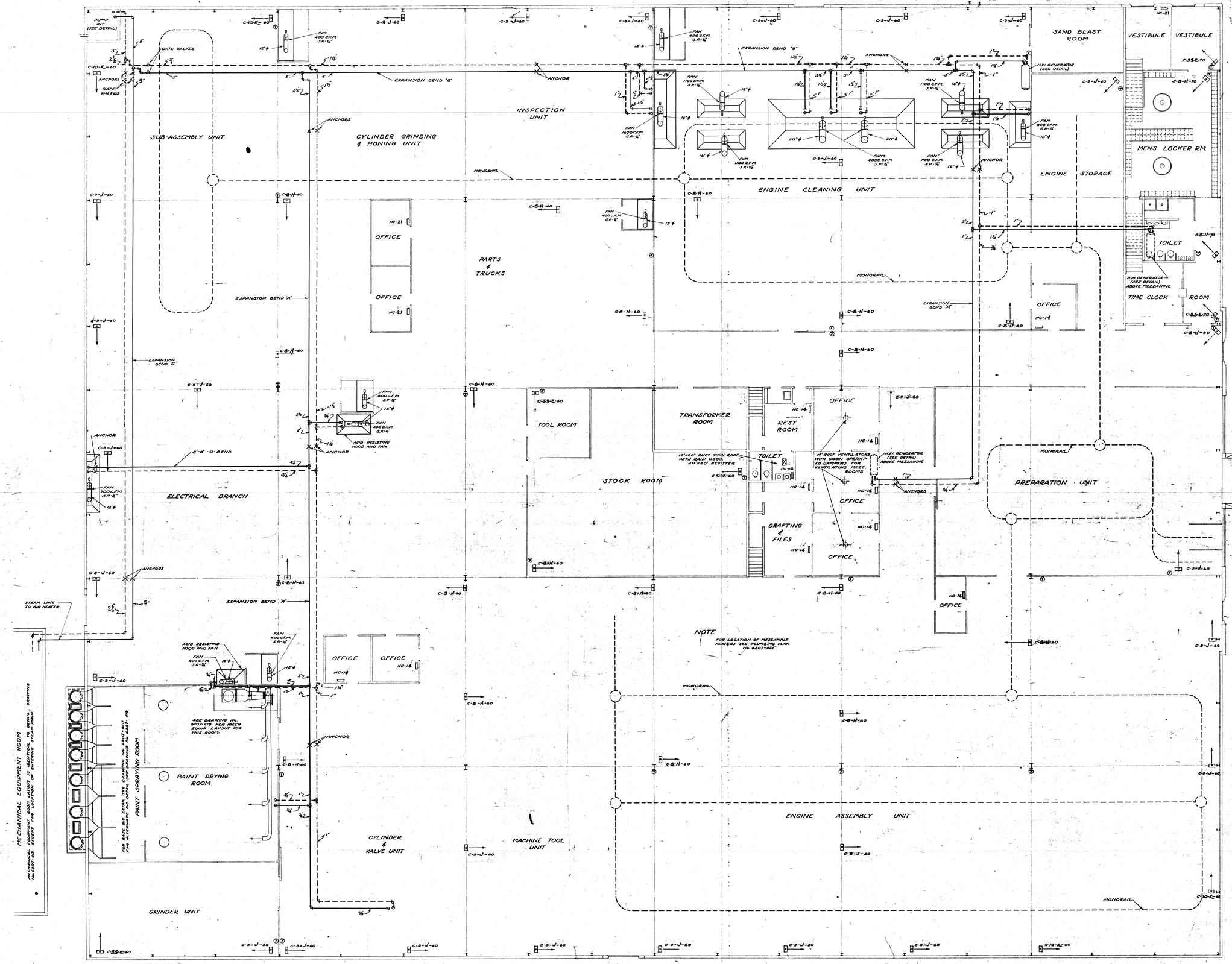
DESIGNED BY JENNINGS
DRAWN BY ROSS
DATE Sep 6 1983

INSTALL HVAC BLDG. 265

MECHANICAL

DATE			
DATE			
DATE			
DATE			
John Moore 1 May 84	CHECKED BY DATE		
APPROVED BY DATE 25 Apr 84			
1881st COMM. SQ. DATE Wesley H. Belnap 16 May 84	CHIEF ENGINEERING DESIGN	CHIEF CONSTRUCTION MANAGEMENT	CHIEF ENGINEERING BRANCH 10 MAY 84
ENVIRONMENTAL REVIEW DATE William E. Taylor 26 April 84	APPROVED BASE CIVIL ENGINEER DATE	SAFETY DATE Ronald J. Barton 10 May 84	PROJECT NO. HIL-115-S
ENERGY CONSERVATION REVIEW DATE	CORROSION ENGINEER DATE	FIRE DEPARTMENT DATE	DRAWING NO. 183-9886
USING AGENCY DATE 9 May 84	PHYSICAL SECURITY REVIEW DATE 25 Apr. 84	BIOENVIRONMENTAL DATE 9 May 84	SCALE NOTED
			SHEET 1 OF 4

265



FLOOR PLAN

EXPANSION BENDS	
SYMBOL	LENGTH OF BEND
A	4'-1¼" FT.
B	4'-1½" FT.
C	4'-4½" FT.

GAS FIRED UNIT HEATERS					
SYMBOL	NO. OF UNITS	TYPE	CAPACITY BTU/HR.	MIN. C.F.M.	ENT. AIR TEMP.
C-5-E-60	3	CEILING	60,000	1,000	60
C-5-E-70	4	"	60,000	1,000	70
C-5-H-60	20	"	125,000	2,500	60
C-5-H-70	3	"	125,000	2,500	70
C-5-J-60	27	"	150,000	3,000	60
C-10-K-60	4	"	175,000	3,500	60

GAS FIRED HEATING CABINETS		
SYMBOL	NO. OF UNITS	CAPACITY BTU/HR.
HC-14	11	14,000
HC-21	4	21,000
HC-28	2	28,000

CONDENSATE PUMPS & RECEIVER	
PUMP CAPACITY - NOT LESS THAN	60 GAL./MIN. EACH
DISCHARGE PRESSURE	30 POUNDS
TANK STORAGE CAPACITY	60 GALLONS

HEATING COILS			
	COIL No. 1	COIL No. 2	COIL No. 3
CAPACITY - MINIMUM BTU PER HR.	2,609,000	5,176,080	5078000
C.F.M.	74,500	73,000	145000
MINIMUM FACE AREA - SQ.FT.	34.5	42.5	67.5
TEMPERATURE OF ENTERING AIR - °F	0	0	0

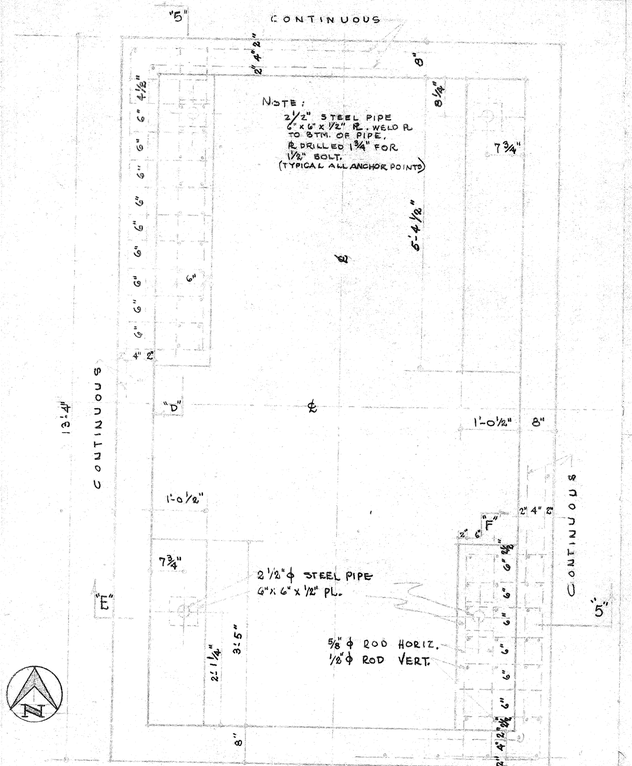
NOTE - OPERATING STEAM PRESSURE - 40 LBS.

OF ZONE

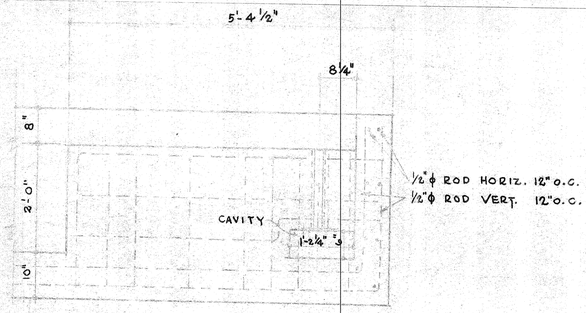
SCALE	CONSTRUCTION DIVISION
1/8"-1'-0"	OFFICE OF THE QUARTERMASTER GENERAL
REVISIONS	HILL FIELD, UTAH
	ENGINE REPAIR SHOP
	HEATING & VENTILATING PLANS

DRAWN BY	CHECKED BY	APPROVED BY DIRECTION	DATE
temps	FE	Thomas Gulstan	SEPT. 1941
TRACED BY		LT. COL. M.A.C.	PLAN NUMBER
temps			6312-36

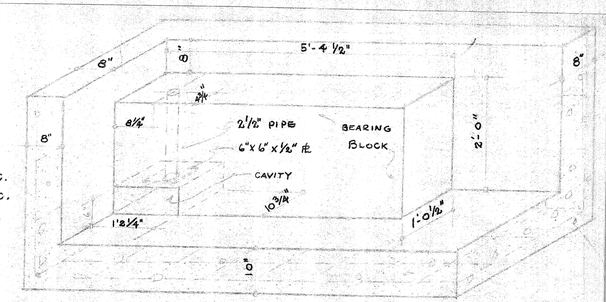
265-42-M



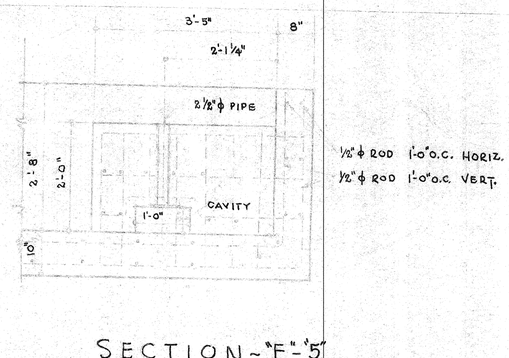
PLAN-200 TON PUNCH PRESS



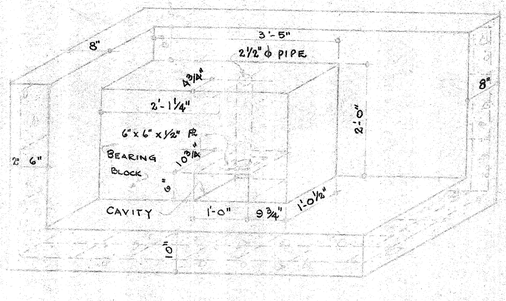
SECTION-"D"-"5"



ISOMETRIC SECTION-"D"-"5"



SECTION-"F"-"5"



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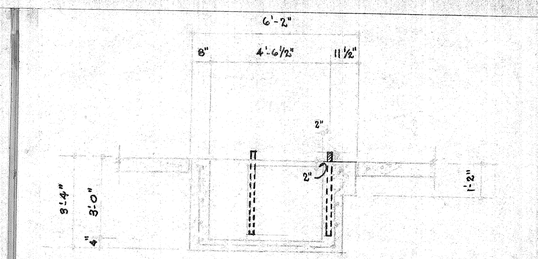
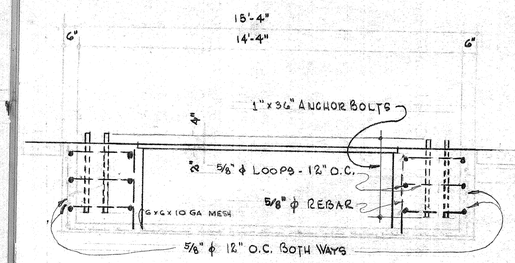
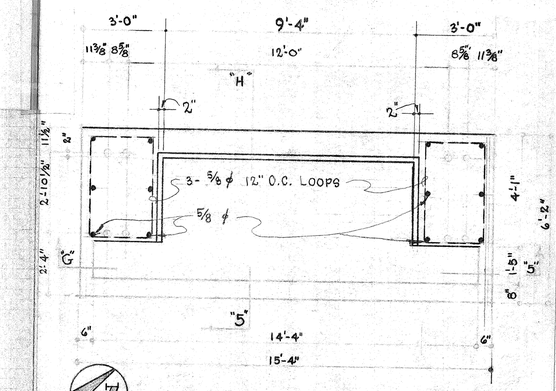


SECTION-"H"-"5"



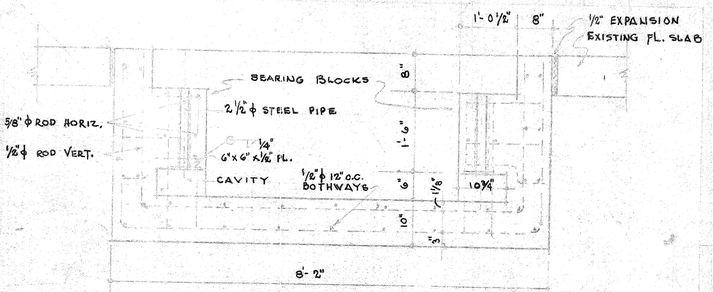
SECTION-"G"-"5"



PLAN-VIEW

9'x12' PRESS BRAKE

SCALE 3/8"=1'-0"

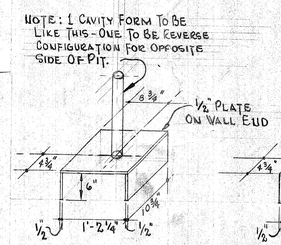


SECTION-"E"-"5"

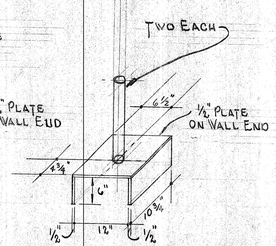
NOTE:
1. BEARING BLOCKS SHALL BE REINFORCED WITH 5/8" ϕ BARS 6" O.C. EACH WAY HORIZONTALLY & 1/2" ϕ BARS VERTICALLY.
2. CAVITIES IN BEARING BLOCKS MAY BE FORMED BY USING 1/2" STEEL PLATE, WITH HOLE DRILLED & 2 1/2" ϕ STEEL PIPE WELDED TO IT.

GENERAL NOTES

1. USE 3,000 P.S.I. CONC.
2. USE 20,000 P.S.I. STEEL.
3. ALLOW CONC. TO SET 7 DAYS BEFORE REMOVING FORMS.
4. ALLOW CONC. TO SET 21 DAYS BEFORE INSTALLING EQUIPMENT.
5. USE CONCRETE CURING COMPOUND DURING CURING PERIOD.



STEEL CAVITY FORM "D-5"
NO SCALE



STEEL CAVITY FORM "F-5"
NO SCALE

REVISION	DATE	DESCRIPTION	BY

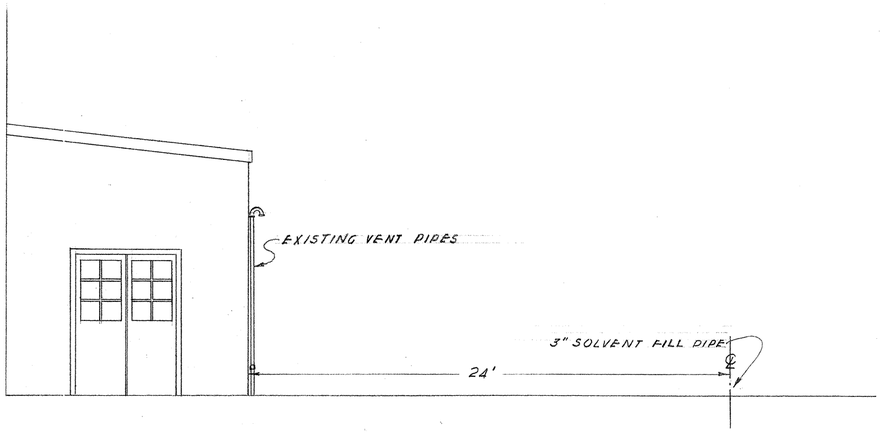
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
HILL AIR FORCE BASE OFFICE OF CIVIL ENGINEERING OGDEN, UTAH

Designed by: W.I. HARP
Drawn by: 7 OCT 80
Date:
CHECKED BY: DATE:
APPROVED BY: DATE:

CONSTRUCT NEW PITS FOR 200 TON PUNCH PRESS & 9'x12' PRESS BRAKE — BLDG. 265

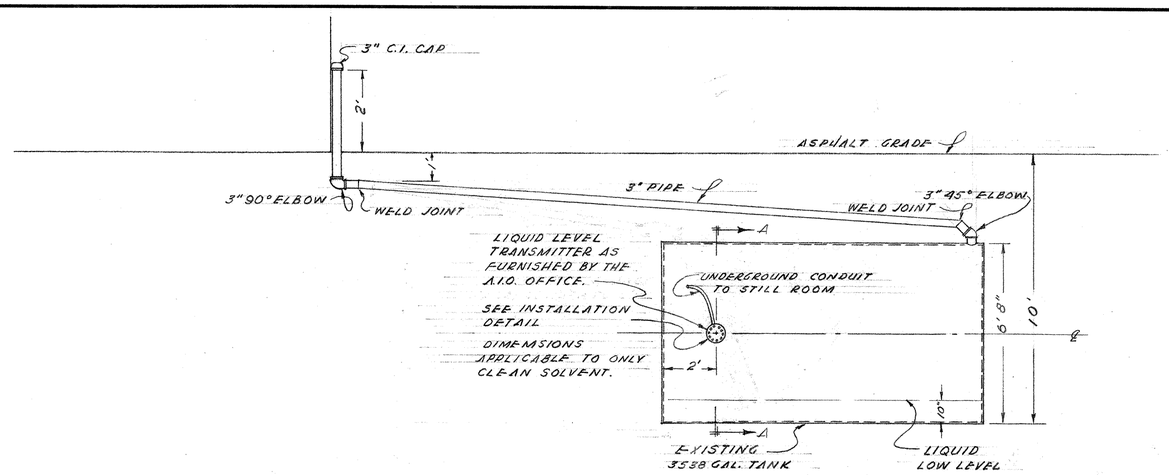
SUBMITTED — APPROVAL RECOMMENDED — APPROVED

APPROVED - BASE CIVIL ENG. DATE
CORROSION ENGINEER DATE
AIR FORCE GROUND SAFETY DATE: R.H. Emerson 10-7-80
FIRE DEPARTMENT DATE
SIDEN VIRONMENTAL DATE
Work Order No. 31821
Drawing No.



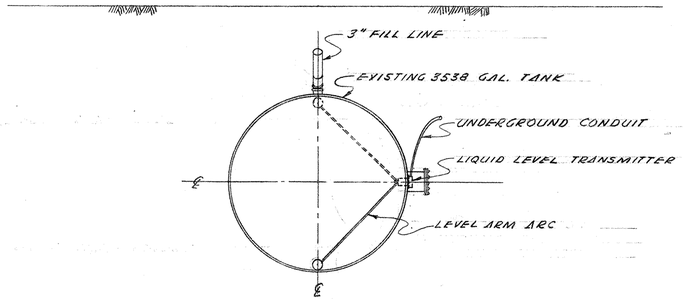
SOUTH ELEVATION - SOLVENT STILL ANNEX - BLDG - 111

SCALE 3/16" = 1'-0"



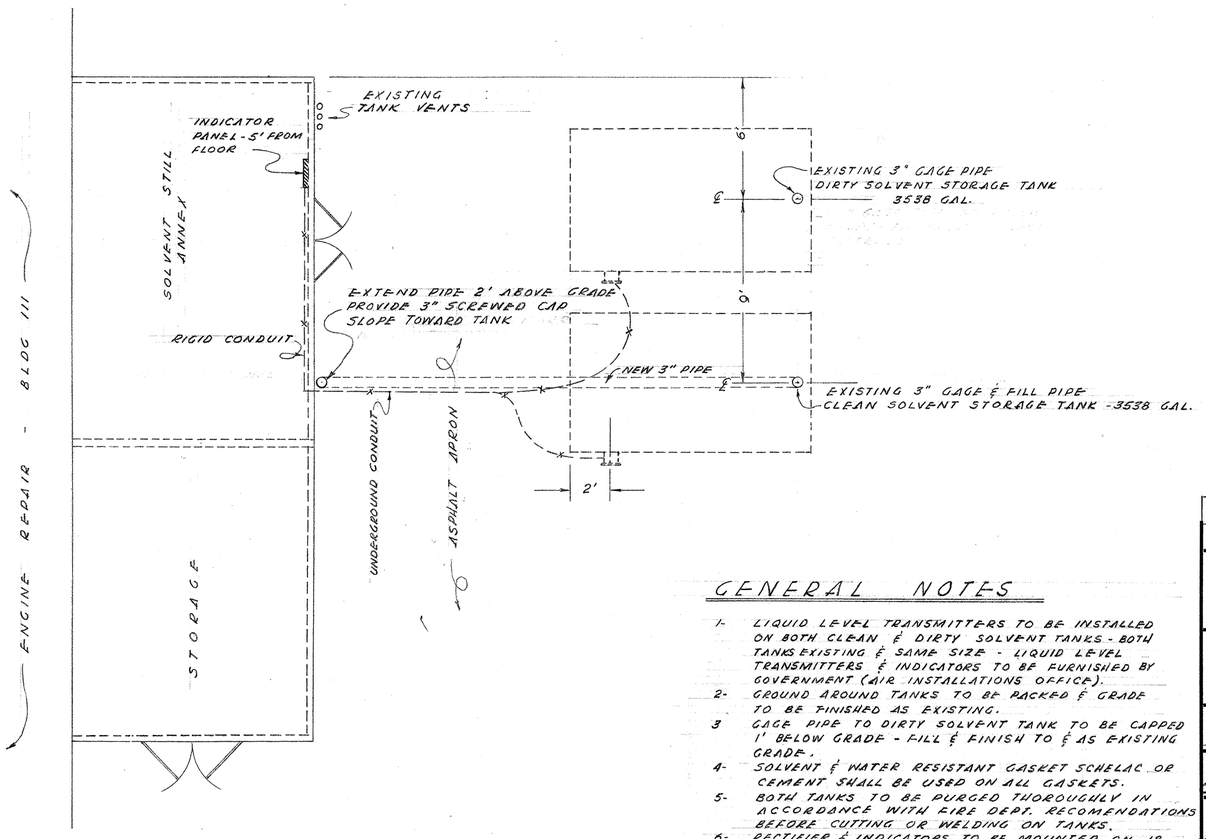
ELEVATION VIEW - TANK MODIFICATION

SCALE 1/4" = 1'-0"



SECTION A - A

SCALE 1/4" = 1'-0"



PLAN VIEW - SOLVENT STILL ANNEX

SCALE 3/16" = 1'-0"

GENERAL NOTES

1- LIQUID LEVEL TRANSMITTERS TO BE INSTALLED ON BOTH CLEAN & DIRTY SOLVENT TANKS - BOTH TANKS EXISTING & SAME SIZE - LIQUID LEVEL TRANSMITTERS & INDICATORS TO BE FURNISHED BY GOVERNMENT (AIR INSTALLATIONS OFFICE).
2- GROUND AROUND TANKS TO BE PACKED & GRADE TO BE FINISHED AS EXISTING.
3 GAGE PIPE TO DIRTY SOLVENT TANK TO BE CAPPED 1' BELOW GRADE - FILL & FINISH TO & AS EXISTING GRADE.
4- SOLVENT & WATER RESISTANT GASKET SCHELAC OR CEMENT SHALL BE USED ON ALL GASKETS.
5- BOTH TANKS TO BE PURGED THOROUGHLY IN ACCORDANCE WITH FIRE DEPT. RECOMENDATIONS BEFORE CUTTING OR WELDING ON TANKS.
6- RECTIFIER & INDICATORS TO BE MOUNTED ON 18 GAGE G.I. PANEL

REVISION	DATE	DESCRIPTION	BY

OGDEN AIR MATERIEL AREA
OFFICE OF AIR INSTALLATIONS
DEPARTMENT OF THE AIR FORCE

HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY ARMSTRONG
DRAWN BY ARMSTRONG 2-2-53
TRACED BY
CHECKED BY Heath DATE 5 Jan 53
APPROVED BY [signature] DATE 5 Jan 53

SOLVENT TANK MODIFICATION STILL ANNEX - BLDG 111

SUBMITTED W S Shelley — APPROVAL RECOMMENDED J S Bonnemort — APPROVED [signature]

APPROVED DATE
APPROVED DATE
APPROVED DATE

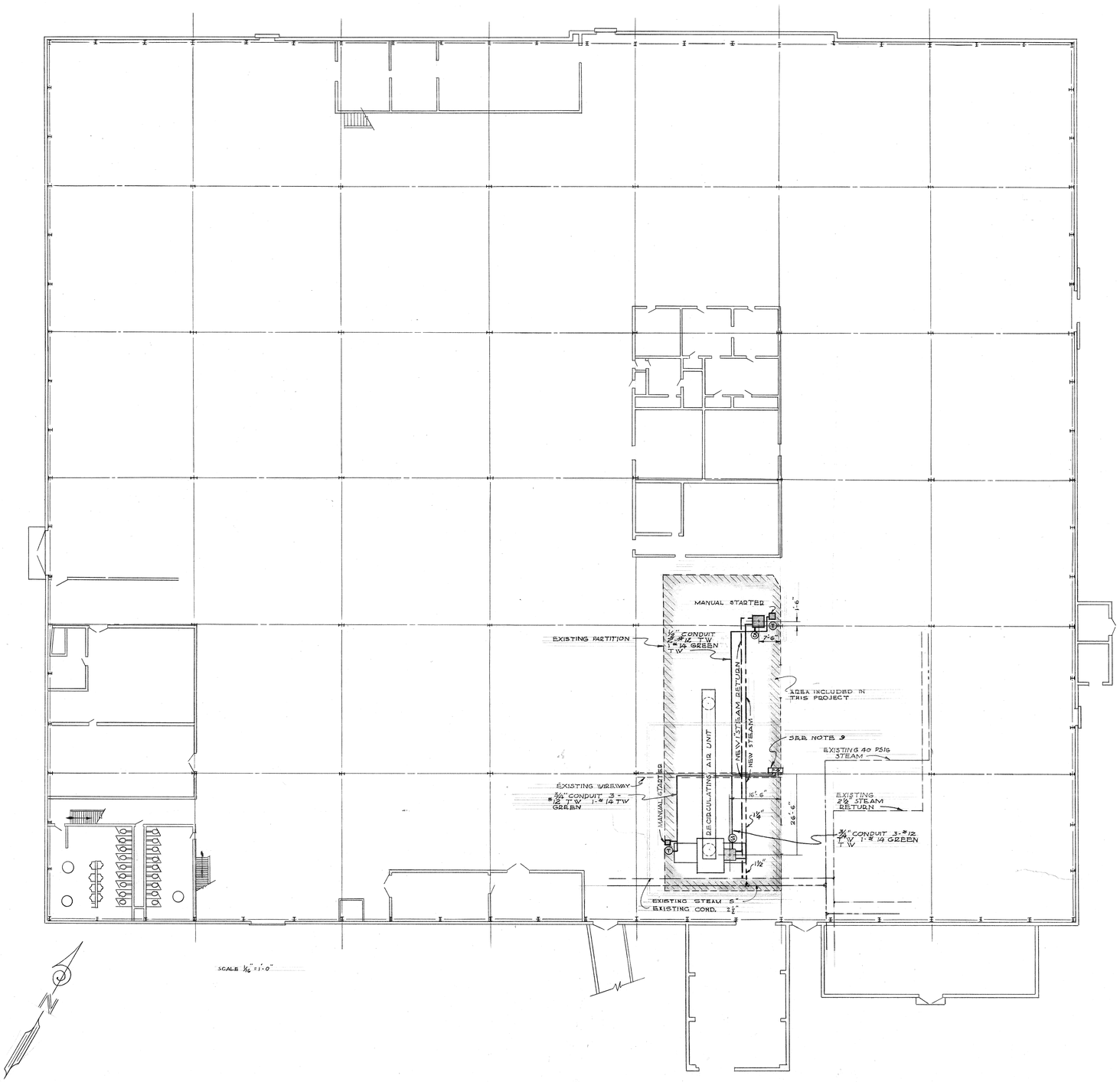
PROJECT NO. 4235

DRAWING NUMBER 53 - 2426

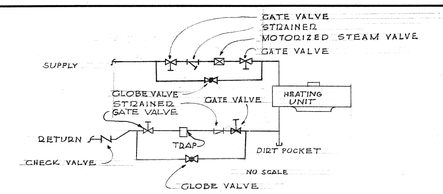
SHEET 1 OF 2 SCALE NOTED

678 265-53-C 116-11 M 265

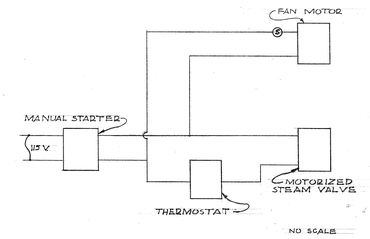
PHOTO BLUE



BLDG. S-265 PLAN



TYPICAL STEAM CONNECTION



CONTROL CIRCUIT

LEGEND

- □ MOTOR STARTING SWITCH WITH THERMAL PROTECTION 120 V. ½ H.P.
- Ⓣ THERMOSTAT- LINE VOLTAGE HEAVY DUTY - RANGE 56° TO 84° F.
- Ⓓ MOTOR DISCONNECT SWITCH 120 VOLT 20 AMP.

NOTES

1. FURNISH AND INSTALL TWO EACH VERTICAL DISCHARGE UNIT STEAM HEATERS. CAPACITY OF EACH AT 2 P.S.I.G. STEAM, 1140 C.F.M., 1235 C.F.M. AND FINAL TEMPERATURE OF 128°F, TO BE 131,000 BTU/HR. FAN MOTOR TO BE 115 V, 1 Φ AND NO LARGER THAN ½ H.P. ENTERING AIR AT 60° F.
2. THE MANUAL STARTER AND THERMOSTAT CONTROLS ARE TO BE LOCATED TOGETHER ON THE BUILDING COLUMN IN THE NORTH AREA, AND ON THE WEST PARTITION IN THE SOUTH AREA.
3. STEAM CONNECTION TO BE MADE FROM EXISTING 3" X 40 P.S.I.G. LINE AND CONDENSATE & RETURN TO BE MADE TO EXISTING 2½" RETURN LINE.
4. ALL STEAM AND CONDENSATE LINES TO BE INSULATED IN ACCORDANCE WITH SPECIFICATIONS.
5. SIZE ALL TRAPS FOR AT LEAST 3 TIMES FULL LOAD STEAM CAPACITY.
6. SLOPE ALL STEAM AND CONDENSATE LINES IN DIRECTION OF FLOW A MINIMUM OF 1" PER 40'.
7. PROVIDE ADEQUATE HANGERS FOR UNIT HEATERS, STEAM, AND CONDENSATE LINES.
8. HEATER DISCHARGE TO BE AT SAME LEVEL AS EXISTING LIGHTING.
9. CONNECT NEW HEATER CIRCUITS TO SPARE CIRCUIT BREAKERS NO. 24 IN EXISTING PANEL P-6.
10. ALL CURRENT CARRYING CONDUCTORS TO BE #12 TW CONDUCTORS. THE GREEN CONDUCTOR TO BE USED FOR GROUNDING PURPOSES ONLY.
11. INSTALL CONDUIT WHERE SHOWN TO THE ROOF FRAMING OF THE BUILDING.
12. ALL WORK TO BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
13. ALL WORK IS TO BE IN ACCORDANCE WITH ASME CODE.

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR MATERIEL AREA
HILL AIR FORCE BASE — OFFICE OF CIVIL ENGINEERING — OGDEN, UTAH

DESIGNED BY	H. BROWDER
DRAWN BY	LEO FAMULINER
TRACED BY	
CHECKED BY / DATE	R.D.W. 20 July 62
APPROVED BY / DATE	Col. DAFF 7/23/62 Robt. Mullenberger

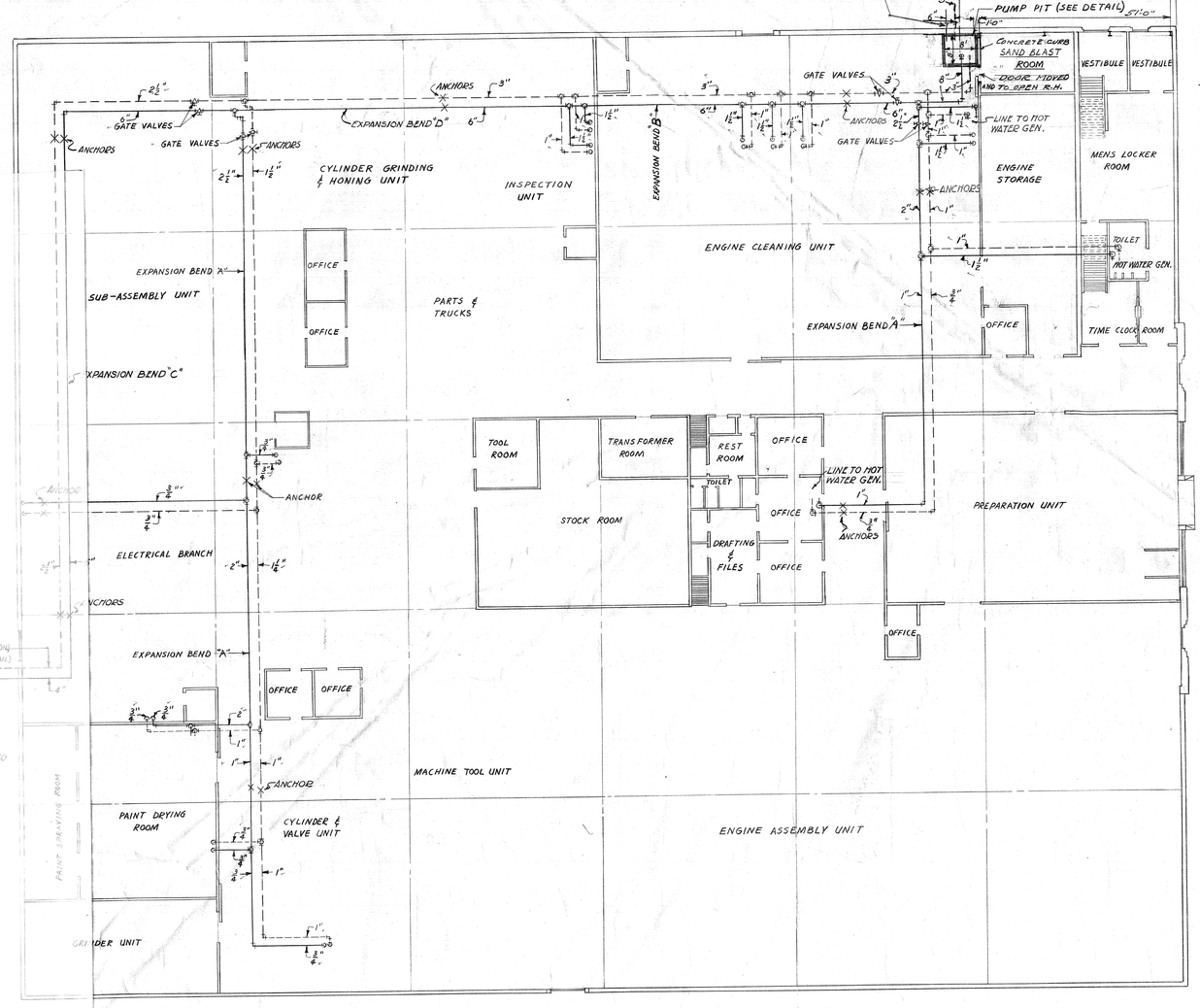
INSTALL STEAM HEATERS IN BLDG S-265

SUBMITTED	APPROVAL RECOMMENDED		APPROVED
H.A. Smith	J.L. Summerhays		Ralph L. Lowe
APPROVED / DATE		WORK ORDER NO.	696-B
APPROVED / DATE		PROJECT NO.	
APPROVED / DATE		DRAWING NUMBER	62-4865
APPROVED / DATE		SHEET 1 OF 1	SCALE NOTED

M 116-58

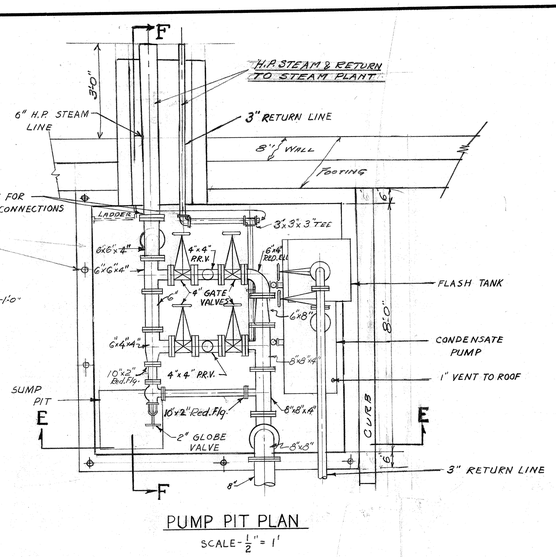
346

265-62-M



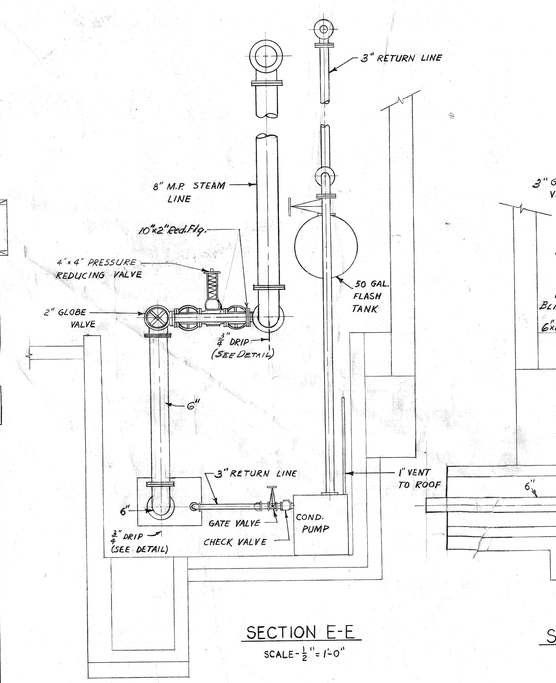
FLOOR PLAN

SCALE - 1/16" = 1'



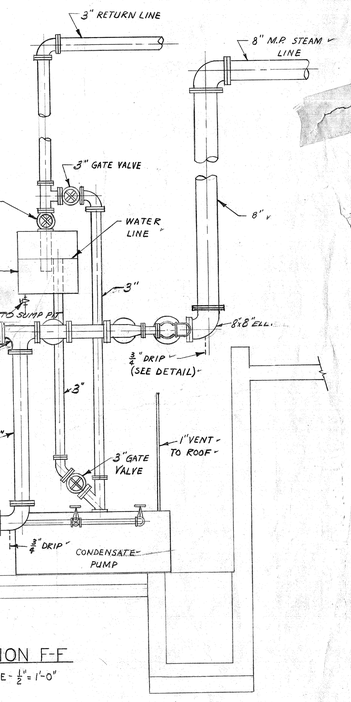
PUMP PIT PLAN

SCALE - 1/2" = 1'



SECTION E-E

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



SECTION F-F

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

CONSTRUCTION AT MILITARY AIRPORTS

HILL FIELD, OGDEN, UTAH

ENGINE REPAIR SHOP

HEATING DETAILS

CHANGE IN STEAM AND RETURN LINES

SCALE: AS NOTED | IN 1 SHEETS | SHEET NO. 1

GRAPHIC SCALE FEET

U. S. ENGINEER OFFICE, LOS ANGELES, CALIF., JUNE 1941

SUBMITTED BY: W. D. Higgins, MAJOR, CORPS OF ENGINEERS, U.S. ARMY, CHIEF, ENGINEERING DIVISION

APPROVED BY: Edwin C. Kelton, LT. COL., CORPS OF ENGINEERS, U. S. ARMY, DISTRICT ENGINEER

FILE NO.	DRAWN	TRACED	CHECKED	TO ACCOMPANY SPECIFICATIONS
487/50	F.L.W.		H.A.V. J.L.V. C.W.G.	DATED:

265-41-M

M 117-20

31,260.32

Bldg. 265

138

PART PLAN 2ND FLOOR OVER REST ROOM
SCALE 1/16" = 1'-0"

FOR 2ND FLOOR OVER THIS AREA SEE 6/2/2

LAVATORIES

LINES UNDER FLOOR IN TRENCH

STEAM & CONDENSATE REMOVE ABANDONED LINE BACK TO MAINS

REMOVE ABANDON HEATER

EXCEPT C

CONNECT RETURN TO EXISTING CONDENSATE RECEIVER

EXISTING PIT

REMOVE THIS LINE & CAP OFF AT MAIN

REPLACE EXISTING RETURN LINE

SEE DETAIL A/1

EXISTING MED PRES STEAM LINE

FRESH AIR UNIT

FRESH AIR UNIT

FRESH AIR UNIT

PENTHOUSE ON ROOF (TYP)

UNIT HEATERS EXCEPT C

INCLOSED OFFICE AREA

REPLACE EXISTING RETURN LINE (TYP.)

FIRST FLOOR OFFICE SECOND FLOOR SIMILAR

EXISTING HIGH PRESSURE STEAM LINE

EXISTING MED-PRESSURE STEAM LINE

PIPE TO BE RUN IN TRUSS SPACE

CONDENSATE PUMP & TANK TO REMAIN. RECONNECT TO NEW PIPING

REMOVE ABANDONED LINE

12 UNIT HEATERS

NEW LINE

INCLOSED OFFICE AREA

REMOVE ABANDON LINE

UNIT HEATER

UNIT HEATER

UNIT HEATER

PIPE TO BE RUN IN TRUSS SPACE (TYP.)

REMOVE ABANDON LINE

EXISTING PRESSURE REDUCING VALVE WITH BY PASS

FRESH AIR UNIT

REMOVE ABANDON LINE

NEW LINE FRESH AIR UNIT

EXISTING CONDENSATE LINE

EXISTING HIGH PRESSURE STEAM LINE

REPLACE RETURN LINE

PUMP DISCHARGE LINE REPLACED

CONDENSATE PUMP

HEATING PLAN BLDG 265
SCALE 1/16" = 1'-0"

PIPE INSULATION NOT SHOWN FOR CLARITY

CONDENSATE LINE

TYP

2" x 2" x 1/4" L (TYP.)

30° TYP.

BOTTOM CHORD OF ROOF TRUSS

PIPE ANCHOR DETAIL 5/2/2
NO SCALE

RECONNECT BOTH STEAM COILS

FAN

DUCT THRU ROOF

MOTOR

B/2/2

3/2/2 PLAN VIEW OF EXISTING PENT HOUSE
SCALE 3/8" = 1'-0"

AIR

EXIST. STEAM SUPPLY

SEE 4/2/1

EXIST. STEAM CON.

3" COND RETURN

B/2/2 SECTION
SCALE 3/8" = 1'-0"

LEGEND — HEATING AND VENTILATING

PIPING
HIGH PRESSURE STEAM
MEDIUM PRESSURE STEAM
LOW PRESSURE STEAM
HIGH PRESSURE RETURN
MEDIUM PRESSURE RETURN
LOW PRESSURE RETURN
HOT WATER HEATING SUPPLY — HWS
HOT WATER HEATING RETURN — HWR
VALVES
CHECK
GATE
REDUCING PRESSURE
VENT POINT — VENT
TRAPS
BUCKET INVERTED
THERMOSTATIC
MISC
UNIT HEATER
CONVECTOR RADIATION
STRAINER

MARK	TRAP CAPACITY	PRESSURE DIFF.	OPERATING PRESSURE	TYPE	MODEL OR EQUAL	ORIFICE SIZE
A	3500 LBS/HR	20 PSIG	40 PSIG	INVERTED BUCKET	813 ARMSTRONG	5/16 IN
B	1500 LBS/HR	20 PSIG	40 PSIG	INVERTED BUCKET	812 ARMSTRONG	1/4 IN
C	300 LBS/HR	20 PSIG	40 PSIG	INVERTED BUCKET	81 ARMSTRONG	3/16 IN
D	2750 LBS/HR	20 PSIG	40 PSIG	THERMOSTATIC	9-125 SARCO	3/8 IN

REVISION	DATE	DESCRIPTION	BY
	2-5-81	"AS BUILT"	HSW

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY JENNINGS
DRAWN BY JENNINGS
DATE 6 DEC. 1979
CHECKED BY DATE
APPROVED BY DATE

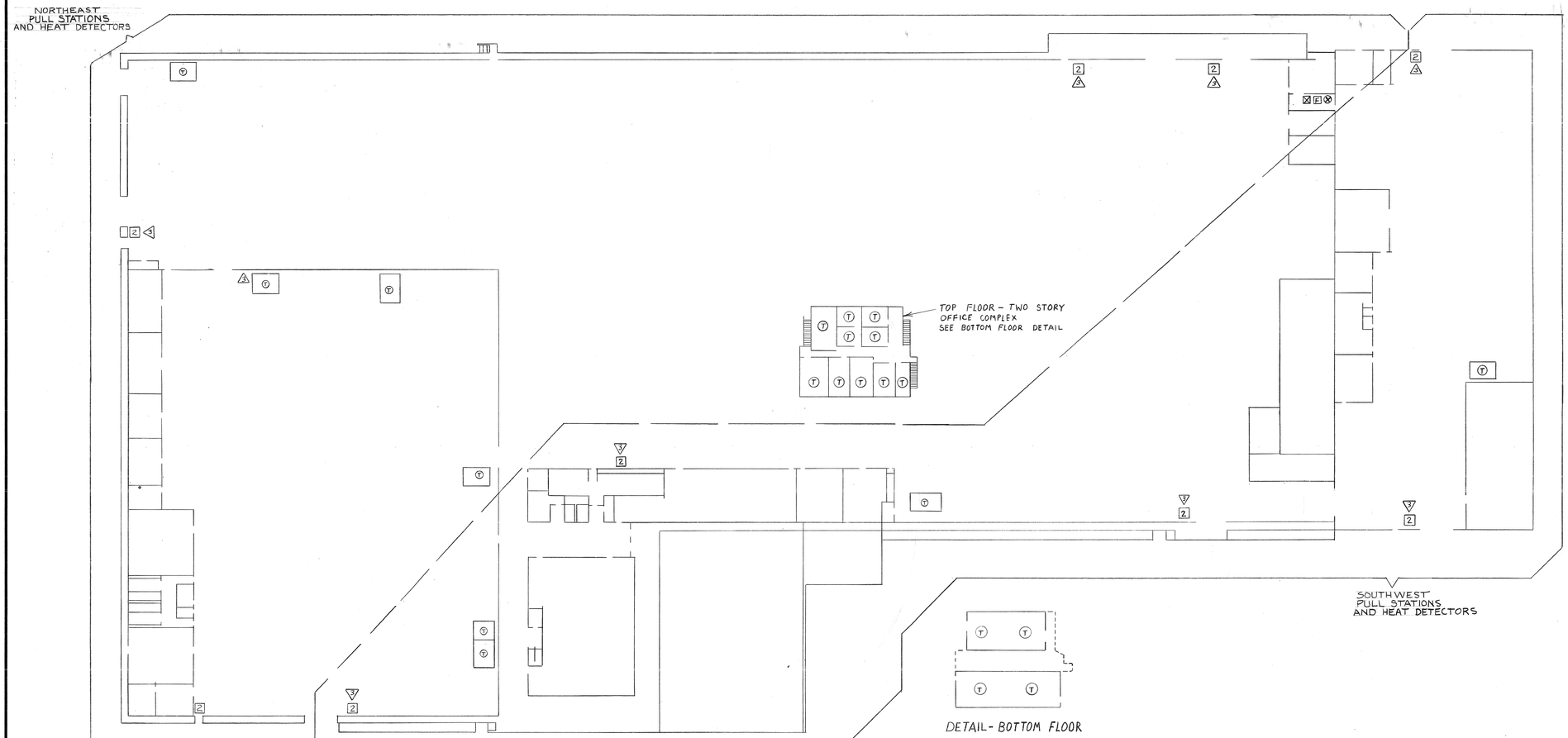
REPAIR CONDENSATE SYSTEM. BLDG. 265 PLANS & DETAILS

CHIEF ENGINEERING DESIGN — CHIEF CONSTRUCTION MANAGEMENT — CHIEF ENGINEERING BRANCH

ENVIRONMENTAL REVIEW DATE 13 March 80
ENERGY CONSERVATION REVIEW DATE 20 MARCH 80
USING AGENCY DATE
APPROVED CIVIL ENGINEER DATE 16 Mar 80
CORROSION ENGINEER DATE 19 Mar 80
PHYSICAL HANDICAP REVIEW DATE 20 March 80
SURVEY DATE 18 MAR 80
FIRE DEPARTMENT DATE 12 MAR 80
BIOENVIRONMENTAL DATE

PROJECT NO. HILL 221-0
DRAWING NO. 80/9/82
SCALE AS NOTED
SHEET 2 OF 2

B 11 265

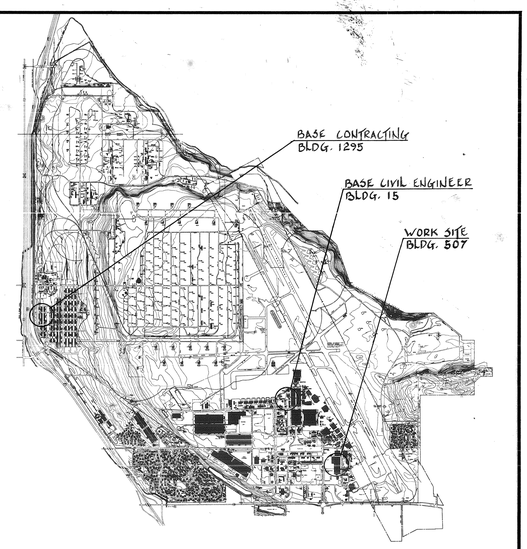


FLOOR PLAN - BLDG. 507

SCALE: 1" = 30'-0"

DETAIL - BOTTOM FLOOR
TWO STORY OFFICE COMPLEX

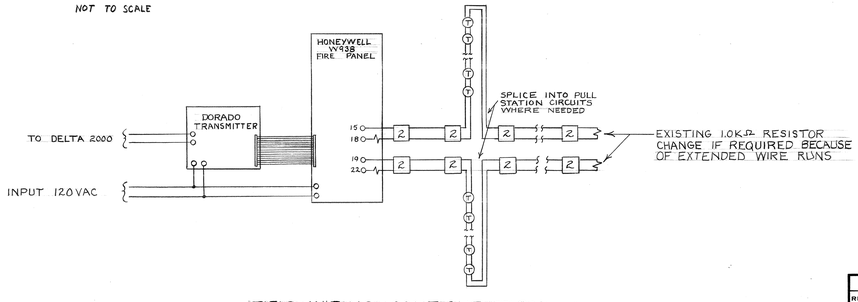
NOT TO SCALE



LOCATION MAP - HILL AFB

SYMBOLS

- (T) HEAT DETECTOR, 135° FIXED TEMPERATURE - RATE OF RISE
- F EXISTING HONEYWELL W938 ZONED FIRE ALARM PANEL
- ⊠ NEW TRANSMITTER
- ⊗ EXISTING TRANSMITTER
- 3 EXISTING AUDIO ALARMS
- 2 EXISTING PULL STATIONS



FIELD WIRING CONFIGURATION

NOTES

1. The contractor shall provide qualified personnel, supervision, inspection, transportation, labor, test equipment, parts and material to provide and test a heat detection system for the modular offices shown, and update the existing fire alarm transmission system to a multiple frequency, multiple signal system.

2. For the twenty modular offices shown, the contractor will install a heat detector fire protection system to include the following: heat detectors (Pyrotronics DT-135-CPF or equal) flush-mounted in the ceilings of the offices shown; The new detectors will be wired in line with the existing pull station circuits (see Field Wiring Configuration). To wire in the new detectors, the contractor will determine if he wants to splice into only one pull station circuit location per zone, or several locations. Replace fire panel faceplate labels for Northeast and Southwest zones to show addition of detectors.

3. The contractor will remove the TZ-2 transmitter, wiring and conduit. He will install a new Dorado 136 transmitter with integral 120/16 VAC transformer, and supply a receiver card compatible with the Honeywell Delta 2000. The Dorado transmitter will include four modules with transmitting frequencies A, B, C and D respectively, and be capable of transmitting twelve supervised signals. The new Dorado will be connected to the Honeywell W938 to monitor the status of the eight waterflow detector zones, the northeast and southwest pull station/heat detector zones, and the one firestat zone. Tap off existing input power lines to the Honeywell W938 fire panel to supply power to the Dorado transmitter. Supply the Dorado with its own battery backup system capable of operating the Dorado for 48 hours in the event of input power loss.

4. All wiring will be enclosed in EMT. The input wiring for the Dorado will be #12 AWG THW copper. All other wiring will be #14 AWG THW copper.

5. All equipment will be listed for its intended use by Underwriters' Laboratories, Inc, (UL).

6. Before disconnecting any existing fire protection equipment, contractor shall get the approval of the Contracting Officer, who will coordinate with the base Fire Department.

7. Contractor will conduct an operational test of the fire protection system that will include, but not be limited to, the following criteria:

   a. Coordinate scheduling of tests with Contracting Officer so the Fire Department and using agency are made aware of test times and the order of testing.

   b. Demonstrate that a trouble signal is sent to the Fire Department whenever any of the pull station/heat detector or audio/visual alarm circuits are opened.

   c. Demonstrate by shorting the appropriate terminals of each heat detector that the audio/visual alarms for that zone are activated; that the indicator lamp for the detector being tested comes on; and that an alarm signal indicating the correct zone is received by the Fire Department.

   d. Demonstrate by shorting out the appropriate terminals of each sprinkler riser flow switch that an alarm signal indicating the correct zone is received by the Fire Department, and the correct audio/visual alarms are activated in Building 507.

   e. Disconnect input power to the Dorado transmitter and operate on battery power for 24 hours. During the 24th hour of this test, initiate four alarm conditions and insure that the correct signals are received by the Fire Department.

8. Three copies of AS BUILT drawings, operating and maintenance manuals and repair manuals will be supplied to the Contracting Officer before final acceptance of the work.

9. All work will conform to the National Fire Protection Association (NEPA) standards No 70 1981: National Electrical Code; No 72A 1981 Local Protective Signaling Systems; and No 72E 1981 Automatic Fire Detectors.

10. As soon as possible after contract award, but in no case more than 30 days thereafter, the Contractor shall submit to the Contracting Officer shop drawings or descriptive literature covering the installation of the materials and/or equipment as listed hereinafter. Five submittal packages are required. Submit on the following: (List is only considered as minimum.)
System Drawings; Fire Alarm Transmitter; Heat Detectors.

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE, OGDEN, UTAH

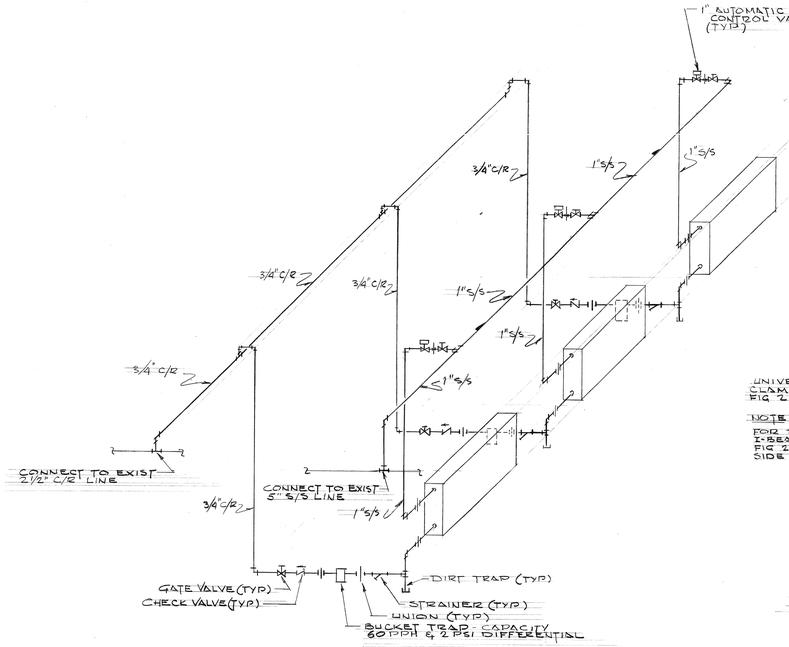
DESIGNED BY JAEER
DRAWN BY ALAN BURKE
DATE 26 July 1982
CHECKED BY / DATE
APPROVED BY / DATE

HEAT DETECTORS
BLDGS. 265 AND 507

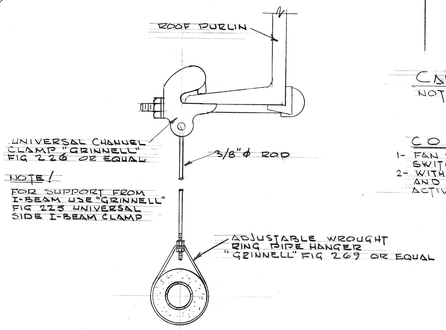
DEM / DATE 18 Aug 82	CHIEF ENGINEERING DESIGN / DATE	CHIEF CONSTRUCTION MANAGEMENT / DATE 22 Aug 82	CHIEF ENGINEERING BRANCH / DATE 26 AUG 82		
ENVIRONMENTAL REVIEW / DATE 27 July 82	APPROVED BASE CIVIL ENGINEER / DATE	GROUND SAFETY / DATE 20 AUG 82	PROJECT NO. HILL 82-1		
ENERGY CONSERVATION REVIEW / DATE 16 Aug 82	CORROSION ENGINEER / DATE 16 Aug 82	FIRE DEPARTMENT / DATE 18 Aug 82	DRAWING NO. 82-9678		
1981st / DATE	USING AGENCY / DATE MANEE 24 Aug 82	PHYSICAL HANDICAP REVIEW / DATE 6 Aug 82	BIOENVIRONMENTAL / DATE 12 Aug 82	SCALE AS SHOWN	SHEET 2 OF 2

265

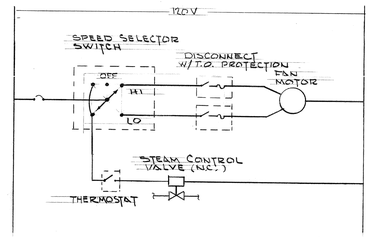
MONSEN ENG. 1500 11-81 MC 3200•



CABINET HEATER STEAM PIPING SCHEMATIC
NOT TO SCALE



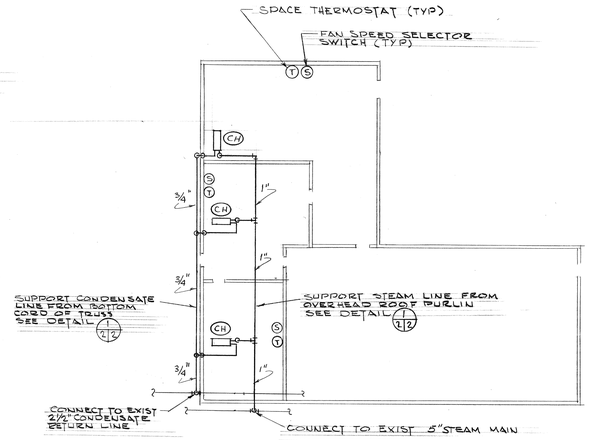
PIPE SUPPORT - DETAIL (1/12)
NOT TO SCALE



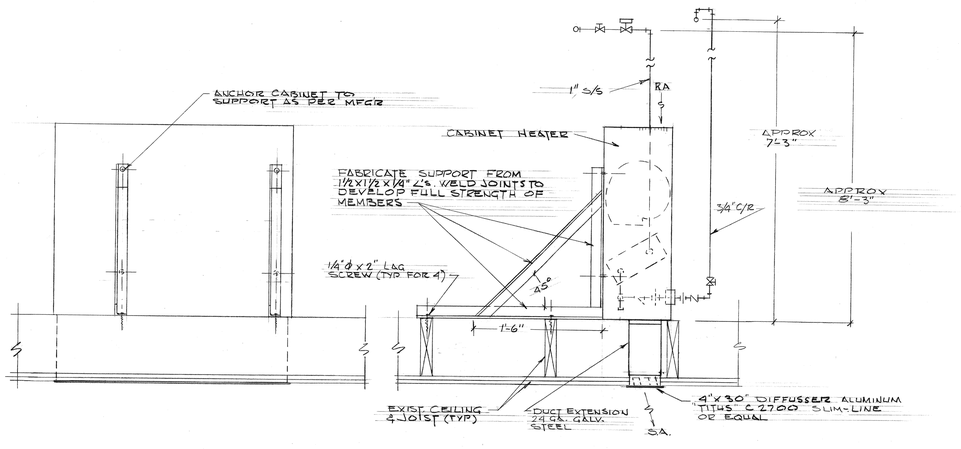
CABINET HEATER CONTROL DIAGRAM
NOT TO SCALE

CONTROL SEQUENCE

1- FAN SPEED IS DETERMINED FROM FAN SELECTOR SWITCH; HIGH, LOW OR OFF.
2- WITH THE FAN ON EITHER HIGH OR LOW SPEED AND THE SPACE CALLS FOR HEAT THE THERMOSTAT ACTIVATES THE STEAM VALVE TO OPEN.



PLAN - SHEET METAL SCHED. OFFICE
SCALE 1/8"=1'-0"



BACK VIEW SIDE VIEW

TYP. CABINET HEATER INSTALLATION
SCALE 1½"=1'-0"

EQUIPMENT SPECIFICATION

(CH) CABINET HEATER:
INVERTED WALL MOUNTED VERTICAL CABINET HEATER WITHOUT DECORATOR CABINET, 2 SPEED SWITCH, 1100/500 RPM MOTOR, NOMINAL 200 CFM, COIL 18MBTU AT HIGH SPEED WITH 60°F EAT AND 5 PSI STEAM. UNIT SHALL HAVE TOP STAMPED RETURN AIR GRILLE & BOTTOM OUTLET DUCT COLLAR. MOTOR SHALL BE OPEN TYPE 120V/60HZ/1Ø.

GENERAL NOTES

1- MOUNT THERMOSTATS 4'-0" ABOVE FLOOR.
2- MOUNT FAN SPEED SELECTOR SWITCH 5'-0" ABOVE FLOOR.
3- DUCT SHALL BE CONSTRUCTED AS PER THE "SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION INC." DUCT MANUAL.
4- STEAM LINES SHALL BE SCHEDULE 40 BLACK STEEL.
5- CONDENSATE LINES SHALL BE SCHEDULE 80 BLACK STEEL.
6- INSULATE STEAM & COUDENSATE LINES WITH 1" THICK FIBERGLASS INSULATION OF 4 LBS PER CU. FT. DENSITY OWENS-CORNING TYPE A, FRJ.
7- PIPE SHALL BE SUPPORTED 7 FT ON CENTER.

REVISION	DATE	DESCRIPTION	BY
1	12JUN73	"AS BUILT"	HP

DEPARTMENT OF THE AIR FORCE
OGDEN AIR MATERIEL AREA
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY L.P.DAVIS
DRAWN BY L.P.DAVIS
DATE 7 MAY 72
CHECKED BY — DATE
APPROVED BY — DATE

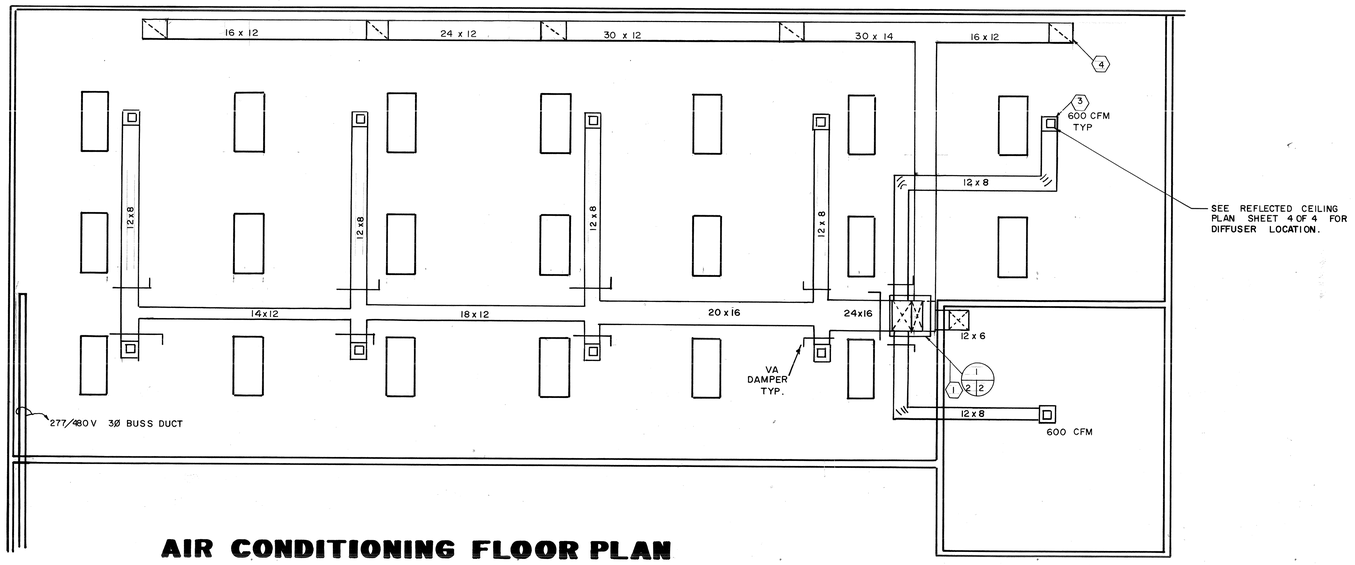
ALTER HEATING SYSTEM
BLDG 265
MECHANICAL PLANS & DETAILS

SUBMITTED: C.E. Johnson DEE
APPROVAL RECOMMENDED: S.G. Smith DEE; M.V. Harbertson DEE
APPROVED 26 May 72

APPROVED K.E. Nelson DBRDO	DATE 25 May 72	APPROVED Ray L. Ward SEG	DATE 16 May 72	WORK ORDER NO. / PROJECT NO.	
APPROVED H. Tom Lunsford MANEP	DATE 25 MAY 72	APPROVED Wm R. Bolton MMM	DATE 17 May 72	DRAWING NUMBER 72-7438	
APPROVED Cindy Vanderlinde DEOM	DATE 17 May 72	APPROVED Kenneth E. Allen DEE	DATE 18 May 72	SHEET 2 OF 4	SCALE NOTED

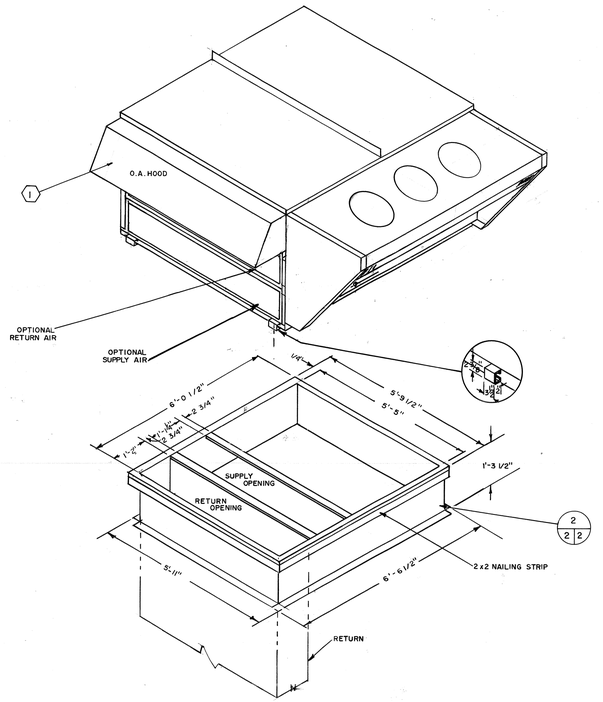
M 11-6-76 265

80107



AIR CONDITIONING FLOOR PLAN

SCALE: 1/4" = 1'-0"



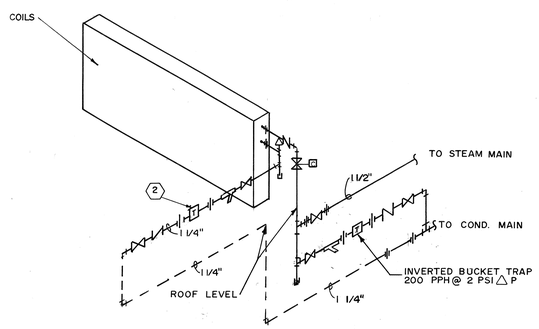
ROOF TOP AIR HANDLER

DIMENSIONS

1
2 2

LEGEND

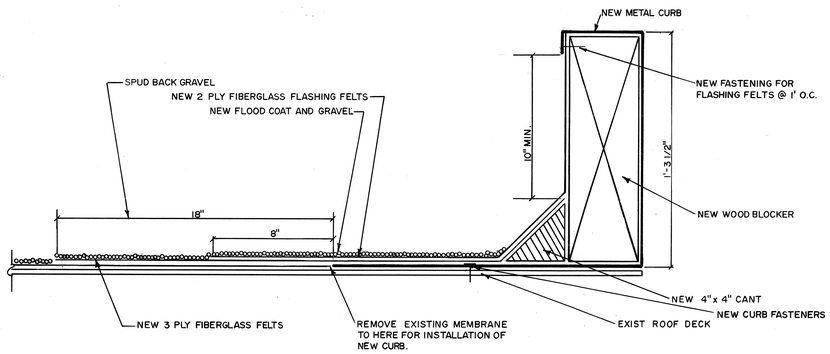
- DIRT POCKET
- GATE VALVE
- STRAINER
- UNION
- BUCKET TRAP
- CHECK VALVE
- VACUUM BREAKER
- CONTROL VALVE



TYPICAL HEATING COIL

NONFREEZE TYPE CONNECTION

NO SCALE



FLASHING DETAIL AT NEW EQUIPMENT CURB

2
2 2

OFFICIAL USE ONLY — RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE — OGDEN, UTAH

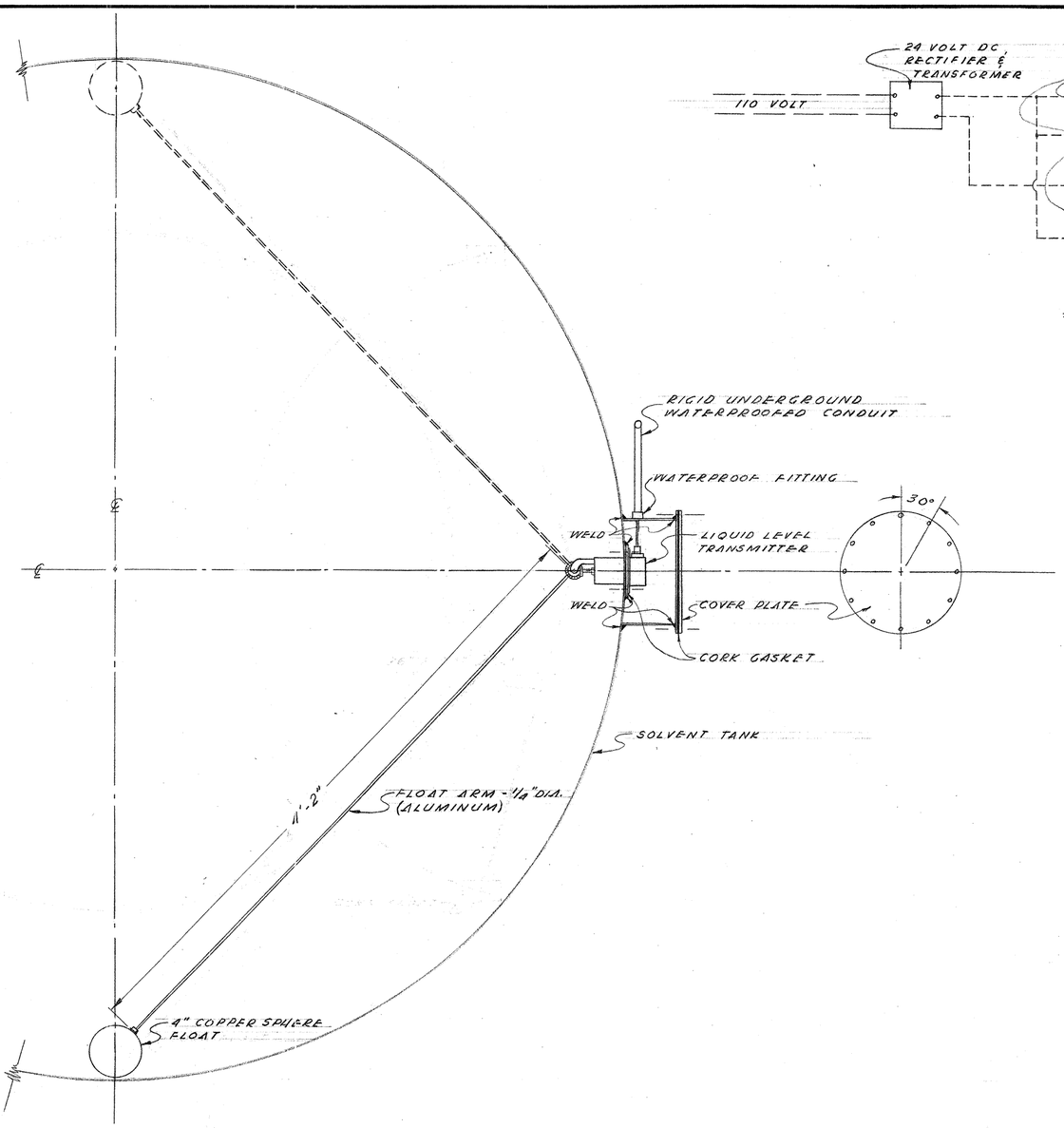
DESIGNED BY JENNINGS
DRAWN BY ROSS
DATE Sep 6 1983
CHECKED BY — DATE
APPROVED BY — DATE

INSTALL HVAC BLDG. 265

MECHANICAL

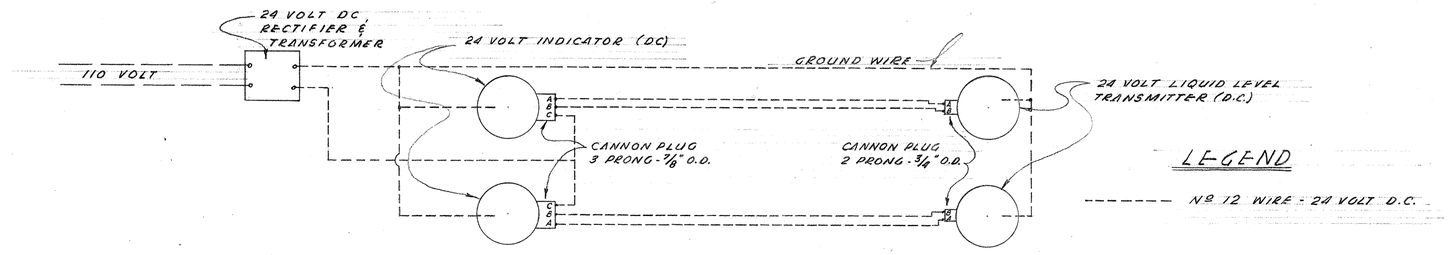
USING AGENCY — DATE	CHIEF, ENGINEERING DESIGN — DATE	CHIEF, CONSTRUCTION MANAGEMENT — DATE	CHIEF, ENGINEERING BRANCH — DATE
John Moore 1 May 84			9 MAY 84
ENVIRONMENTAL REVIEW — DATE	APPROVED BASE CIVIL ENGINEER — DATE	SAFETY — DATE	PROJECT NO. PHL 115-S
William R. Trimble 26 April 84		Ronald J. Bartos 10 May 84	DRAWING NO. 85-3886
ENERGY CONSERVATION REVIEW — DATE	CORROSION ENGINEER — DATE	FIRE DEPARTMENT — DATE	
William 25 April 84			24 MAY 84
CIVIL/ARCHITECTURAL REVIEW — DATE	BIOENVIRONMENTAL — DATE		SCALE NOTED
		9 May 84	SHEET 2 OF 4

265

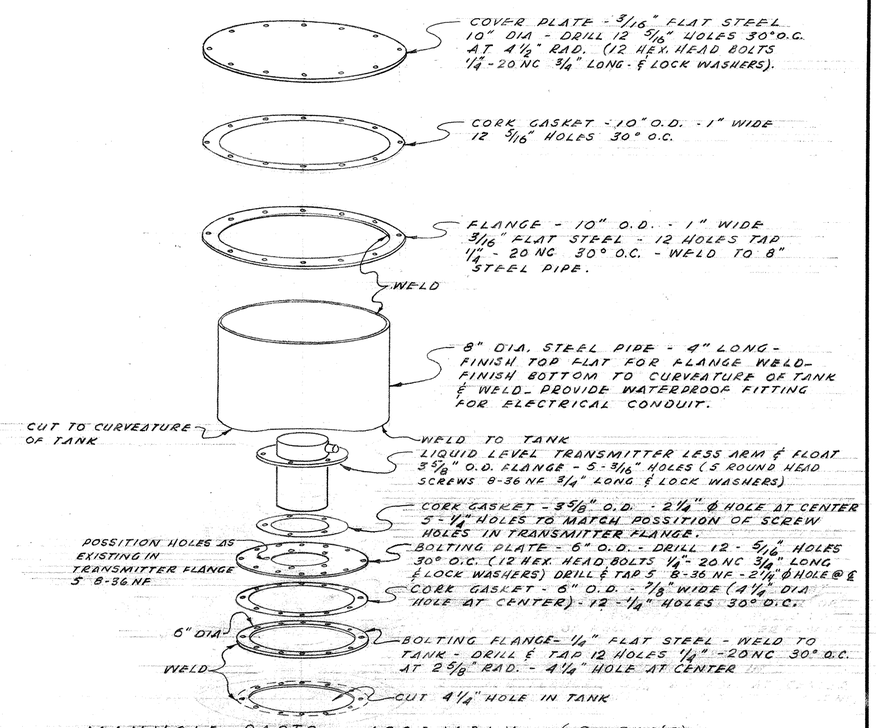


LIQUID LEVEL TRANSMITTER MANHOLE ASSEMBLY

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

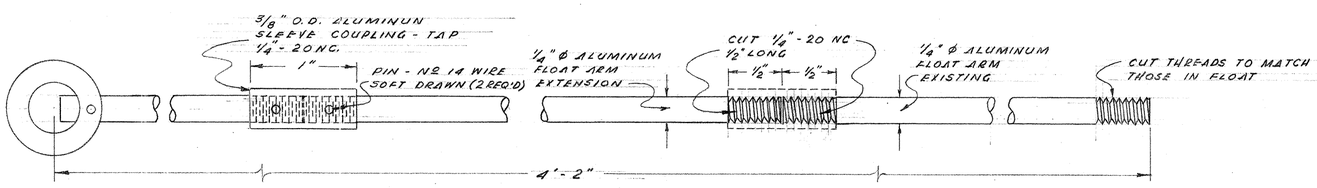


SCHEMATIC WIRING DIAGRAM



MANHOLE PARTS ASSEMBLY - (2 REQ'D)

SCALE 1/4" = 1"



FLOAT ARM EXTENSION DETAIL

NO SCALE

REVISION	DATE	DESCRIPTION	BY

OGDEN AIR MATERIEL AREA
OFFICE OF AIR INSTALLATIONS
DEPARTMENT OF THE AIR FORCE

HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY ARMSTRONG
DRAWN BY ARMSTRONG 2-4-53
TRACED BY
CHECKED BY DATE
APPROVED BY DATE

SOLVENT TANK MODIFICATION STILL ANNEX - BLDG. 111

SUBMITTED W. Shelley — APPROVAL RECOMMENDED J. Bonnemont — APPROVED [signature]

APPROVED DATE
APPROVED DATE
APPROVED DATE

PROJECT NO. 4235

DRAWING NUMBER 53 - 2426

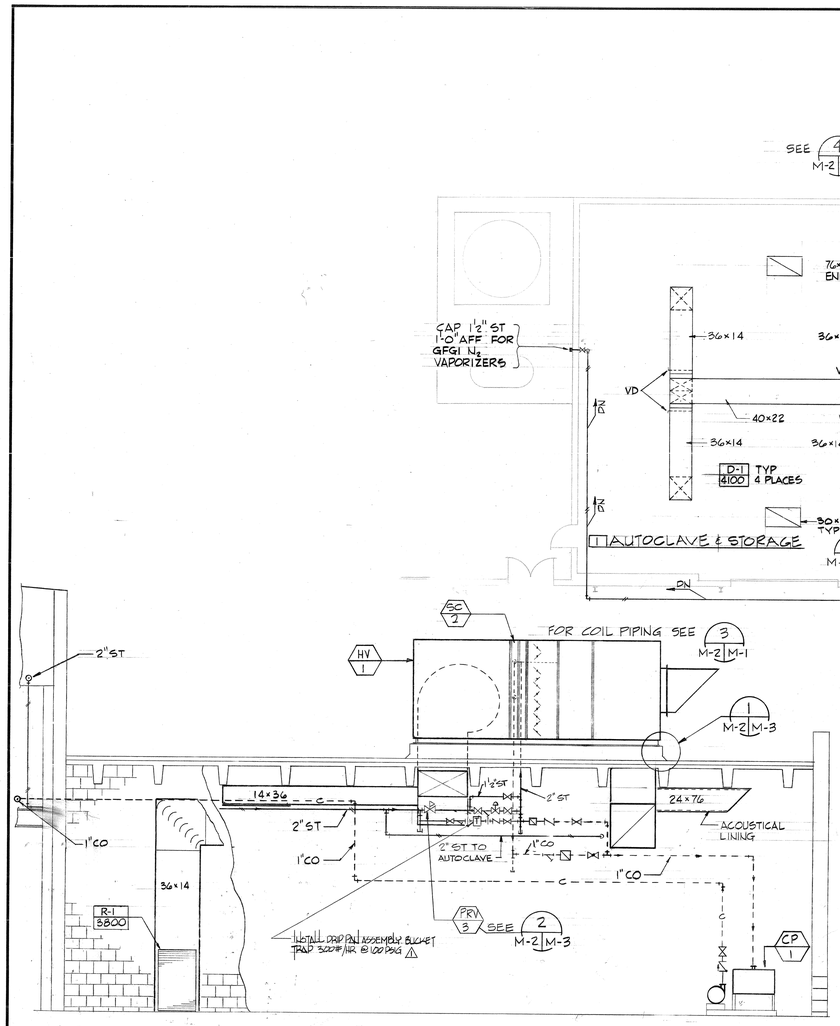
SHEET 2 OF 2 SCALE NOTED

677 PHOTO BLUE

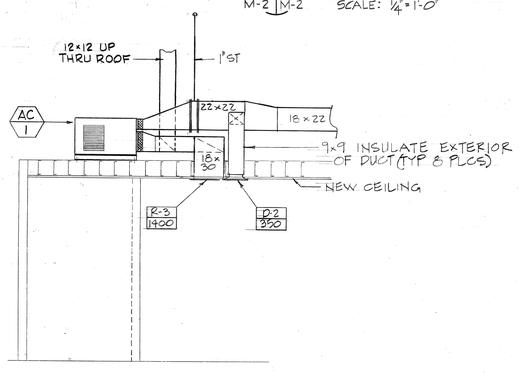
265-53-C

116-12 M

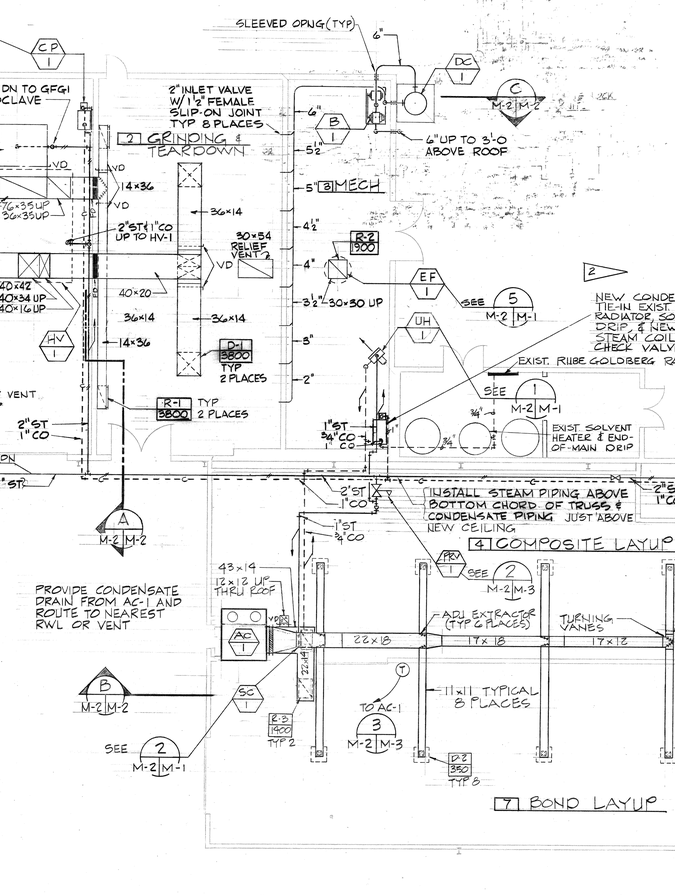
265

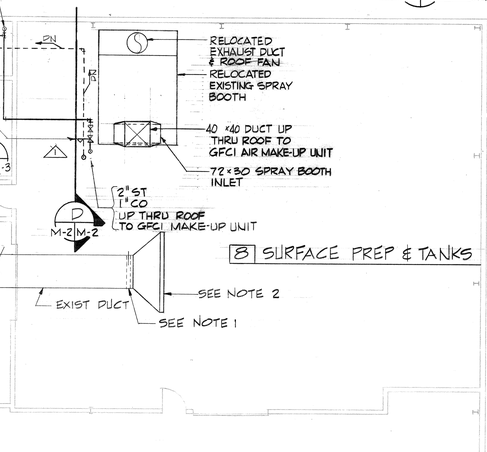


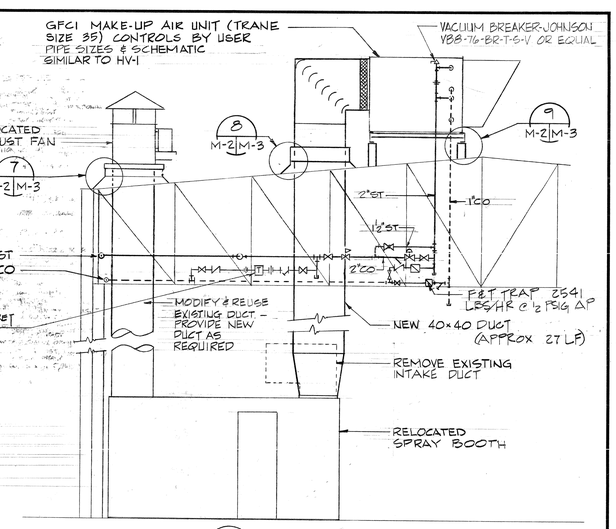
A SECTION
M-2|M-2 SCALE: 1/4"=1'-0"



B SECTION
M-2|M-2 SCALE: 1/4"=1'-0"

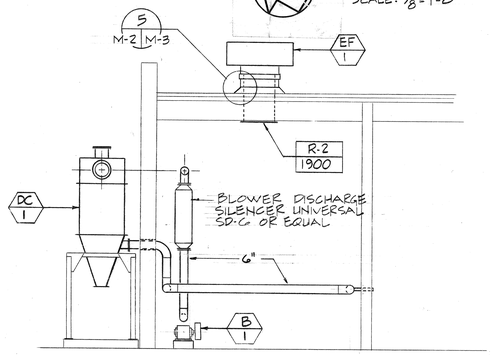






D SECTION
M-2|M-2 SCALE 1/4"=1'-0"

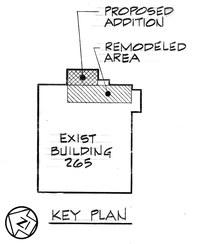
MECHANICAL FLOOR PLAN
SCALE: 1/8"=1'-0"



C SECTION
M-2|M-2 SCALE: 1/4"=1'-0"

NOTES:

1. INSTALL NEW VOLUME DAMPER IN EXISTING 52" WIDTH X 24" DEEP DUCT. FIELD VERIFY DIMENSION OF EXISTING DUCT.
2. REMOVE END FROM EXISTING DUCT AND INSTALL NEW 4'-0" LONG DUCT TRANSITION WITH 12'-8 3/4" X 2'-0" OPENING. EQUIP NEW DUCT OPENING WITH 6 KRUEGER (OR EQUAL) 880 H GRILLES WITH HORIZONTAL FRONT VANES AND VERTICAL REAR VANES.



KEY PLAN

REGISTERED PROFESSIONAL ENGINEER
No. 4538
L. Bryce Gardner
State of Utah

4' 2' 0' 4' 8'
GRAPHIC SCALE 1/4" = 1'-0"

8' 4' 0' 8' 16'
GRAPHIC SCALE 1/8" = 1'-0"

REVISION	DATE	DESCRIPTION	BY
	4-12-82	"AS BUILT"	NMM
2	6 JAN 81	ADD CONDENSATE PUMP	NAS
1	26 JAN 80	INSTALL DRIP TRAP ASSEMBLIES & CHECK VALVES	NAS

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE OGDEN, UTAH

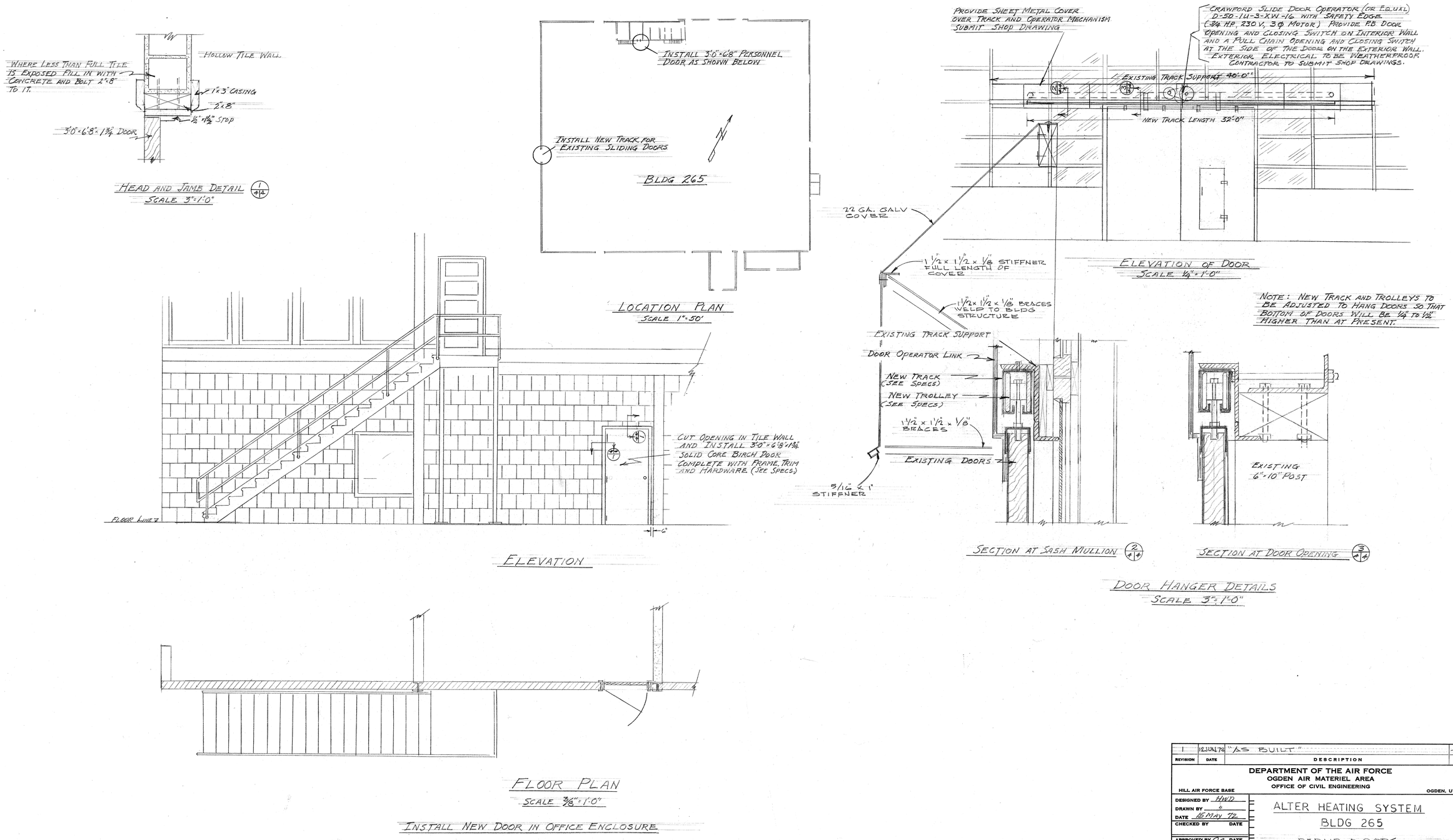
DESIGNED BY RMD
DRAWN BY RMD
DATE 15 FEB 1980
CHECKED BY DATE
APPROVED BY DATE

ADAL BLDG 265

MECHANICAL FLOOR PLAN & SECTIONS

CHIEF ENGINEERING DESIGN: Robert K McKenzie	CHIEF CONSTRUCTION MANAGEMENT: Thomas A Smith	CHIEF ENGINEERING BRANCH: McClelland 80 APR 10	
USING AGENCY: Ward C Bubb Jr 11 APR 80	APPROVED-BASE CIVIL ENGINEER: Donald L Kapp 11 Apr 80	GROUND SAFETY: Ray Faux 10 APR 80	PROJECT NO. HIL 98-0
	CORROSION ENGINEER: 11 April 80	FIRE DEPARTMENT: C A Mann 11 APR 80	DRAWING NO. 80-9221
		BIOENVIRONMENTAL: 10 April 80	SCALE AS SHOWN
			SHEET 13 OF 17

M 265 M-2



HEAD AND JAMB DETAIL (1/4 4)
SCALE 3"=1'0"

LOCATION PLAN
SCALE 1"=50'

ELEVATION OF DOOR
SCALE 1/4"=1'0"

SECTION AT SASH MULLION (2/4 4)

SECTION AT DOOR OPENING (3/4 4)

DOOR HANGER DETAILS
SCALE 3"=1'0"

ELEVATION

FLOOR PLAN
SCALE 3/8"=1'0"

INSTALL NEW DOOR IN OFFICE ENCLOSURE

REVISION	DATE	DESCRIPTION	BY
1	12 JUN 72	"AS BUILT"	

DEPARTMENT OF THE AIR FORCE
OGDEN AIR MATERIEL AREA
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE — OGDEN, UTAH

DESIGNED BY HWD
DRAWN BY "
DATE 15 MAY 72
CHECKED BY DATE
APPROVED BY DATE

ALTER HEATING SYSTEM
BLDG 265
REPAIR DOORS

SUBMITTED: Bill Johnson DEEE
APPROVAL RECOMMENDED: [signature] DEEE
APPROVED: [signature] DEE 26 May 72

APPROVED: Ray L Ward SEG 16 May 72
APPROVED: Wm R. Bolton AMM 17 May 72
APPROVED: Kenneth E. Allen DEE 18 May 72

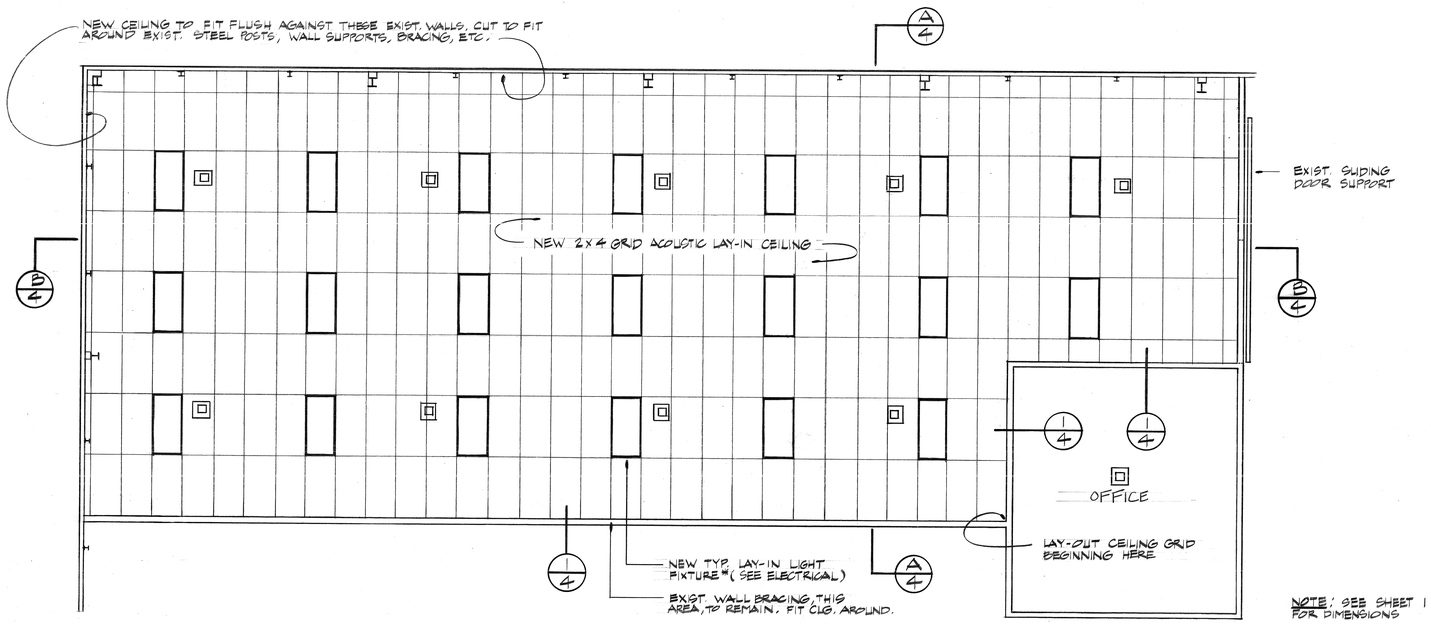
R E Watson DEPD-O 25 May 72
H Tomlinson MANEP 25 MAY 72
Andy Vandenaker DEEM 17 May 72

WORK ORDER NO. / PROJECT NO. HIL 130-3
DRAWING NUMBER 72-7438
SHEET 4 OF 4 SCALE NOTED

B

M 116-78 265

80107



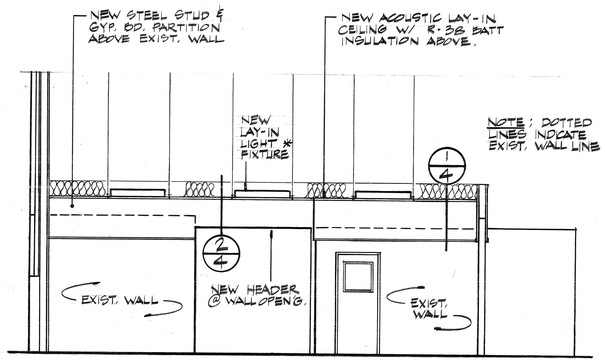
NOTE: SEE SHEET 1 FOR DIMENSIONS

REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

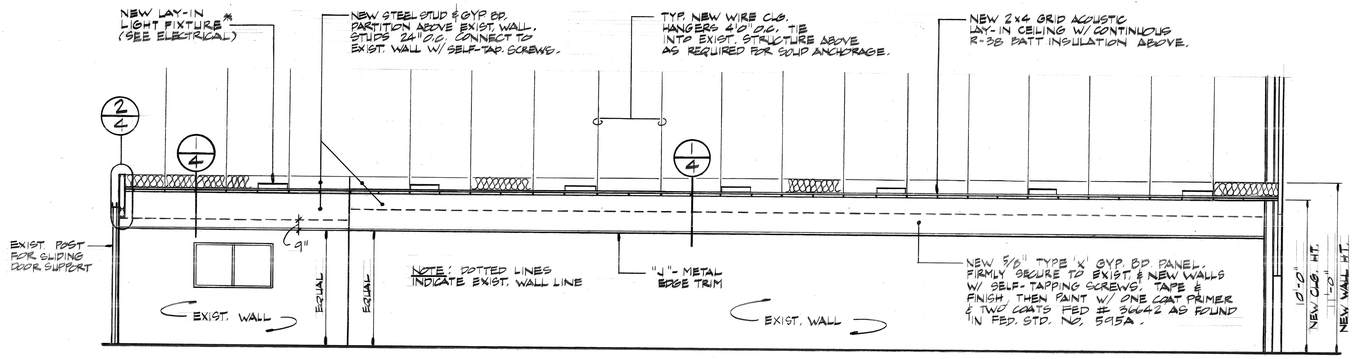
N

* IMPORTANT NOTE !!
PROVIDE 5/8" GYP. BD. FIRE-RESISTIVE ENCLOSURE (NOT SHOWN ON DRAWING) FOR EA. LAY-IN FLUORESCENT LIGHT FIXTURE, LAY CONT. R-38 INSULATION ABOVE ENCLOSURES.



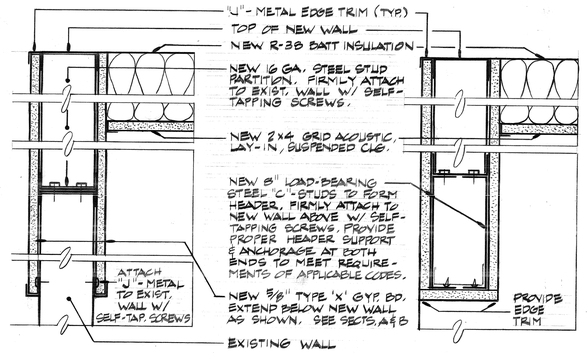
A/4 SECTION A

SCALE 1/4" = 1'-0"



B/4 SECTION B

SCALE: 1/4" = 1'-0"



1/4 TYP. WALL SECTION

SCALE: 3" = 1'-0"

2/4 HEADER

SCALE: 3" = 1'-0"

MAJOR ITEMS OF WORK (ARCHITECTURAL)

1. Coordinate all architectural work with mechanical and electrical requirements.
2. Remove (and relocate as necessary) existing mechanical and electrical apparatus which will interfere with new ceiling installation. This includes, but is not limited to, removal of the wide flange beam and block-and-tackle from traveling hoist assembly.
3. Erect new steel stud and gypsum board partition above existing walls as shown. Tape, finish and paint gypsum board as shown. Erect header as shown.
4. Install new 2'x 4' grid suspended acoustic ceiling and provide and install R-38 batt insulation above.

SPECIFICATIONS (ARCHITECTURAL)

Suspended Acoustic Ceiling

Grid system shall be white satin finish, exposed Tee-grid. Suspension system shall be capable of safely supporting total ceiling system loads and shall conform to all applicable codes. Hanger wires shall be spaced 4'-0" o.c. max. Allowable tolerance of finished ceiling system: level within 1/8" in 12'-0". Ceiling boards shall be 5/8", white natural fissure texture. Fire rating of ceiling system shall be Class A, 1½ hr., 25 flame spread. All components shall be from one manufacturer. Submittal shall be made of ceiling tile (12"x 12" sample), grid components and manufacturer's literature.

Light-Gauge Metal Framing

Steel studs shall be 16 ga. non load-bearing except where otherwise indicated and shall meet the requirements of applicable codes and AFM 88-15 as revised. Attach runners to existing walls with self-tapping screws spaced at no more than 24" centers and paired as shown.

Gypsum Board

Gypsum board shall be 5/8" thick, type 'X', with edges formed to receive joint compound and tape. Fasten to studs and existing walls with self-tapping screws spaced 12" along supports. Apply ASTM C 475 joint compound and tape to joints. Sand joints smooth and flush with walls.

Paint

Gypsum board shall be primed and then painted by brush or roller only with two coats Fed. Spec. TT-P-1511 Semigloss. Color shall be Fed. # 36642 as found in Fed. Std. No. 595A. Finished surfaces shall be free from runs, drips, laps, brush marks, and variations in color, texture, and finish.

OFFICIAL USE ONLY

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE, OGDEN, UTAH

INSTALL HVAC BLDG 265

ARCHITECTCTRAL

DESIGNED BY LT TAYLOR
DRAWN BY LT TAYLOR
DATE 8-15-83

CHECKED BY	DATE		
John Moore	1 May 84	Capt Taylor 2LT USAF 26 Apr 84	
DEM	DATE	APPROVED BY	DATE
Lonnie J. Thompson	25 Apr 84	Damon	25 Apr 84
1881st COMM. SQ.	DATE	CHIEF, ENGINEERING DESIGN	CHIEF, CONSTRUCTION MANAGEMENT
Dilay H. Belcamp	16 May 84		
ENVIRONMENTAL REVIEW	DATE	APPROVED-BASE CIVIL ENGINEER	DATE
William S. Sinsta	24 April 84		
ENERGY CONSERVATION REVIEW	DATE	CORROSION ENGINEER	DATE
J Nelson	26 April 84		
USING AGENCY	DATE	PHYSICAL HANDICAP REVIEW	DATE

CHIEF ENGINEERING BRANCH 10 MAY 84

SAFETY DATE 10 May 84

FIRE DEPARTMENT DATE

BIOENVIRONMENTAL DATE 9 May 84

PROJECT NO. 84-15-5
DRAWING NO. 83-9886
SCALE AS SHOWN
SHEET 4 OF 4

265



FLOOR PLAN
1/16" = 1' - 0"

N

LEGEND

- EPOXY FLOOR COATING (NOT IN CONTRACT)
- APPLY EPOXY FLOOR COATING SYSTEM
- APPLY 4" WIDE YELLOW SAFTEY STRIPING

75 CEG HILL AFB
CAD COMPUTER INFORMATION
PROJ * .dgn

SIGNATURE ON THIS SHEET IS APPROVAL FOR ALL OTHER SHEETS INCLUDED.

REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
HILL AIR FORCE BASE — OFFICE OF CIVIL ENGINEERING — OGDEN, UTAH

CONSOLIDATED STRUCTURES BLDG 265 EPOXY FLOOR COATING SYSTEM/ SAFTEY STRIPING PLAN

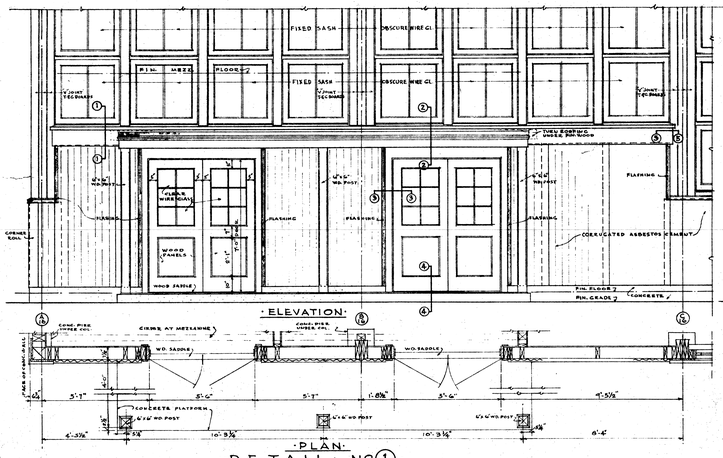
DESIGNED BY
DRAWN BY AMN MALCOLM
DATE 20 APRIL 01
CHECKED BY
APPROVED BY

CEZ-MAINTENANCE ENGINEERING DATE	CEOM-INFRASTRUCTURE REVIEW DATE	ARCHITECTURAL COMPATIBILITY DATE	SITE PLANS-CEEX DATE
CEO-MAINTAINABILITY DATE	SC DATE	EM DATE	ENERGY CONSERVATION REVIEW DATE
USING AGENCY KENT MCFARLAND DATE	PROJECT ENGINEER	CHIEF PROJECT MANAGER	CHIEF ENGINEERING BRANCH
APPROVED-BASE CIVIL ENGINEER DATE	CORROSION ENGINEER DATE	PHYSICAL HANDICAP REVIEW DATE	
SAFETY DATE	FIRE DEPARTMENT DATE	BIOENVIRONMENTAL DATE	

PROJECT NO. KRSM 012049
DRAWING NO.
SCALE
SHEET 4 OF 5

Drawing provided by Site Development 777-2288

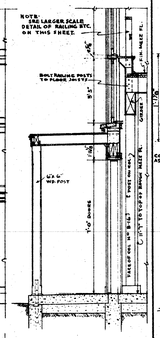
WAR DEPARTMENT



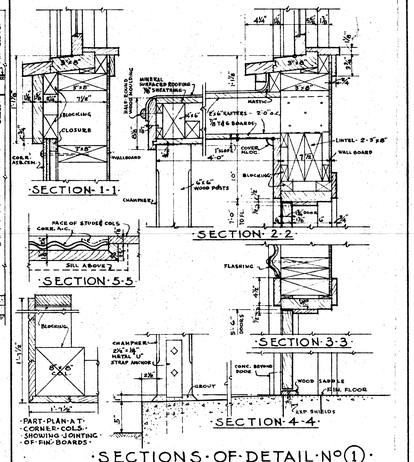
·ELEVATION·

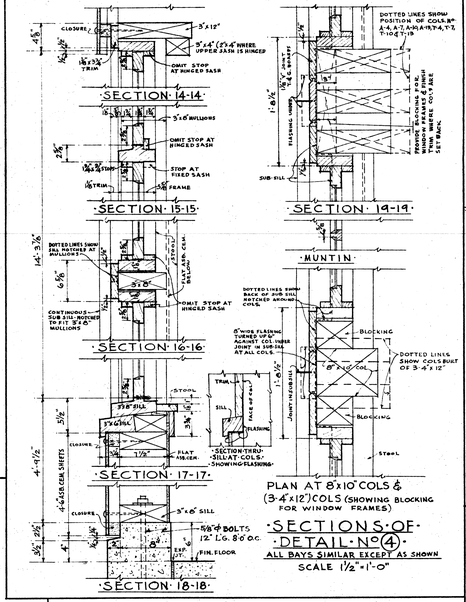
·PLAN·

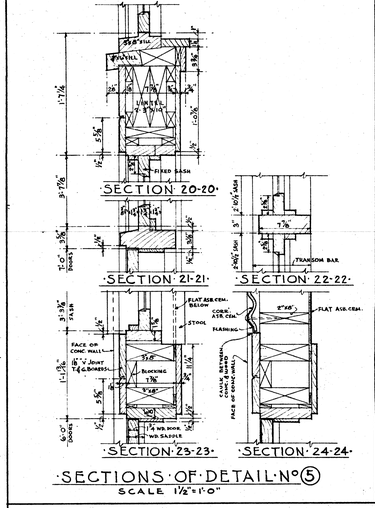
·D E T A I L · N° ① ·
SCALE 3/8"=1'-0"

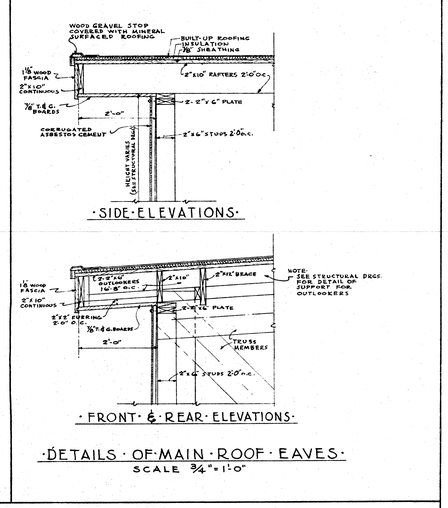


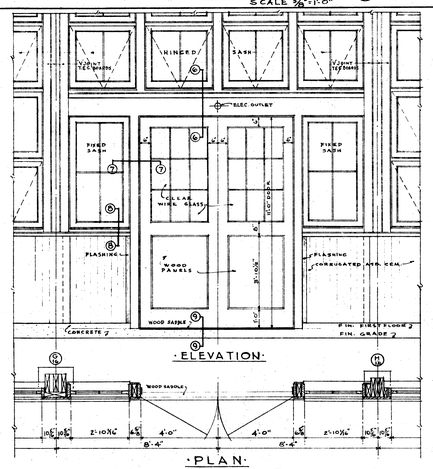
·SECTION·

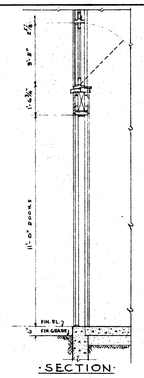


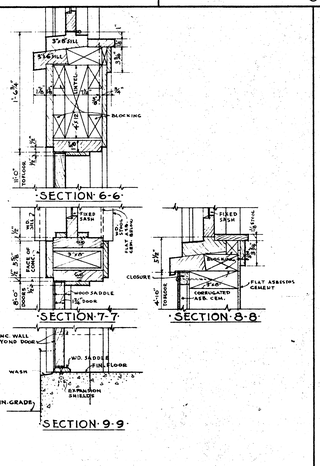


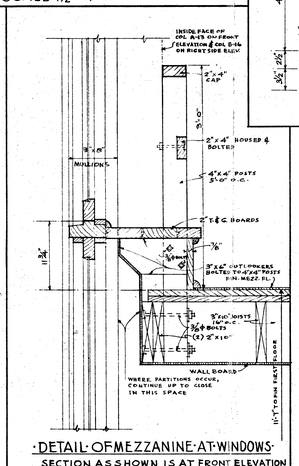


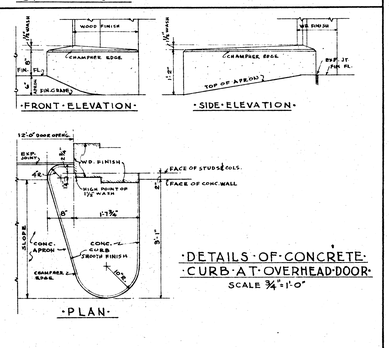


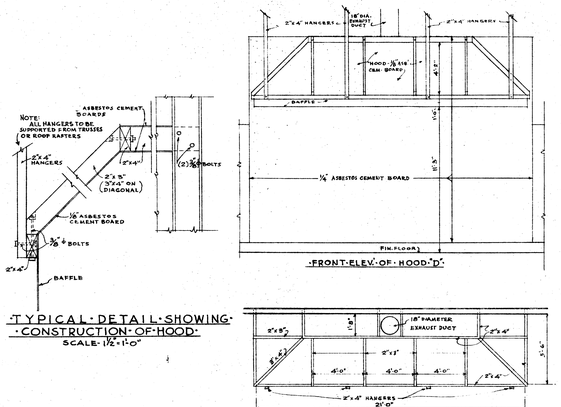


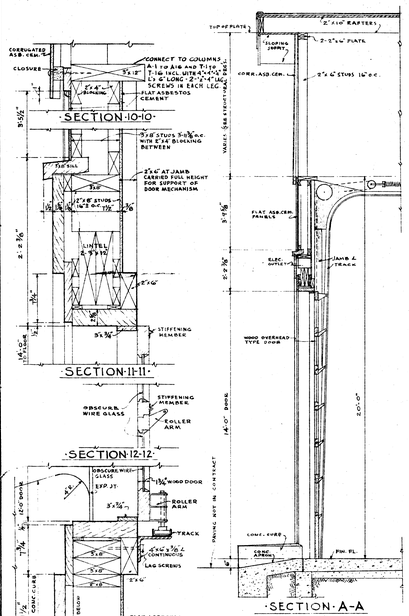


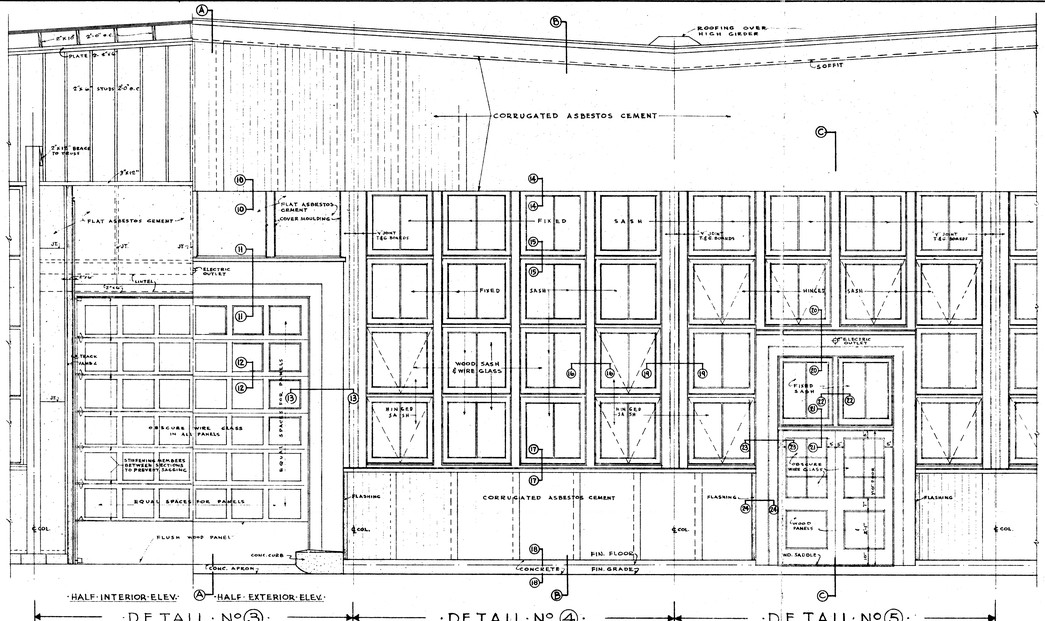


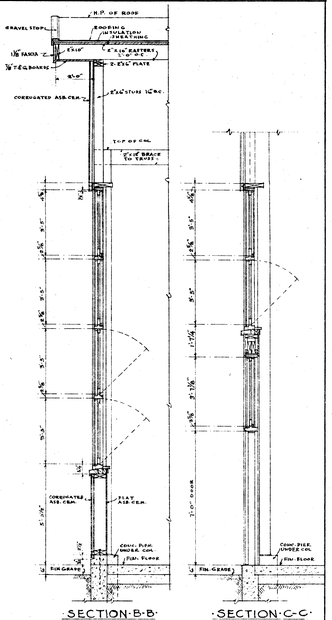


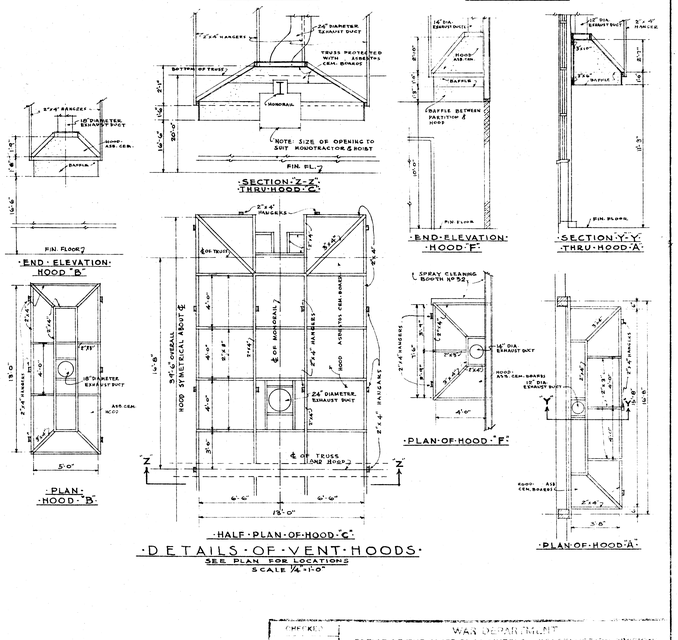


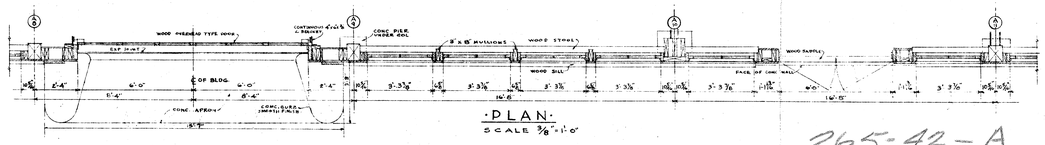












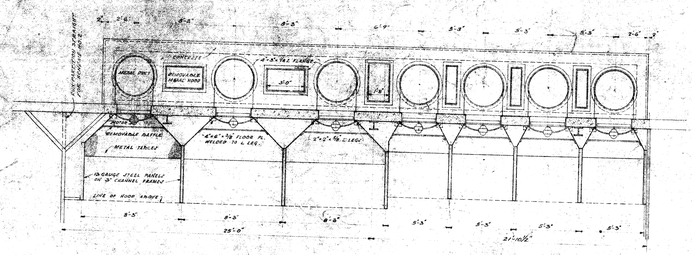
265-42-A

CHECKED	WAR DEPARTMENT
TRACED	OFFICE OF THE CHIEF OF ENGINEERS CONSTRUCTION DIVISION
STRUCT	WASHINGTON, D.C.
ELECT	ENGINE REPAIR BUILDING
MECH	EXTERIOR DETAILS
SPEC'S	AND VENT HOOD DETAILS
	SHEET 4 OF 17 SHEETS — SCALE AS SHOWN
	SUBMITTED — APPROVAL RECOMMENDED — APPROVED
	DRAWN — TRACED — MAY 25 1942 — FILE NO.
	APPROVED FOR THE COMMANDING GENERAL, ARMY AIR FORCES — DRAWING NO. A-4 PLAN 3971-0-3

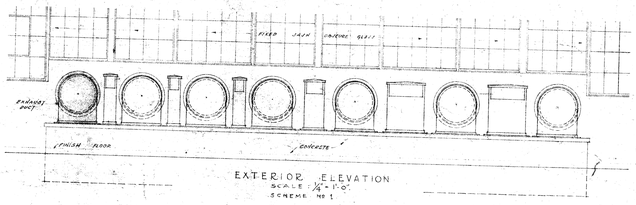
THIS PLAN IS LOANED SUBJECT TO THE TERMS OF CONTRACT W-535-eng-[illegible] DATED APRIL 9, 1942 BETWEEN THE U.S. GOVERNMENT, ALBERT KAHN, INC. AND ALBERT KAHN ASSOCIATED ARCHITECTS & ENGINEERS, INC. BY [illegible]



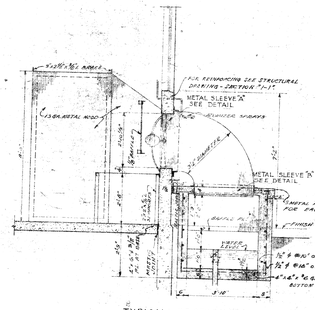
INTERIOR ELEVATION OF BOOTHS
SCALE: ¼"-1'-0"



PLAN
SCALE: ¼"-1'-0"



EXTERIOR ELEVATION
SCALE: ¼"-1'-0"
SCHEME NO 1



TYPICAL SECTION
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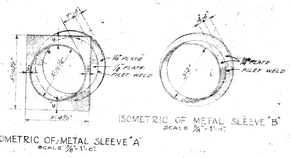
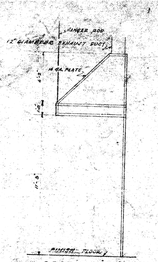


ISOMETRIC OF METAL SLEEVE "B"
SCALE ⅜"-1'-0"

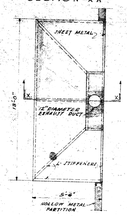
ISOMETRIC OF METAL SLEEVE "A"
SCALE ⅜"-1'-0"

DETAILS OF PAINT SPRAYING EQUIPMENT

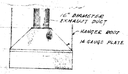
FOR ALTERNATE DETAILS OF PAINT SPRAY EQUIPMENT SEE SCHEME NO 2 ON MECHANICAL EQUIPMENT ROOM DETAILS.

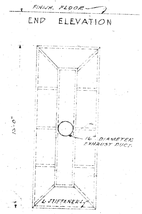


SECTION X-X

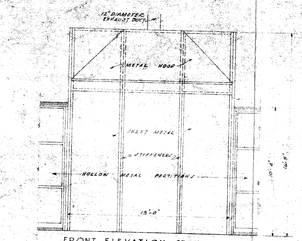


PLAN
HOOD-A





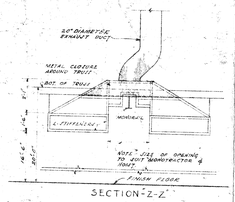
PLAN
HOOD-B



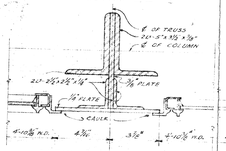
FRONT ELEVATION OF HOOD-A
HOOD B SIMILAR



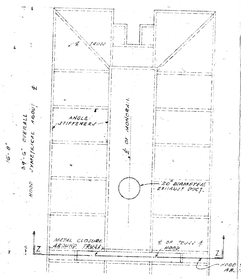
PLAN OF HOOD-D



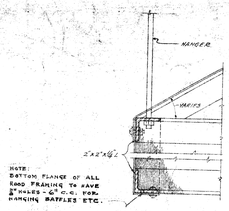
SECTION Z-Z'



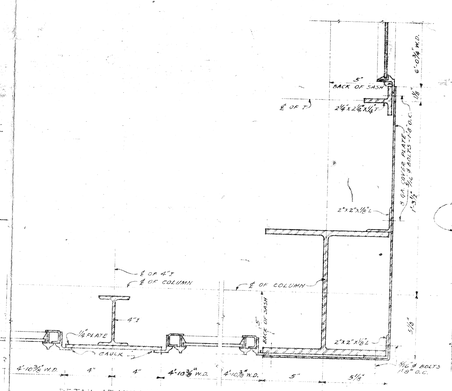
DETAIL AT TRUSS END



PLAN OF HOOD-C

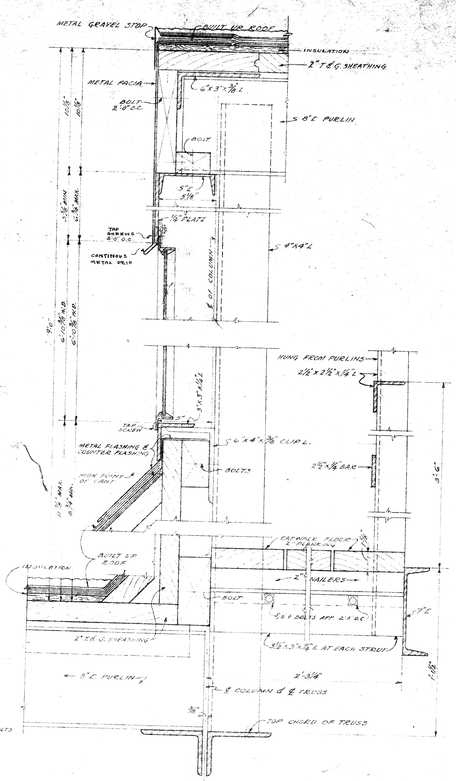


SECTION DETAIL
THRU CORNER OF HOOD
SCALE: 3"-1'-0"

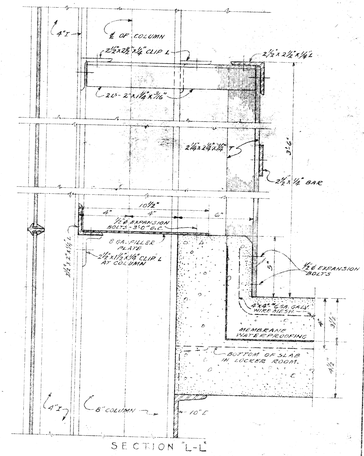


DETAIL AT MULLION
MONITOR DETAILS
SCALE: 3"-1'-0"

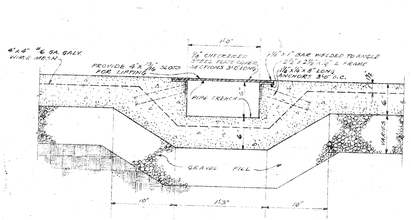
DETAIL AT CORNER COLUMN



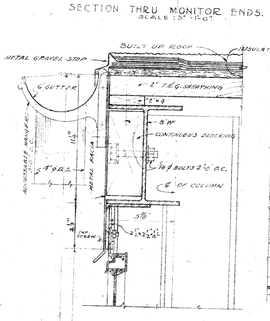
SECTION THRU MONITOR ENDS.
SCALE 3"-1'-0"



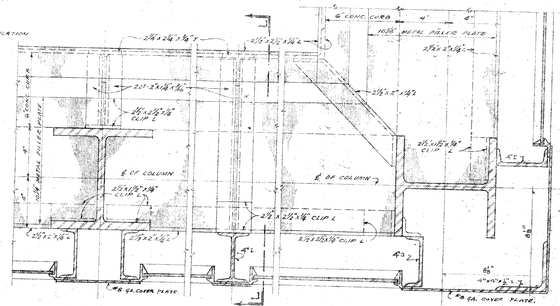
SECTION "L-L"



TYPICAL PLUMBING PIPE TRENCH DETAIL.
SCALE: 1½" = 1'-0"



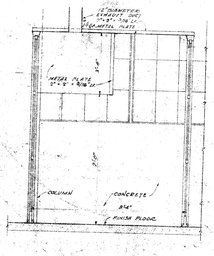
PLAN AT COLUMN



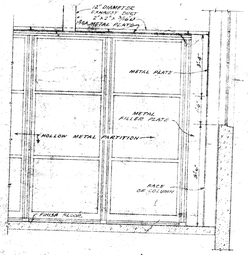
PLAN AT MULLION

PLAN AT CORNER COLUMN

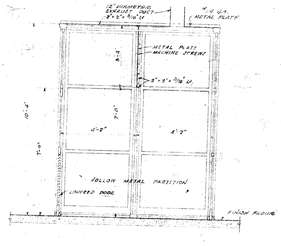
DETAILS OF RAILING AT MEZZANINE WINDOWS.
SCALE: 3"-1'-0"



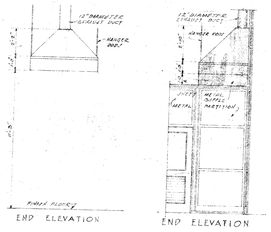
SECTION V-V



SECTION W-W

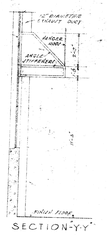


SECTION Z-Z

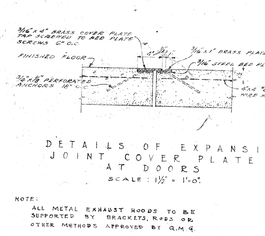


END ELEVATION

END ELEVATION

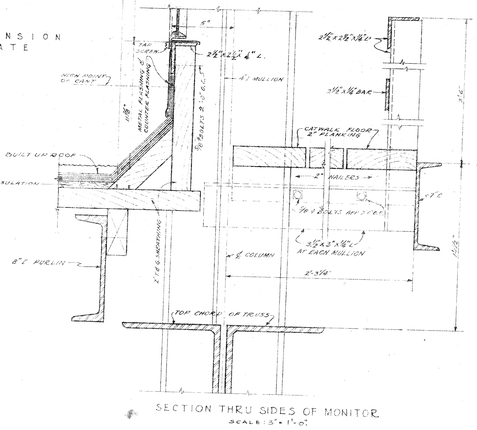


SECTION Y-Y

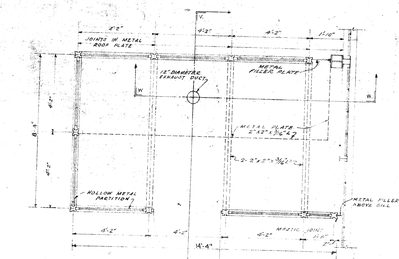


DETAILS OF EXPANSION JOINT COVER PLATE AT DOORS
SCALE: 1½" = 1'-0"

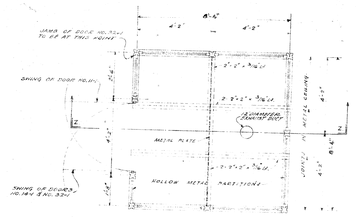
NOTE:
ALL METAL EXHAUST HOODS TO BE SUPPORTED BY BRACKETS, RODS OR OTHER METHODS APPROVED BY B.M.S.



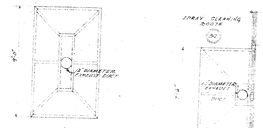
SECTION THRU SIDES OF MONITOR.
SCALE: 3"-1'-0"



PLAN OF SPRAY CLEANING BOOTHS (1) (2)



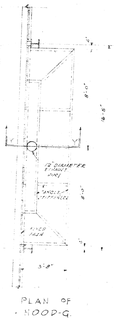
PLAN OF
SPRAY CLEANING BOOTHS (11) (14) (32)



PLAN OF HOOD-E

PLAN OF HOOD-F

NOTE: ALL HOODS TO BE ACID RESISTING.



PLAN OF
HOOD-G

(A) REINFORCING STEEL ASSTD. C.2340.

LEGEND

MATERIALS		ABBREVIATIONS	
	CONCRETE	C.I.	CAST IRON
	METAL	GA.	GAUGE
	WOOD	PL.	PLATE
	GRAVEL	T&G	TONGUE & GROOVE
	EARTH	SHT.	SHEET(ING)
		W.D.	WINDOW DIMENSION
		O.C.	ON CENTERS
		GALV.	GALVANIZED
		D.S.	DOWN SPOUT

SCALE	AS NOTED
REVISIONS	

CONSTRUCTION DIVISION
OFFICE OF THE QUARTERMASTER GENERAL

HILL FIELD UTAH

ENGINE REPAIR SHOP

VENT HOODS, PAINT SHOP & MONITOR DETAILS

DRAWN BY	CHECKED BY	APPROVED BY DIRECTION	DATE
C.LEWIS	R.S.D.		SEPT. 6-1940
V.KATTAU	J.W.S.		
TRACED BY			PLAN NUMBER
C.LEWIS		Thomas J. Wallace	6910-355
E.BARTHEL		MAJ. G.S.C.	

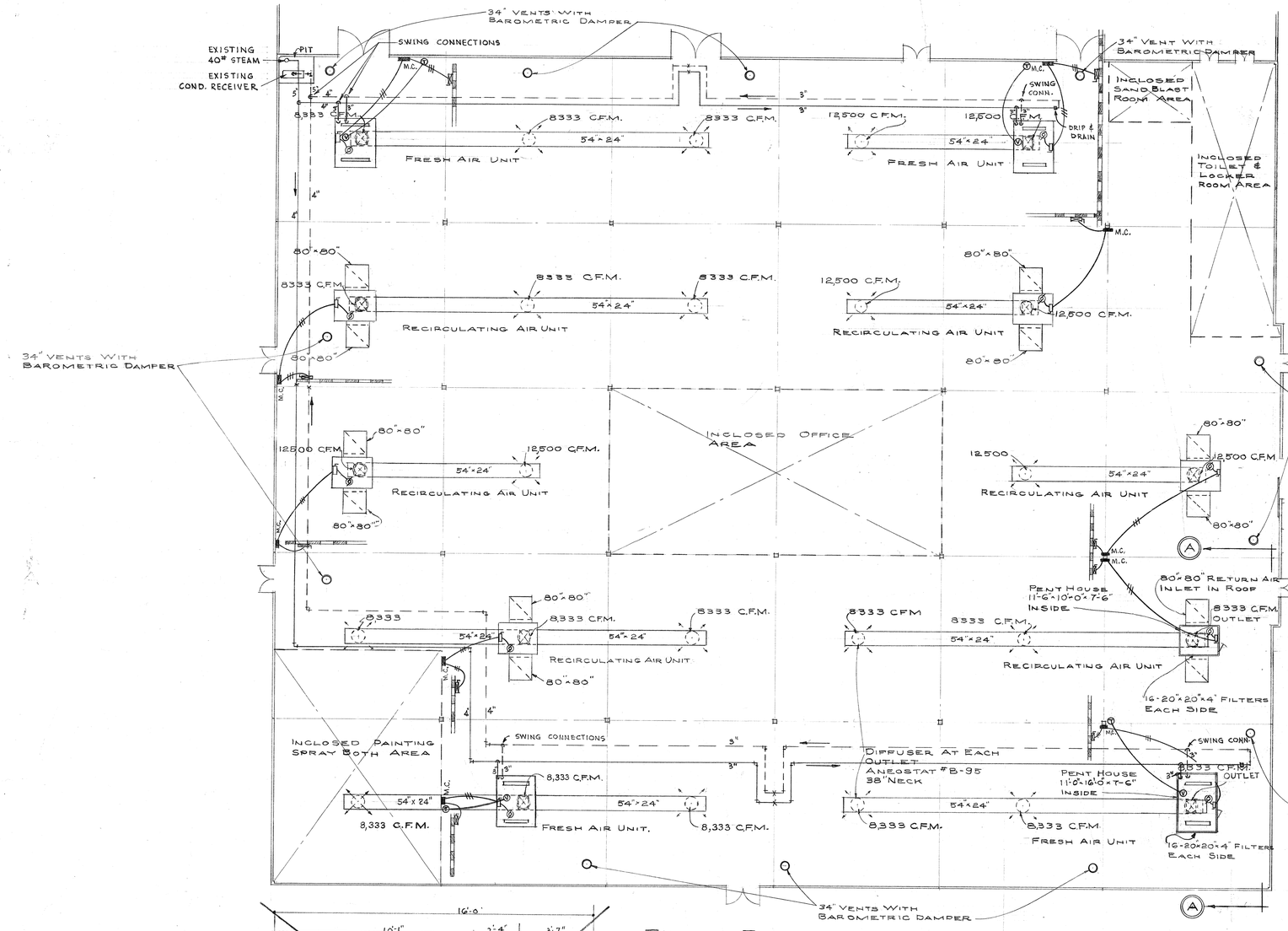
117-4

265

M-117-4

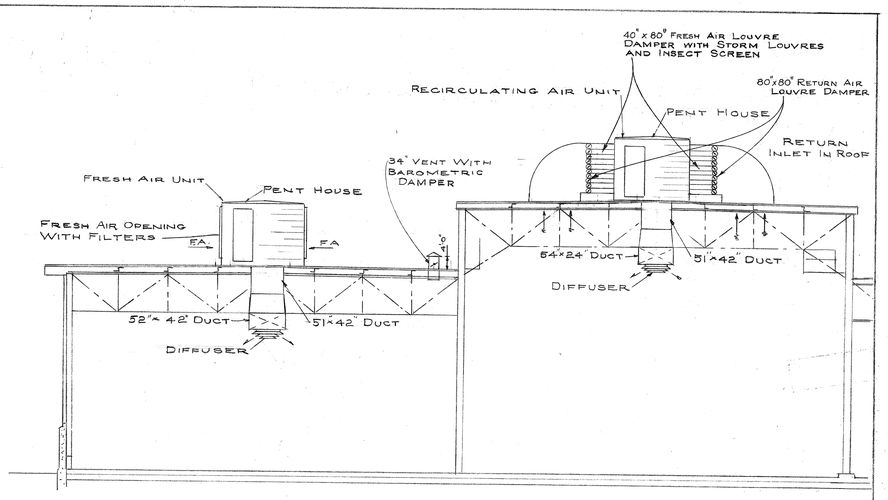
WAR DEPARTMENT

CORPS OF ENGINEERS, U. S. ARMY



FLOOR PLAN

SCALE 1/16"=1'-0"



SECTION A-A

SCALE 3/8"=1'-0"

NOTE

SUPPLY FAN SHALL BE D.W.D.I., BOTTOM VERTICAL DISCHARGE CAPACITY 85,000 C.F.M. @ ½" S.P. MOTOR-220 V. 3PH 60 CY. 1140 R.P.M. 5 H.P. FAN AND MOTOR TO BE MOUNTED ON APPROVED TYPE VIBRATION BASE.

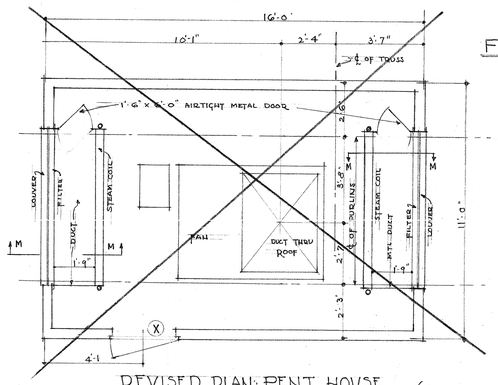
PROVIDE DUCT TURNS AT ALL SUPPLY ELBOWS AND APPROVED VOLUME CONTROL AT EACH OUTLET

FOR STEAM COIL CONNECTION DETAILS SEE SHEET NO. 1.

ELECTRICAL NOTES:

WIRING SYSTEM SHALL MATCH THAT EXISTING IN THE BUILDING ALL WIRE SHALL BE #12 A.W.G. ENTIRE INSTALLATION SHALL BE IN FULL ACCORDANCE WITH N. E. CODE REQUIREMENTS.

- Existing Busway or Power Duct at Truss Line.
- New 60A. 3P. Fused Sw., Ex. Op.; Mount Rigidly, As Approved, on Power Duct.
- New 30 A. 3P. Ex. Op. Unfused Disc. Sw.; Mount in Pent House Adjacent to Fan Motor.
- Fan Motor,- 5 H.P. 3ϕ 220 V. 1140 R.P.M.
- M.C. Motor Controller,- Trumbull Type "T.M." or Equal 5 H.P. Front Operated Manual Starter. Mount 4'-0" up on Column or Wall as Shown.

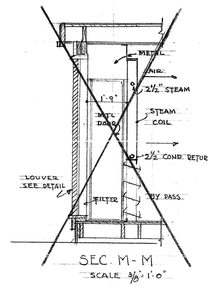


REVISED PLAN: PENT HOUSE FOR FRESH AIR SUPPLY

SCALE 3/8"=1'-0"

ELEV., SECTIONS & DETAILS SIMILAR TO THOSE SHOWN ON DRAWING HF 95-6

(SEE DRWG. HF 95-7)



SEC. M-M

SCALE 3/8"=1'-0"

(SEE DRWG. HF 95-7)

NO.	REVISION	DATE	BY
3	ADDED FRESH AIR & RETURN AIR LOUVRES & DAMPERS	9-1-44	F.J.C.
2	GENERAL	4-28-44	A.R.
1	ADDED VENTS	4-20-44	LMFC

Electrical Submitted:
H. Anderson
Major, Corps of Engineers, U.S.A.
CH. ELEC.

MILITARY CONSTRUCTION
OGDEN AIR DEPOT
OGDEN, UTAH
ENGINE REPAIR BUILDING
AIR CLEANING SYSTEM
JOB Nº(A9-4)

IN 2 DRAWING SCALE AS SHOWN DRAWING Nº 2

U. S. Engineer Office, Sacramento, California, March, 1944

Submitted; W. W. Kline, Assoc. Engineer

Approval Recommended; K. S. Wilson, Principal Engineer

Approved; J. W. Thompson, Major Corps of Engineers, U. S. A.

Dr. by M.C.	Tr. by M.C.	Ch.
DOC. FILE	FILE	DIV.	SHEET
	HF	95	5

136

117-42

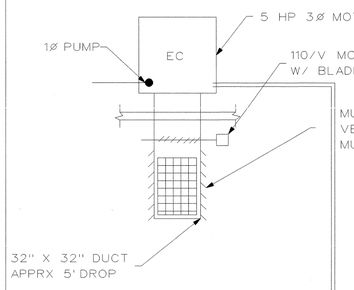
265-44-M

M 117-42

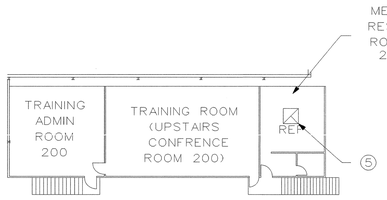
265

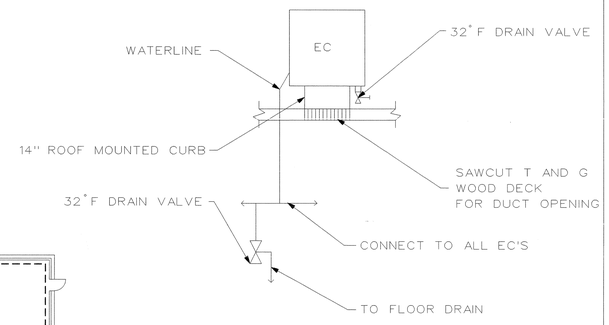
31-265.28

Bldg. 265

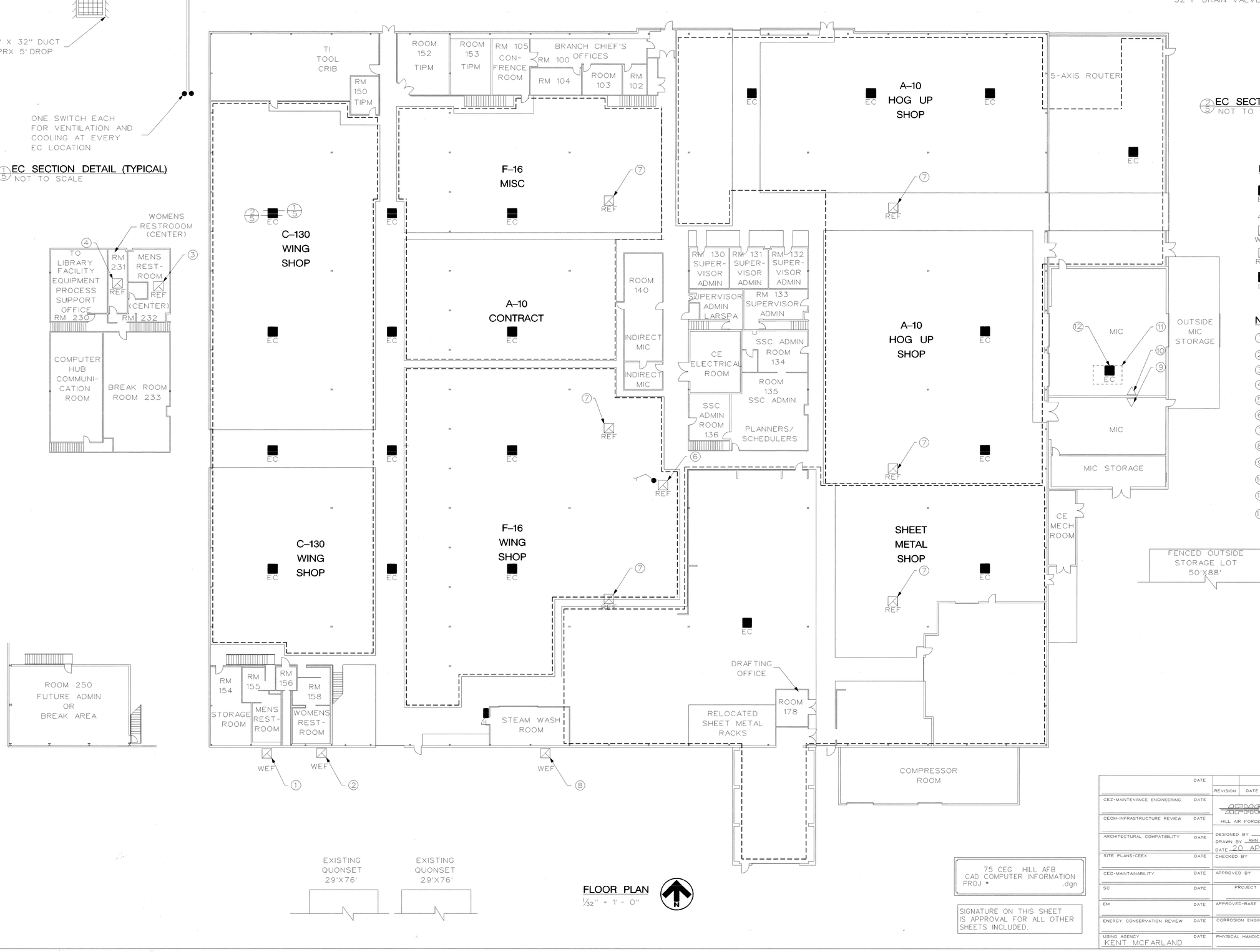


1/5 EC SECTION DETAIL (TYPICAL)
NOT TO SCALE





2/5 EC SECTION DETAIL (TYPICAL)
NOT TO SCALE



FLOOR PLAN
1/32" = 1' - 0"

LEGEND

- EC — EVAPORATIVE COOLER - 21,000 CFM (TYPICAL)
- △ — STEAM UNIT HEATERS
- WEF — WALL EXHAUST FAN
- REF — ROOF EXHAUST FAN
- IL — 4' X 4' INTAKE LOUVER

NOTES

1. 544 CFM
2. 480 CFM
3. 1920 CFM
4. 448 CFM
5. 578 CFM
6. 900 CFM FOR WELDING EXHAUST ARM
7. 52,500 CFM (TYPICAL)
8. 5,000 CFM
9. 100 MBH
10. 150 MBH
11. DEMO EXISTING TRANE HEATING UNIT
12. TIE- 21,000 CFM EVAPORATIVE COOLER INTO EXISTING DUCTWORK

75 CEG HILL AFB
CAD COMPUTER INFORMATION
PROJ * .dgn

SIGNATURE ON THIS SHEET
IS APPROVAL FOR ALL OTHER
SHEETS INCLUDED.

DATE	REVISION	DATE	DESCRIPTION BY
CEZ-MAINTENANCE ENGINEERING DATE			
CEOM-INFRASTRUCTURE REVIEW DATE			
ARCHITECTURAL COMPATIBILITY DATE			
SITE PLANS-CEEX DATE			
CEO-MAINTAINABILITY DATE			
SC DATE			
EM DATE			
ENERGY CONSERVATION REVIEW DATE			
USING AGENCY DATE: KENT MCFARLAND			

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
HILL AIR FORCE BASE — OFFICE OF CIVIL ENGINEERING — OGDEN, UTAH

DESIGNED BY
DRAWN BY AMN MALCOLM
DATE 20 APRIL 01
CHECKED BY DATE
APPROVED BY DATE

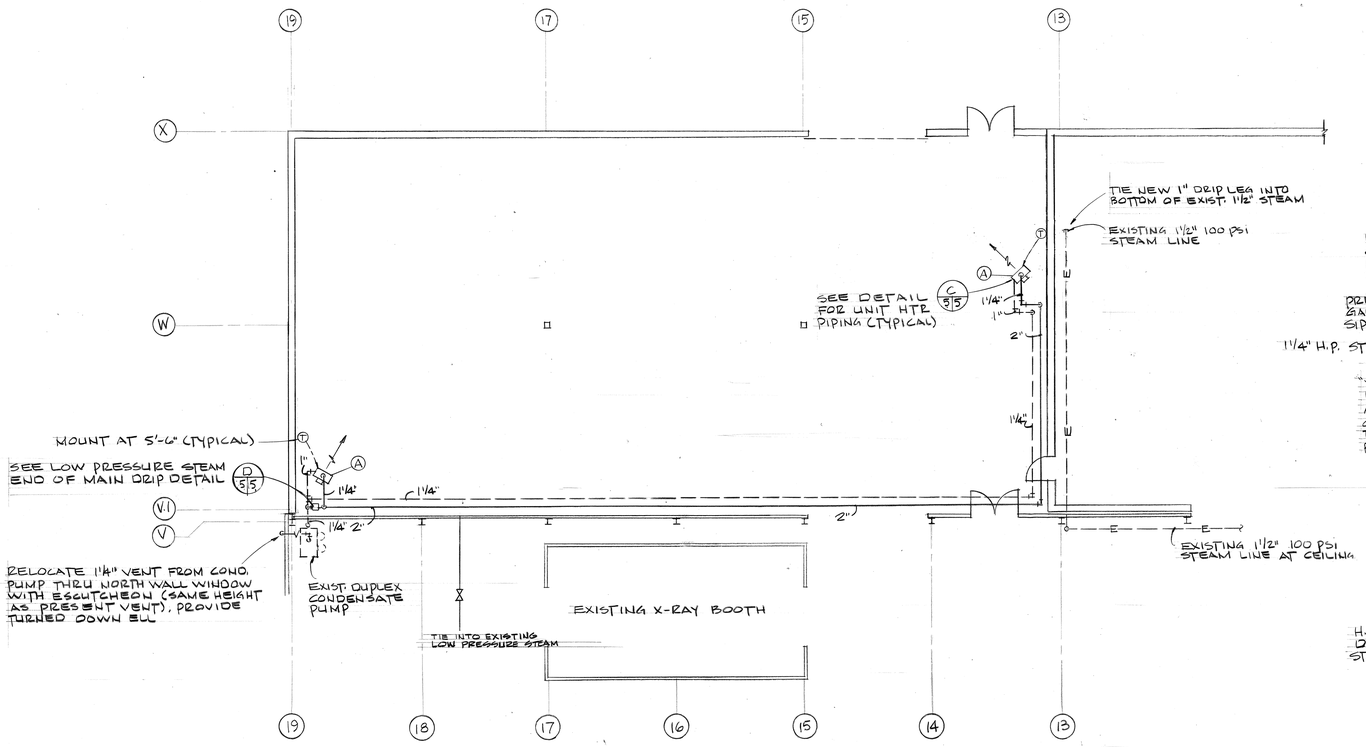
CONSOLIDATED STRUCTURES
BLDG 265
MECHANICAL PLAN

PROJECT ENGINEER | CHIEF PROJECT MANAGER | CHIEF ENGINEERING BRANCH
APPROVED-BASE CIVIL ENGINEER DATE | SAFETY DATE
CORROSION ENGINEER DATE | FIRE DEPARTMENT DATE
PHYSICAL HANDICAP REVIEW DATE | BIOENVIRONMENTAL DATE

PROJECT NO. KRSM 012049
DRAWING NO.
SCALE
SHEET 5 OF 5

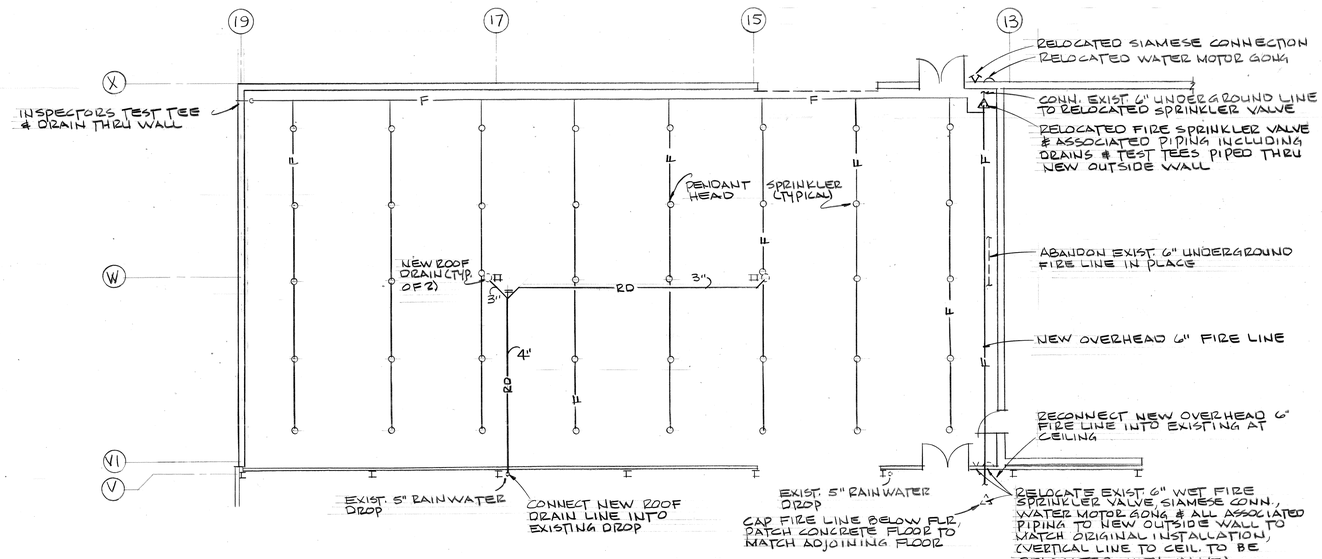
Drawing provided by Site Development 777-2269

EQUIPMENT SCHEDULE	
MARK	DESCRIPTION
(A)	UNIT HEATER, HORIZONTAL, CEILING HUNG, 85,000 BTUH HTG CAPACITY WITH 2 PSI STEAM ENT. AIR AT 60°F, 94°F OUTLET TEMP., 2,300 CFM, 1/6 H.P. MOTOR, 120/1/60 C/W HANGERS, DOUBLE DEFLECTION LOUVERS & MATCHING THERMOSTAT, MAX. RPM IS 1550.



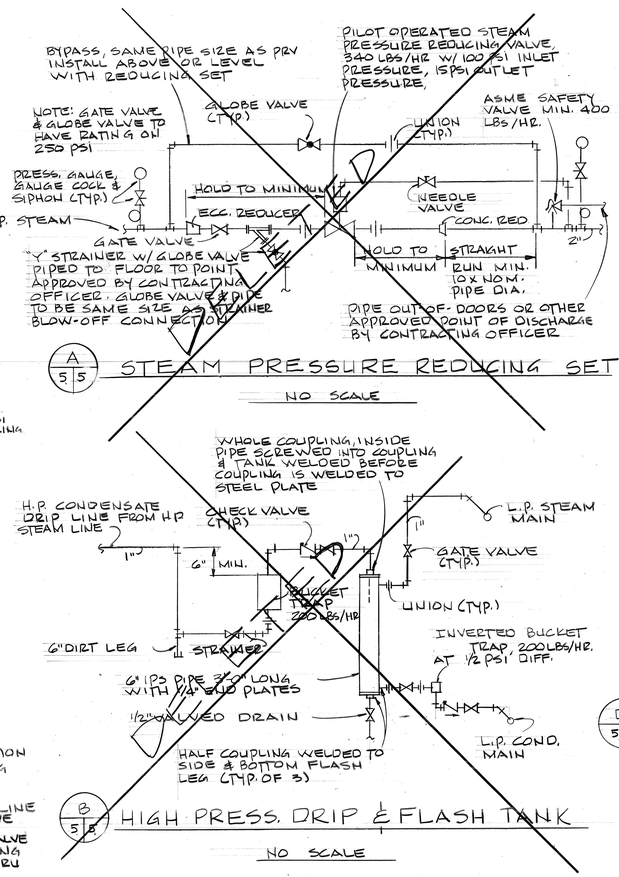
HEATING FLOOR PLAN

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



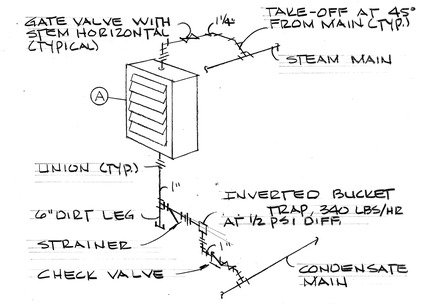
ROOF DRAINAGE & FIRE SPRINKLER FLOOR PLAN

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



A 5/5 STEAM PRESSURE REDUCING SET

NO SCALE

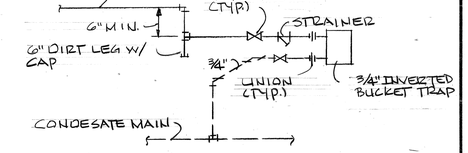


C 5/5 UNIT HEATER PIPING

NO SCALE

B 5/5 HIGH PRESS. DRIP & FLASH TANK

NO SCALE



D 5/5 LOW PRESSURE DRIP

NO SCALE

GENERAL NOTES:

1. THERMOSTATS FOR UNIT HEATERS SHALL CYCLE BLOWER TO MAINTAIN SPACE TEMPERATURE. A SEPARATE FAN SWITCH ON THERMOSTAT BASE LABELLED "FAN-AUTO.-ON" SHALL ALLOW FAN TO OPERATE INDEPENDENT OF HEATING FOR SUMMER OPERATION.
2. NEW FIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED BY FIRE SPRINKLER SUBCONTRACTOR IN ACCORDANCE WITH NFPA NO. 13. COMPLETE CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

REGISTERED PROFESSIONAL ENGINEER No. 2600 GERALD D. SMITH STATE OF TEXAS

DATE	REVISION	DATE	DESCRIPTION	BY
		23 MAR 87	POSTED TO AS-BUILTS	P.S.

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
HILL AIR FORCE BASE — OFFICE OF CIVIL ENGINEERING — OGDEN, UTAH

DESIGNED BY GDS	ADDITION TO FORM SHOP-BUILDING 265	
DRAWN BY SEM		
DATE MAY 17, 1985		
CHECKED BY EJN DATE 6/21/85		
APPROVED BY EJN DATE 21 JUN 85	MECHANICAL PLAN & SCHEDULE	

DEM DATE	CHIEF ENGINEERING DESIGN	CHIEF CONSTRUCTION MANAGEMENT	CHIEF ENGINEERING BRANCH
1881st COMM. SQ. DATE			
ENVIRONMENTAL REVIEW DATE	APPROVED-BASE CIVIL ENGINEER DATE	SAFETY DATE	PROJECT NO. HIL270-2
ENERGY CONSERVATION REVIEW DATE	CORROSION ENGINEER DATE	FIRE DEPARTMENT DATE	DRAWING NO. 265-0085
USING AGENCY DATE	PHYSICAL HANDICAP REVIEW DATE	BIOENVIRONMENTAL DATE	SCALE AS NOTED
			SHEET 5 OF 6

M

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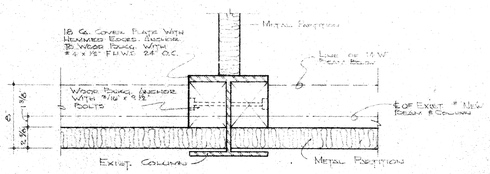
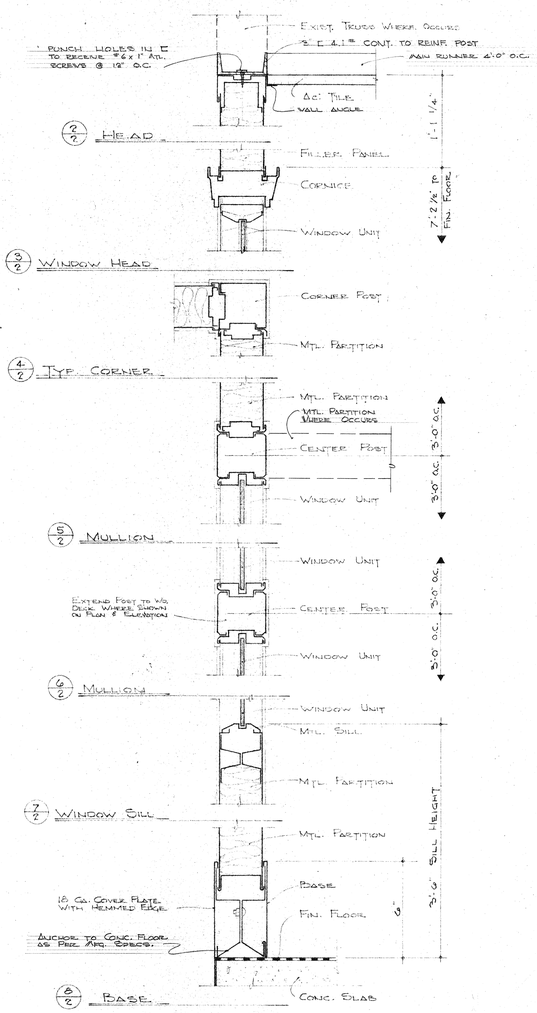
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED

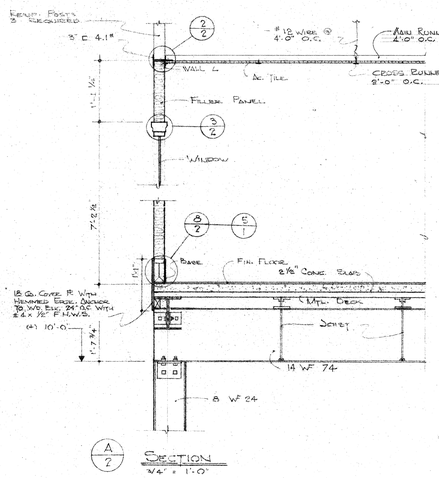


1/2 DETAIL AT EXIST. COLUMN & NEW PARTITION
1½" = 1'-0"

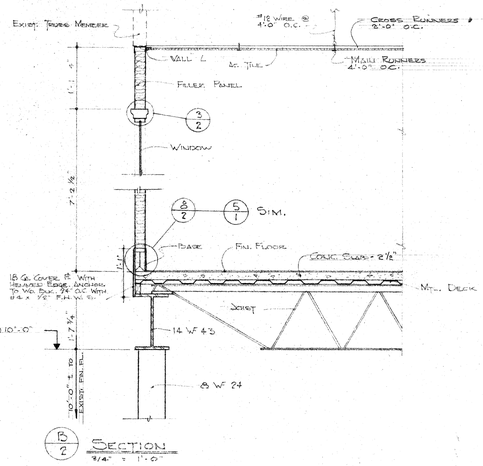


2/2 HEAD
3/2 WINDOW HEAD
4/2 TYP. CORNER
5/2 MULLION
6/2 MULLION
7/2 WINDOW SILL
8/2 BASE

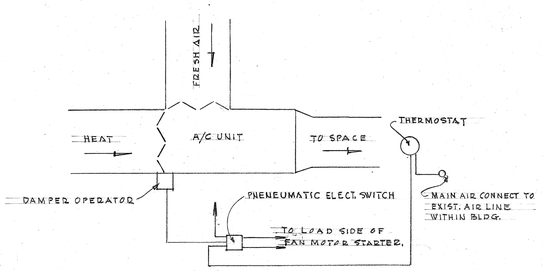
WINDOW & PARTITION DETAILS
3" = 1'-0"



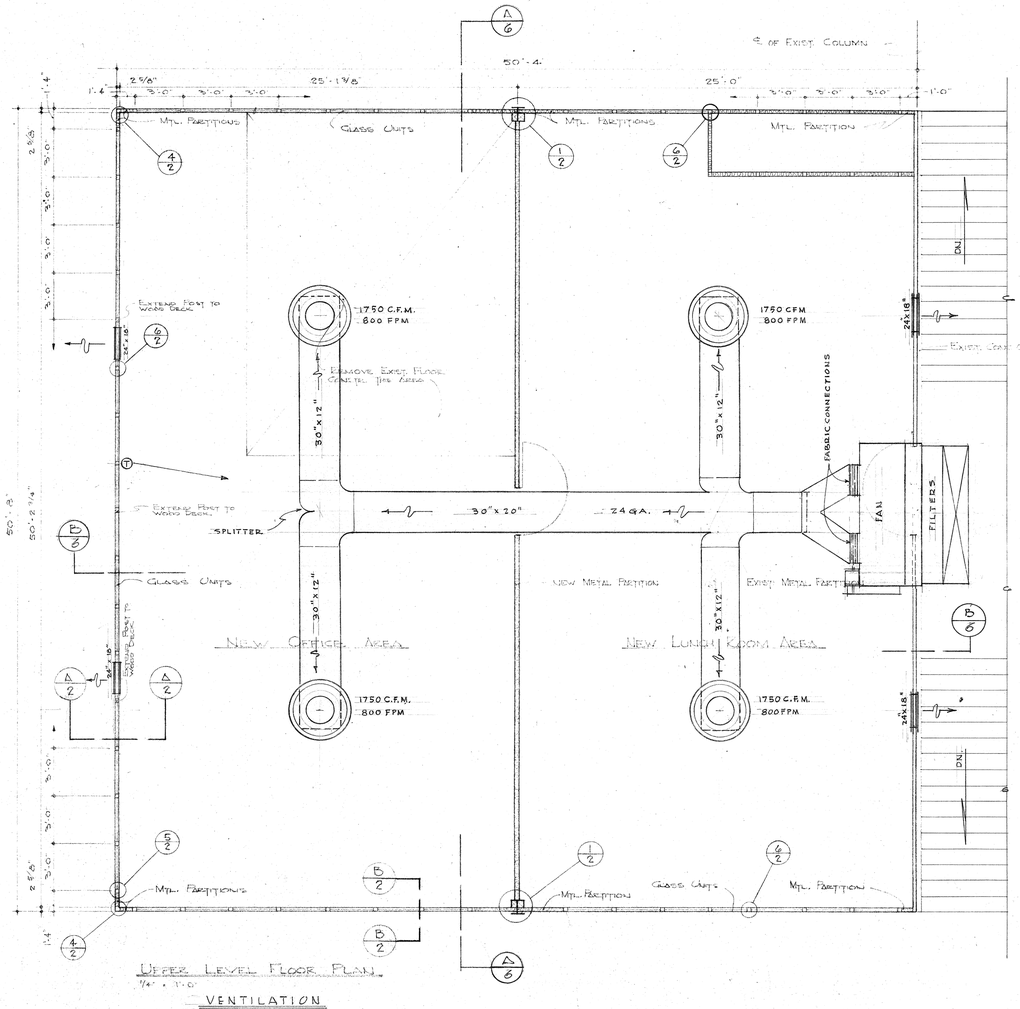
A/2 SECTION
¾" = 1'-0"



B/2 SECTION
¾" = 1'-0"



CONTROL DIAGRAM
NO SCALE



UPPER LEVEL FLOOR PLAN
¼" = 1'-0"

VENTILATION

GENERAL NOTES

1. FURNISH & INSTALL 1 EACH TRANE TORRIVENT VENTILATING UNIT MODEL T-21, 7000 CFM., ARR. A.HF, OR EQUAL, 2 FANS, WITH STANDARD MIXING BOX, 1½ HP MOTOR, 537 RPM.@ ¾" S.P. 220/3PH./60CY. EQUIP WITH VARIABLE SHEAVE AND BELT GUARD. FURNISH THROW AWAY TYPE FILTERS.
2. 4 EACH TITUS, MODEL TMA 20 FLUSH MOUNTED, 1750 CFM @ 800 FPM. CEILING DIFFUSERS, OR EQUAL.
3. CONTROL OPERATION: THE DAMPER SECTION OF THIS UNIT SHALL BE OPERATED BY A PNEUMATIC DAMPER MOTOR WHICH WILL BE CONNECTED TO A THERMOSTAT LOCATED IN THE SPACE. ON CALL FOR HEAT THE DAMPER CONTROLLING AIR DAMPERS CLOSE. DURING THE VENTILATING SEASON THE DAMPER TO THE HEATING UNIT SHALL CLOSE AND THE FRESH AIR DAMPERS SHALL MODULATE TO THE FULL OPEN POSITION. THE FAN SHALL BE OPERATING CONTINUOUSLY AND SHALL HAVE A SWITCH LOCATED NEAR THE WALL THERMOSTAT THAT WILL ALLOW FAN SHUT-DOWN. UPON FAN SHUT-DOWN THE FRESH AIR DAMPER WILL GO TO THE CLOSED POSITION AND THE DAMPER TO THE HEATING UNIT SHALL OPEN.
4. FURNISH & INSTALL 4 EACH TITUS-MODEL RL-240 RETURN AIR GRILLES - 24"x18" OR EQUAL.
5. JOB FIT ALL NEW COMPONENTS TO FIT EXISTING CONSTRUCTION.

DRAWN	M.D.B. & D.U.B.	DATE 12-2-63
CHECKER	R.M.C.	12-11-63
DESIGNED	M.D.B.	12-2-63
APPROVED	M.D. Evans	12/9/63
SUBMITTED	[illegible]	12/9/63
APPROVAL RECOMMENDED		
FINAL APPROVAL		

APPROVED (FIRE PROTECTION) Paul J. Rumbell PAF 13 Jan 64
APPROVED (SAN. & INDUST. HYGIENE) M. Friel 13 Jan. 64
APPROVED (STRUCTURAL ENGR.) [illegible] 14 Jan 64
APPROVED

U.S. AIR FORCE
OGDEN AIR MATERIEL AREA
HILL AIR FORCE BASE OGDEN UTAH

MODIFICATION TO BLDG. 265
OFFICES & LUNCH ROOM AREA
VENTILATION-PLAN-NOTES & DIAGRAM

CODE IDENT NO. | SIZE F | 64-5138

SCALE AS NOTED | SHEET (5) OF 6

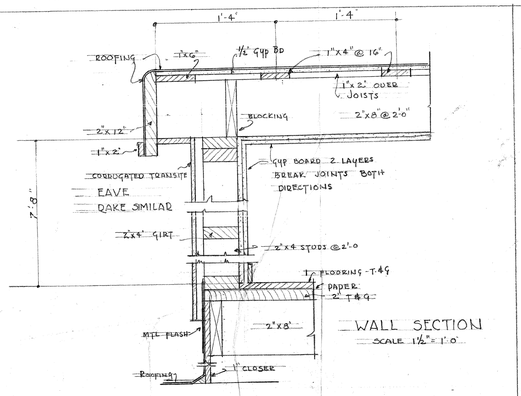
AF FORM 1657 DEC 61

344

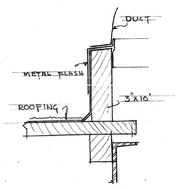
265-63-M

ENGINEERING DRAWING LAYOUT F

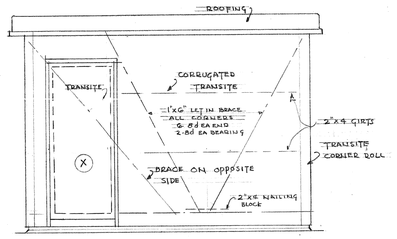
M 116-64



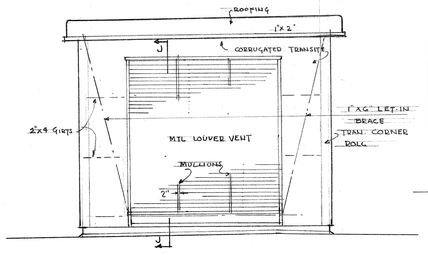
WALL SECTION
SCALE 1½" = 1'-0



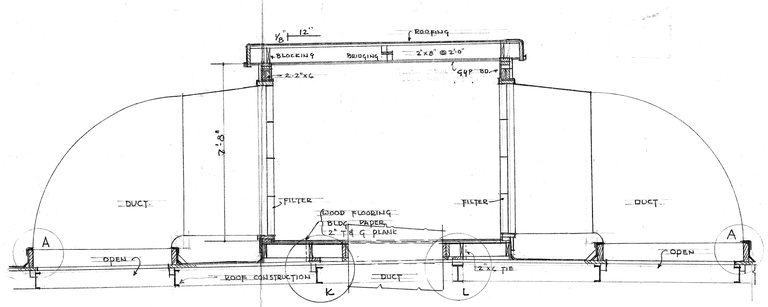
DETAIL A
SCALE 1½" = 1'-0"



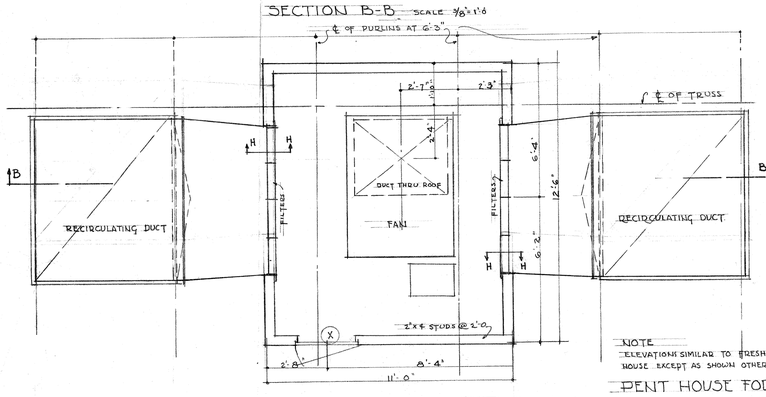
ELEVATION C SCALE ⅜" = 1'-0"
ELEV. E SIMILAR OMIT DOOR



ELEVATION D SCALE ⅜" = 1'-0"
ELEV. F SIMILAR



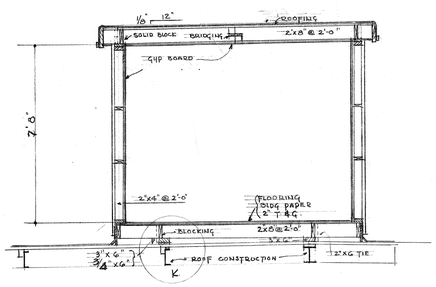
SECTION B-B SCALE ⅜" = 1'-0
℄ OF PURLINS AT C-3"



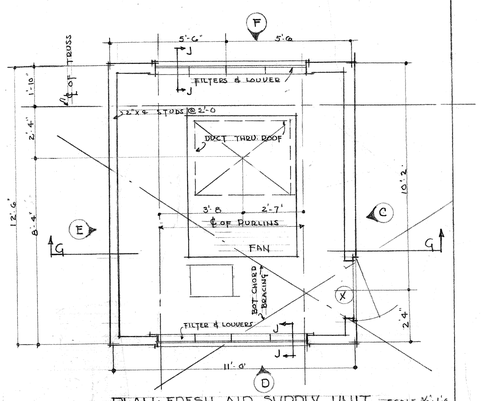
PLAN RECIRCULATING UNIT SCALE ⅜" = 1'-0

NOTE
ELEVATIONS SIMILAR TO FRESH AIR PENT HOUSE EXCEPT AS SHOWN OTHERWISE BY PLAN

PENT HOUSE FOR RE-CIRCULATING AIR

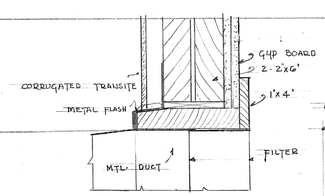


SECTION G-G SCALE ⅜" = 1'-0"



PLAN: FRESH AIR SUPPLY UNIT SCALE ⅜" = 1'-0

PENT HOUSE FOR FRESH AIR SUPPLY



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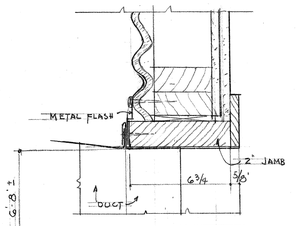
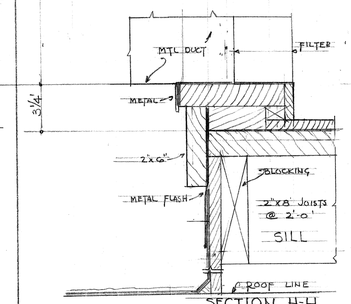
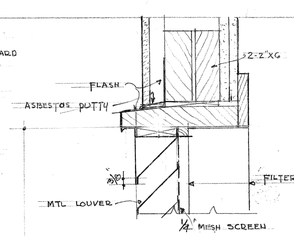


JAMB



SECTION H-H
OPENING AT RECIRCULATING DUCT
SCALE 3" = 1'-0"



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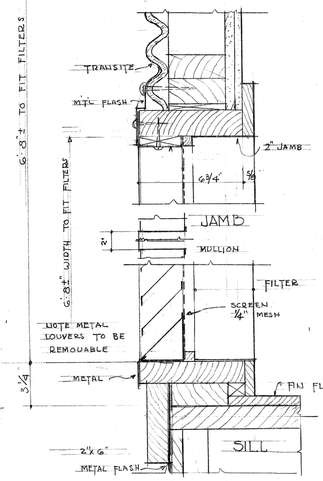
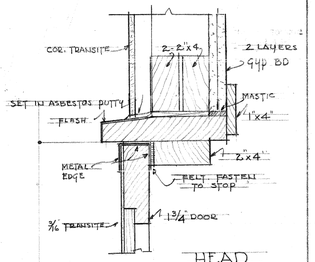


SECTION J-J
METAL LOUVERS
SCALE 3" = 1'-0"



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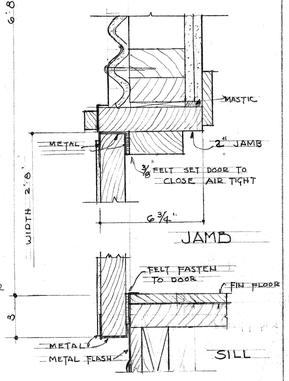
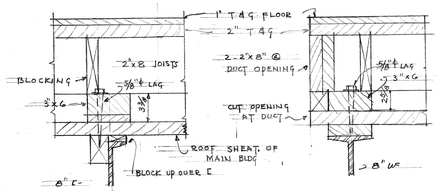


TYPE-X
DOOR DETAILS
SCALE 3" = 1'-0"

DETAILS OF OPENINGS
SCALE 3" = 1'-0"

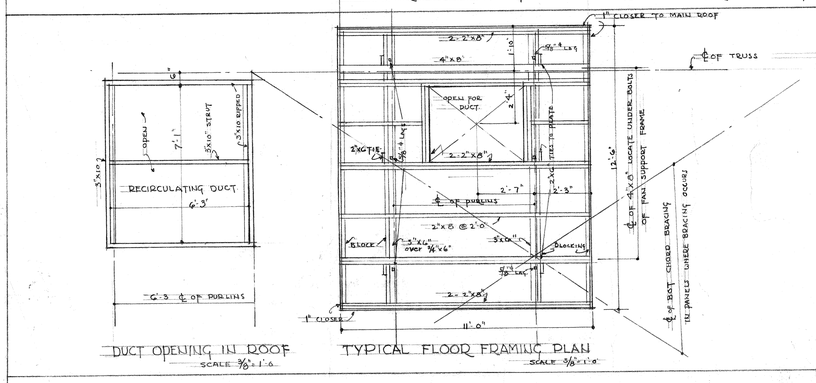


DETAIL K

DETAIL L AT DUCT

SCALE 1½" = 1'-0

NOTE
1. PENT HOUSES TO ACT AS PLENUM CHAMBER. ALL JOINT TO BE TIGHT TO MAKE BLDG AIR TIGHT. LAP 5ply BOARD JOINTS IN BOTH DIRECTION. PROVIDE FELT STRIP BETWEEN TWO LAYERS AT ALL CORNER. FELT TO LAP ½ WIDTH OF SHEET IN BOTH DIRECTIONS FROM CORNER



DUCT OPENING IN ROOF
SCALE ⅜" = 1'-0

TYPICAL FLOOR FRAMING PLAN
SCALE ⅜" = 1'-0

REFERENCE DRAWINGS	
NO	TITLE
IH-F 95-6	PENT HOUSES
HF 95-5 SH-1	AIR CLEANING SYSTEM
" SH-2	" " "

MILITARY CONSTRUCTION JOB A(9-4)
OGDEN AIR DEPOT
OGDEN UTAH
ENGINE REPAIR BLDG
PENT HOUSES
PLANS, ELEVATIONS & DETAILS
IN 1 SHEET SCALE: AS SHOWN SHEET No. 1
U. S. Engineer Office, Sacramento, California, MAR 1944

Submitted: [signature] ARCHITECT
Approved: [signature] Major, Corps of Engineers
Approved: Recommended: [signature] Asst. Engineer

Dr.	Ch.	Tr.	
		HF-95	6

132

265-44-A

M 117-43

265

31.265.39
Bldg. 265

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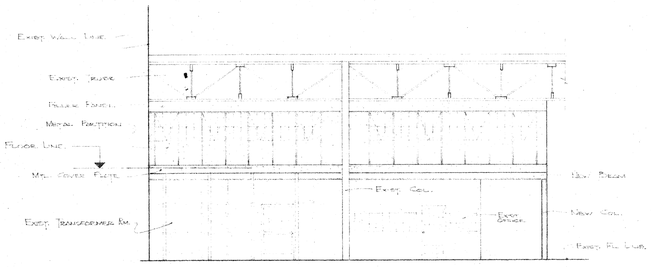
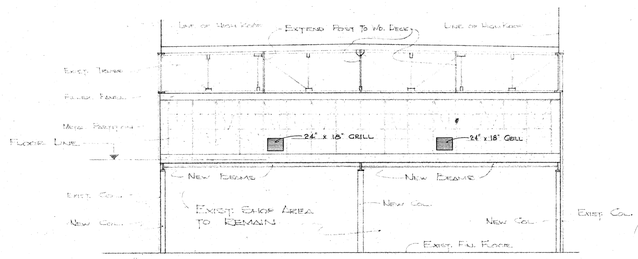
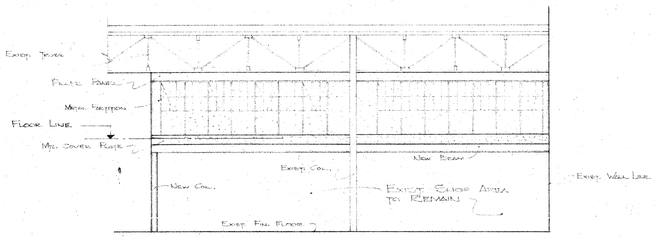
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED



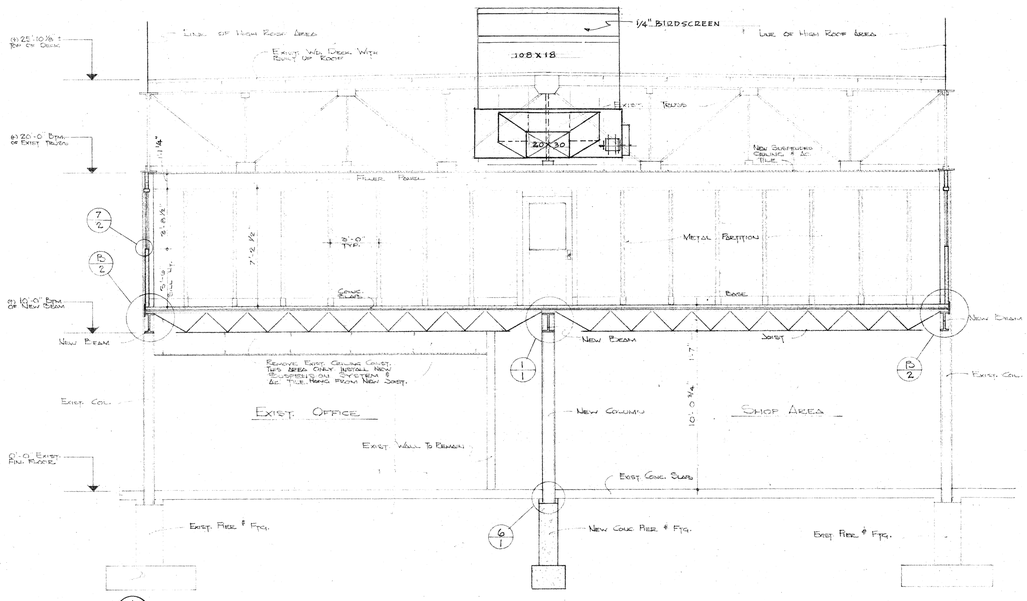
WEST ELEVATION
1/8" = 1'-0"



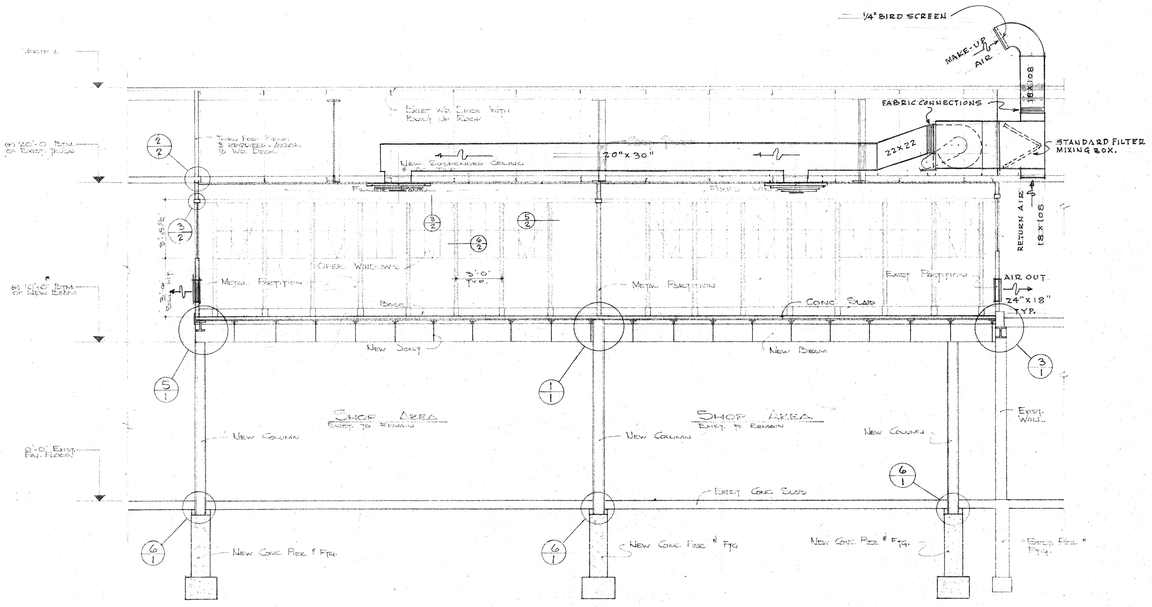
SOUTH ELEVATION
1/8" = 1'-0"



EAST ELEVATION
1/8" = 1'-0"



A/6 SECTION
1/4" = 1'-0"



B/6 SECTION
1/4" = 1'-0"

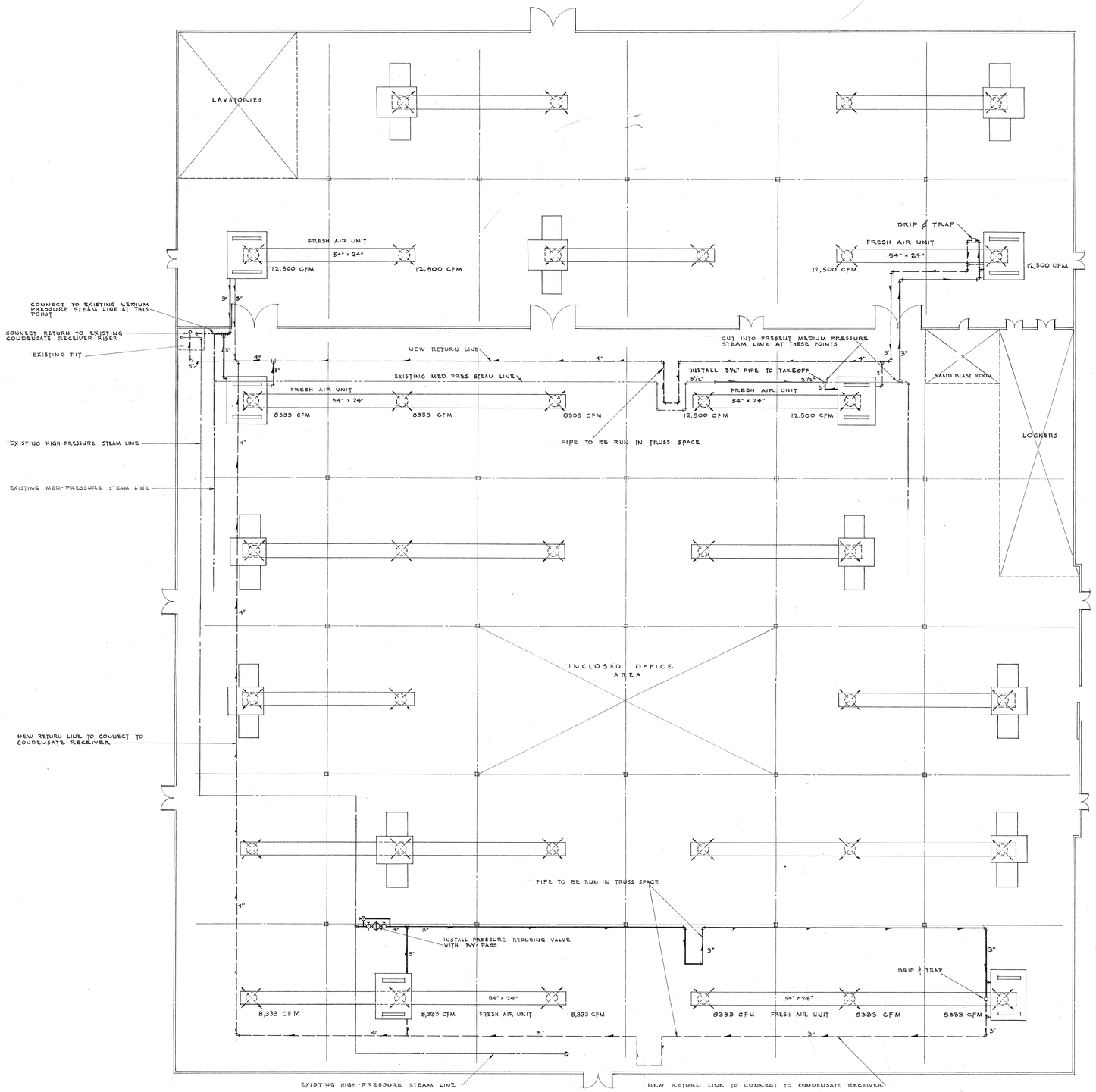
DRAWN M.D.B. & D.U.E.	DATE 12-2-63	U.S. AIR FORCE OGDEN AIR MATERIEL AREA HILL AIR FORCE BASE OFFICE OF PROJECT ENGINEERING OGDEN UTAH
CHECKER R. Mc.	12-11-63	
DESIGNED M.D.B.	12-2-63	MODIFICATION TO BLDG. 265 OFFICES & LUNCH ROOM AREA VENTILATION SECTIONS
APPROVED W. W. Evans	12/31/63	
SUBMITTED B. W. Jones	12/31/63	
APPROVAL RECOMMENDED		CODE IDENT NO. / SIZE F / 64-5138
FINAL APPROVAL		SCALE AS NOTED / SHEET 6 OF 6

APPROVED (FIRE PROTECTION) Paul J. Hammfeldt DAF 13 Jan 64
APPROVED (SAN. & INDUST. HYGIENE) W. J. Hoel 13 Jan 64
APPROVED (GROUND SAFETY) Geo. L. Hess 76 14 Jan 64
APPROVED

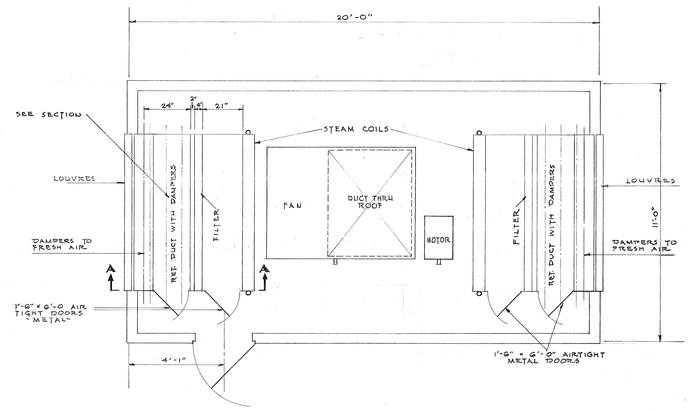
AF FORM 1657 345 265-63-M ENGINEERING DRAWING LAYOUT F M 116-65

WAR DEPARTMENT

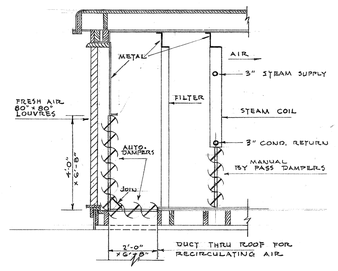
CORPS OF ENGINEERS, U. S. ARMY



PLAN
SCALE 1/16" = 1'-0"



LAYOUT OF PENT HOUSE
SCALE 3/8" = 1'-0"



SECTION A-A
SCALE 3/8" = 1'-0"

REVISIONS					
NO.	DATE	DESCRIPTION	REV.	CK.	APP.
1	3-1-44	Added (1) Diffusing Outlet	F.C.	E.V.G.	H.P.

U. S. ENGINEER OFFICE, ~~SALT LAKE CITY~~ SACRAMENTO DISTRICT
MILITARY CONSTRUCTION
OGDEN AIR DEPOT HILL FIELD - OGDEN, UTAH

ENGINE REPAIR BUILDING
ADDITIONAL STEAM HEATING FACILITIES
(AS CONSTRUCTED)

SCALE: AS SHOWN
GRAPHIC SCALE:
IN SHEETS SHEET NO.:
DATE: 15 June '44

SUBMITTED BY: SENIOR ENGINEER
APPROVED BY: MAJOR, CORPS OF ENGINEERS, U.S.A.
APPROVAL RECOMMENDED: PRINCIPAL ENGINEER
DRAWN BY: STAM
CHECKED BY:
TRACED BY:
PLAN NO. HF 95-7

117-44

265-44-M

M

265

31.265-31
Bldg. 265

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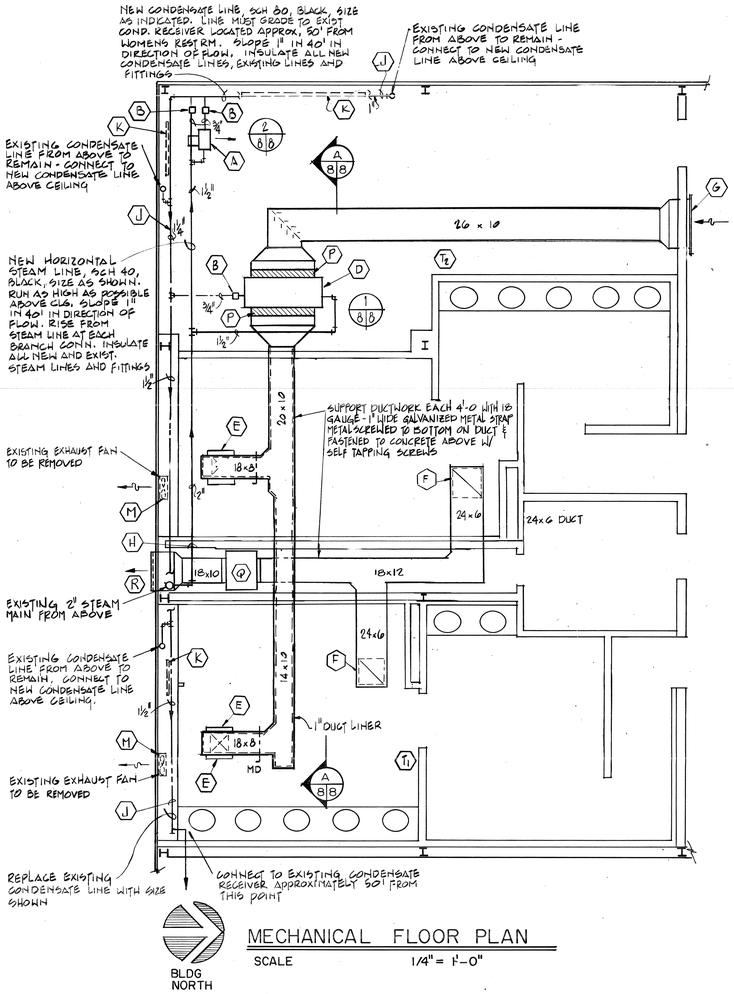


MECHANICAL FLOOR PLAN

SCALE 1/4" = 1'-0"

EQUIPMENT SCHEDULE

(A) UNIT HEATER, STEAM, HORIZONTAL DISCHARGE WITH 2 SPEED OPERATION AND CONTROL, COIL TESTED FOR 400 PSI, WITH 200PSI WORKING PRESSURE. FURNISH WITH ADJUSTABLE 4-WAY LOUVER. CAPACITY TO BE 161,000 BTU/HR MIN AT 2 PSI STEAM PRESSURE, 60°F E.A.T. 120/1/60 MOTOR. DUNHAM BUSH MODEL 250 OR APPROVED EQUAL.

(B) STEAM TRAP, INVERTED BUCKET TYPE, 900#/HOUR AT 2 PSI PRESSURE DIFFERENTIAL. DUNHAM BUSH '08' OR '005' OR APPROVED EQUAL.

(C) DIRT STRAINER, WYE TYPE WITH INTERNAL BRASS OR STAINLESS STEEL REMOVABLE SEIVE. INSTALL BALL VALVE AT DRAIN SIDE. SIZE TO BE FULL LINE SIZE. DUNHAM BUSH TYPE SSA OR EQ.

(D) PACKAGE HEATING UNIT, COMPLETE WITH 400 PSI TESTED STEAM COIL WITH 200 PSI WORKING PRESSURE, DUCT CONNECTION INLET AND OUTLET, WITH FILTER SECTION, 8 FINS PER INCH OF STEAM COIL, BELT DRIVE. CAPACITY TO BE 1200 CFM AT 1/4" SP, 52,000 BTUH MIN. 70°F E.A.T. 1/2 HP, 120/1/60 MOTOR.

(E) CEILING DIFFUSER, PERFORATED, LAY-IN STYLE. 24" x 24" WITH 15" x 15" NECK, 600 CFM, WHITE ENAMEL FINISH. KRUGER MODEL 1100, 3 WAY BLOW OR APPROVED EQ.

(F) EXHAUST CEILING GRILL, PERFORATED, LAY-IN STYLE, 24" x 24", 600 CFM, WHITE ENAMEL, KRUGER MODEL 1190 OR APPROVED EQ.

(G) RETURN AIR GRILLE, WALL MOUNT, FLANGED, ALUMINUM, SINGLE BLADE WITH DAMPER, 1200 CFM, 40" x 10". KRUGER 550 H OR APPROVED EQ.

(H) NEW STEAM LINE, SCHEDULE 40 BLACK, SIZE AS SHOWN. CONNECT AT EXISTING 2" VERTICAL STEAM LINE FROM FLOOR ABOVE. RUN AS HIGH AS POSSIBLE ALONG UNDERSIDE OF MEZZANINE LEVEL AND ABOVE NEW CEILING IN RESTROOM. SLOPE 1" PER 40' MINIMUM TO END POINT IN DIRECTION OF ARROWS. RISE FROM STEAM LINE FOR EACH BRANCH CONNECTION. INSULATE ALL NEW AND REMAINING STEAM LINES AND FITTINGS.

(J) NEW CONDENSATE LINES, SCHEDULE 80 BLACK, SIZE AS SHOWN. THIS LINE MUST GRADE TO EXISTING CONDENSATE RECEIVER LOCATED APPROXIMATELY 50' FROM WOMENS RESTROOM. SLOPE 1" EACH 40' TO CONDENSATE RECEIVER IN DIRECTION OF ARROWS. CONNECT CONDENSATE LINES FROM MEZZANINE RADIATION ABOVE INTO THIS NEW LINE. INSULATE ALL NEW CONDENSATE AND EXISTING LINES AND FITTINGS REMAINING.

(E) DEMOLITION OF PIPING AND RADIATION. REMOVE FINNED VECTOR RADIATION AND SUPPORT BRACKETS IN SPACES AND ALL RELATED PIPING NOT REQUIRED. REMOVE ALL STEAM PIPING BACK TO 2" VERTICAL DROP FROM FLOOR ABOVE. REMOVE ALL CONDENSATE PIPING TO EXISTING CONDENSATE RECEIVER FROM RESTROOMS AND STORAGE AREA IN PREPARATION FOR NEW LINES. CONDENSATE LINES FROM RADIATION ABOVE TO REMAIN AND TO BE CONNECTED TO NEW PIPING.

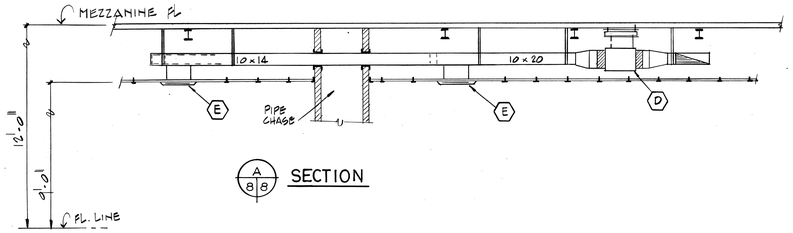
(Q) SMALL CABINET EXHAUST FAN, WITH BOTTOM HINGED DOOR, INTERNALLY ISOLATED MOTOR WITH BACK DRAFT DAMPER, 1260 CFM @ .5" SP, 1/2 HP 120/1/60 MOUNT ABOVE PIPING IN PIPING ACCESS SPACE. SUSPEND FROM THREADED ROD SIMILAR TO DETAIL . PACE SCF 85A OR APPROVED EQUIVALENT.

(R) WEATHERPROOF EXHAUST LOUVER, FLANGED. EXTRUDED ALUMINUM 30 x 16, W/ BIRD SCREEN, AMERICAN WARMING OR APPROVED EQUIVALENT

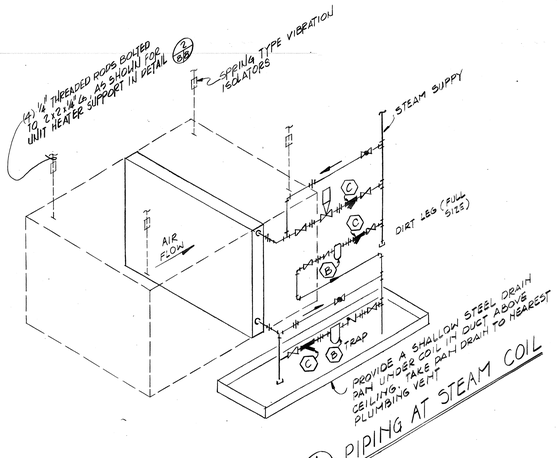
(M) EXISTING EXHAUST FANS (TWO) TO BE REMOVED.

(T_1) THERMOSTAT, NEW ELECTRIC. STOPS AND STARTS UNIT HEATER THROUGH SPEED SWITCH UPON CALL FOR HEATING.

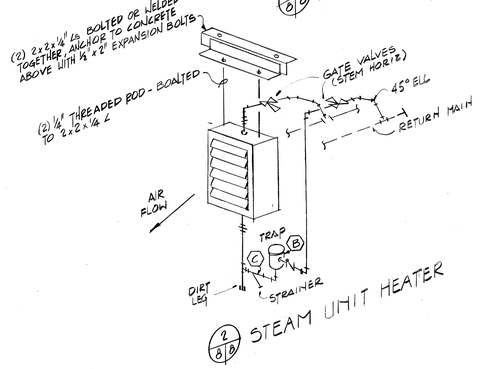
(T_2) THERMOSTAT, NEW ELECTRIC. MODULATES STEAM VALVE OF PACKAGED HEATING UNIT ON CALL FOR HEATING IN RESTROOMS.



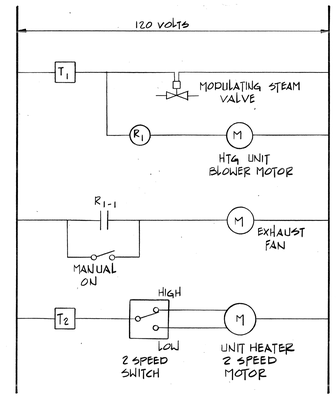
(A) SECTION (8/8)



(1/8/8) PIPING AT STEAM COIL



(2/8/8) STEAM UNIT HEATER

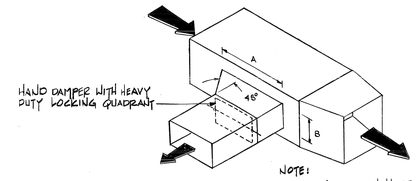


TEMPERATURE CONTROL LADDER DIAGRAM

SEQUENCE OF CONTROL

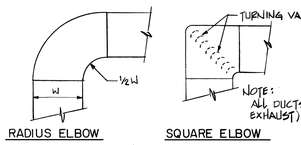
PACKAGED HEATING UNIT - SYSTEM CALL FOR HEATING FROM THERMOSTAT T_1 THE FAN SHALL CYCLE AND STEAM SHALL MODULATE TO MAINTAIN PRE-DETERMINED TEMPERATURE, AN INTERLOCKING RELAY R_1 SHALL CYCLE THE TWO EXISTING EXHAUST FANS.
UNIT HEATER - SYSTEM CALL FOR HEATING FROM THERMOSTAT T_2, THE UNIT HEATER SHALL CYCLE THROUGH ITS TWO SPEED SWITCH.

PIPE LEGEND	
SYMBOL	DISCRIPTION
——	STEAM PIPING
-----	CONDENSATE PIPING



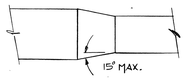
BRANCH DUCT TAKE-OFF DETAIL

N.T.S.



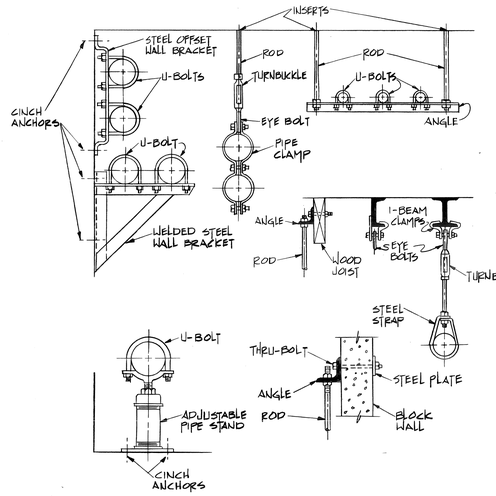
RECTANGULAR DUCT ELBOW CONSTRUCTION DETAIL

N.T.S.



TYPICAL TRANSITION DETAIL

N.T.S.



METHOD OF SUPPORTING PIPING

N.T.S.

STATE OF UTAH
BILLY K JONES
1327
LICENSED ARCHITECT

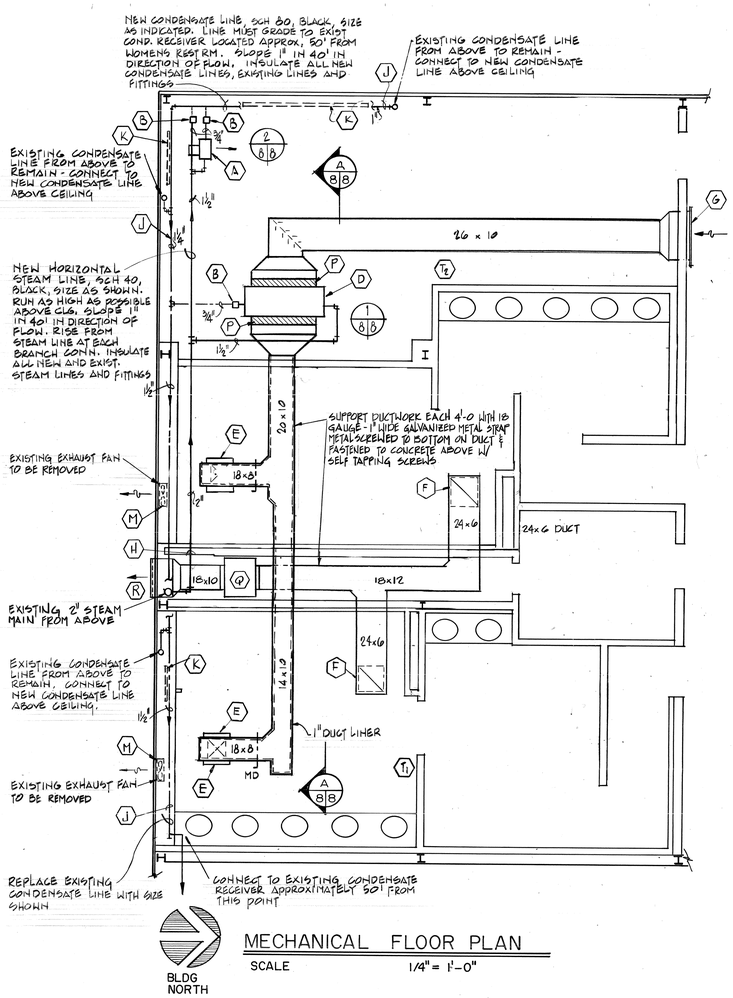
REVISION	DATE	DESCRIPTION	BY

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE, OGDEN, UTAH

DESIGNED BY CHRISTY
DRAWN BY A.D. Bunge
DATE 13 Oct 86
CHECKED BY CHRISTY DATE 24 Oct 86
APPROVED BY D. TORMEY DATE 10/27/86

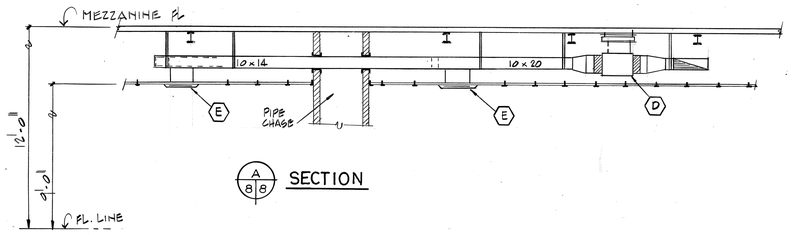
RESTROOM RENOVATION BLDG 265
MECHANICAL FLOOR PLAN

	DATE	CHIEF ENGINEERING DESIGN	DATE	CHIEF CONSTRUCTION MANAGEMENT	DATE	CHIEF ENGINEERING BRANCH	DATE
ENVIRONMENTAL REVIEW	DATE	APPROVED-BASE CIVIL ENGINEER	DATE	SAFETY	DATE	PROJECT NO. 151-7	
ENERGY CONSERVATION REVIEW	DATE	CORROSION ENGINEER	DATE	FIRE DEPARTMENT	DATE	DRAWING NO. 86-0191	
USING AGENCY	DATE	PHYSICAL HANDICAP REVIEW	DATE	BIOENVIRONMENTAL	DATE	SCALE NOTED	
1881st COMM. SQ.	DATE	DEM	DATE			SHEET 8 OF 8	

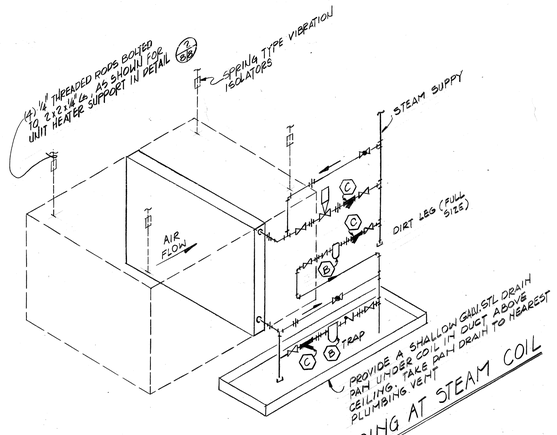


MECHANICAL FLOOR PLAN

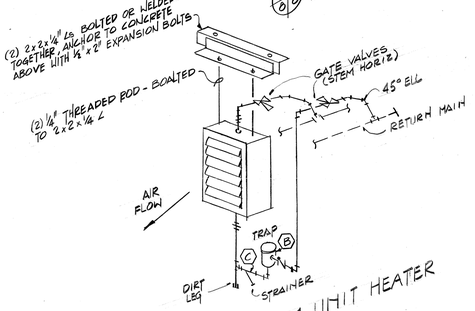
SCALE 1/4" = 1'-0"



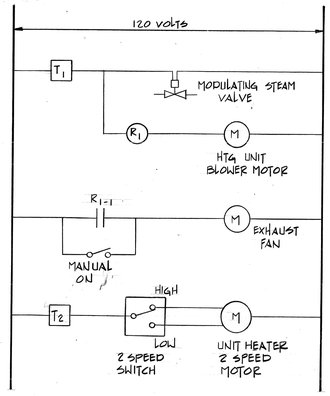
A/8/8 SECTION



1/8/8 PIPING AT STEAM COIL



2/8/8 STEAM UNIT HEATER

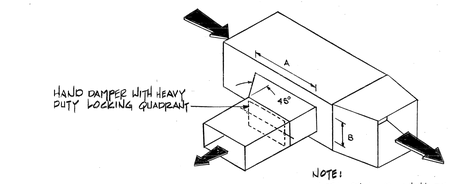


TEMPERATURE CONTROL LADDER DIAGRAM

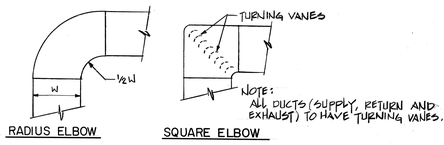
SEQUENCE OF CONTROL

PACKAGED HEATING UNIT - SYSTEM CALL FOR HEATING FROM THERMOSTAT T_1 THE FAN SHALL CYCLE AND STEAM SHALL MODULATE TO MAINTAIN PRE-DETERMINED TEMPERATURES. AN INTERLOCKING RELAY R_1 SHALL CYCLE THE TWO EXISTING EXHAUST FANS.
UNIT HEATER - SYSTEM CALL FOR HEATING FROM THERMOSTAT T_2, THE UNIT HEATER SHALL CYCLE THROUGH ITS TWO SPEED SWITCH.

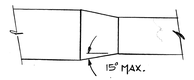
PIPE LEGEND	
SYMBOL	DISCRIPTION
——	STEAM PIPING
-----	CONDENSATE PIPING



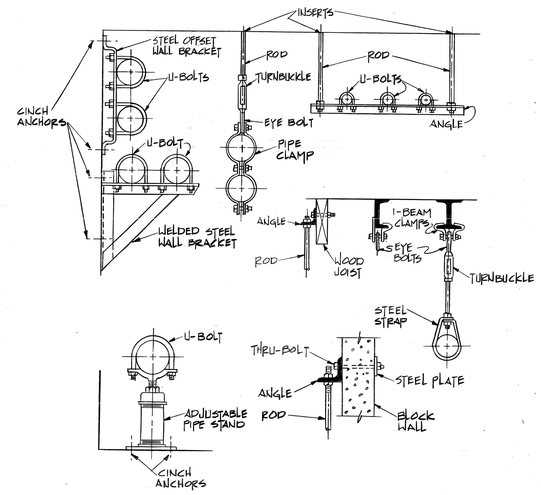
BRANCH DUCT TAKE-OFF DETAIL
N.T.S.



RECTANGULAR DUCT ELBOW CONSTRUCTION DETAIL
N.T.S.



TYPICAL TRANSITION DETAIL
N.T.S.



METHOD OF SUPPORTING PIPING
N.T.S.

EQUIPMENT SCHEDULE

(A) UNIT HEATER, STEAM, HORIZONTAL DISCHARGE WITH 2 SPEED OPERATION AND CONTROL, COIL TESTED FOR 400 PSI, WITH 200PSI WORKING PRESSURE. FURNISH WITH ADJUSTABLE 4-WAY LOUVER. CAPACITY TO BE 61,000 BTU/H MIN AT 2 PSI STEAM PRESSURE, 60°F E.A.T. 120/1/60 MOTOR. DUNHAM BUSH MODEL 250 OR APPROVED EQUAL.

(B) STEAM TRAP, INVERTED BUCKET TYPE, 900#/HOUR AT 2 PSI PRESSURE DIFFERENTIAL. DUNHAM BUSH '0B' OR '0B5' OR APPROVED EQUAL

(C) DIRT STRAINER, WYE TYPE WITH INTERNAL BRASS OR STAINLESS STEEL REMOVABLE SEIVE. INSTALL BALL VALVE AT DRAIN SIDE. SIZE TO BE FULL LINE SIZE, DUNHAM BUSH TYPE 55A OR EQ.

(D) PACKAGE HEATING UNIT, COMPLETE WITH 400 PSI TESTED STEAM COIL WITH 200 PSI WORKING PRESSURE, DUCT CONNECTION INLET AND OUTLET, WITH FILTER SECTION, 8 FINS PER INCH OF STEAM COIL, BELT DRIVE. CAPACITY TO BE 1200 CFM AT 1/4" SP, 52,000 BTUH MIN. 70°F E.A.T. 1/2 HP, 120/1/60 MOTOR.

(E) CEILING DIFFUSER, PERFORATED, LAY-IN STYLE, 24" x 24" WITH 15" x 15" NECK, 600 CFM, WHITE ENAMEL FINISH. KRUGER MODEL 1100, 3 WAY BLOW OR APPROVED EQ.

(F) EXHAUST CEILING GRILL, PERFORATED, LAY-IN STYLE, 24" x 24", 600 CFM, WHITE ENAMEL, KRUGER MODEL 1190 OR APPROVED EQ.

(G) RETURN AIR GRILLE, WALL MOUNT, FLANGED, ALUMINUM, SINGLE BLADE WITH DAMPER, 1200 CFM, 40" x 10". KRUGER 550 H OR APPROVED EQ.

(H) NEW STEAM LINE, SCHEDULE 40 BLACK, SIZE AS SHOWN. CONNECT AT EXISTING 2" VERTICAL STEAM LINE FROM FLOOR ABOVE. RUN AS HIGH AS POSSIBLE ALONG UNDERSIDE OF MAZZANINE LEVEL AND ABOVE NEW CEILING IN RESTROOM. SLOPE 1" PER 40' MINIMUM TO END POINT IN DIRECTION OF ARROWS. RISE FROM STEAM LINE FOR EACH BRANCH CONNECTION. INSULATE ALL NEW AND REMAINING STEAM LINES AND FITTINGS.

(J) NEW CONDENSATE LINES, SCHEDULE 80 BLACK, SIZE AS SHOWN. THIS LINE MUST GRADE TO EXISTING CONDENSATE RECEIVER LOCATED APPROXIMATELY 50' FROM WOMENS RESTROOM. SLOPE 1" EACH 40' TO CONDENSATE RECEIVER IN DIRECTION OF ARROWS. COLLECT CONDENSATE LINES FROM MEZZANINE RADIATION ABOVE INTO THIS NEW LINE. INSULATE ALL NEW CONDENSATE AND EXISTING LINES AND FITTINGS REMAINING.

(K) DEMOLITION OF PIPING AND RADIATION. REMOVE FINNED VECTOR RADIATION AND SUPPORT BRACKETS IN SPACES AND ALL RELATED PIPING NOT REQUIRED. REMOVE ALL STEAM PIPING BACK TO 8" VERTICAL DROP FROM FLOOR ABOVE. REMOVE ALL CONDENSATE PIPING TO EXISTING CONDENSATE RECEIVER FROM RESTROOMS AND STORAGE AREA IN PREPARATION FOR NEW LINES. CONDENSATE LINES FROM RADIATION ABOVE TO REMAIN AND TO BE CONNECTED TO NEW PIPING.

(Q) SMALL CABINET EXHAUST FAN, WITH BOTTOM HINGED DOOR, INTERNALLY ISOLATED MOTOR, WITH BACK DRAFT DAMPER, 1260 CFM @ .5" SP, 1/2 HP 120/1/60. MOUNT ABOVE PIPING IN PIPING ACCESS SPACE. SUSPEND FROM THREADED ROD SIMILAR TO DETAIL PACE SCF 85A OR APPROVED EQUIVALENT.

(R) WEATHERPROOF EXHAUST LOUVER, FLANGED. EXTRUDED ALUMINUM 30 x 16, W/ BIRD SCREEN, AMERICAN WARMING OR APPROVED EQUIVALENT

(M) EXISTING EXHAUST FANS (TWO) TO BE REMOVED.

(T_1) THERMOSTAT, NEW ELECTRIC. STOPS AND STARTS UNIT HEATER THROUGH SPEED SWITCH UPON CALL FOR HEATING.

(T_2) THERMOSTAT, NEW ELECTRIC. MODULATES STEAM VALVE OF PACKAGED HEATING UNIT ON CALL FOR HEATING IN RESTROOMS.

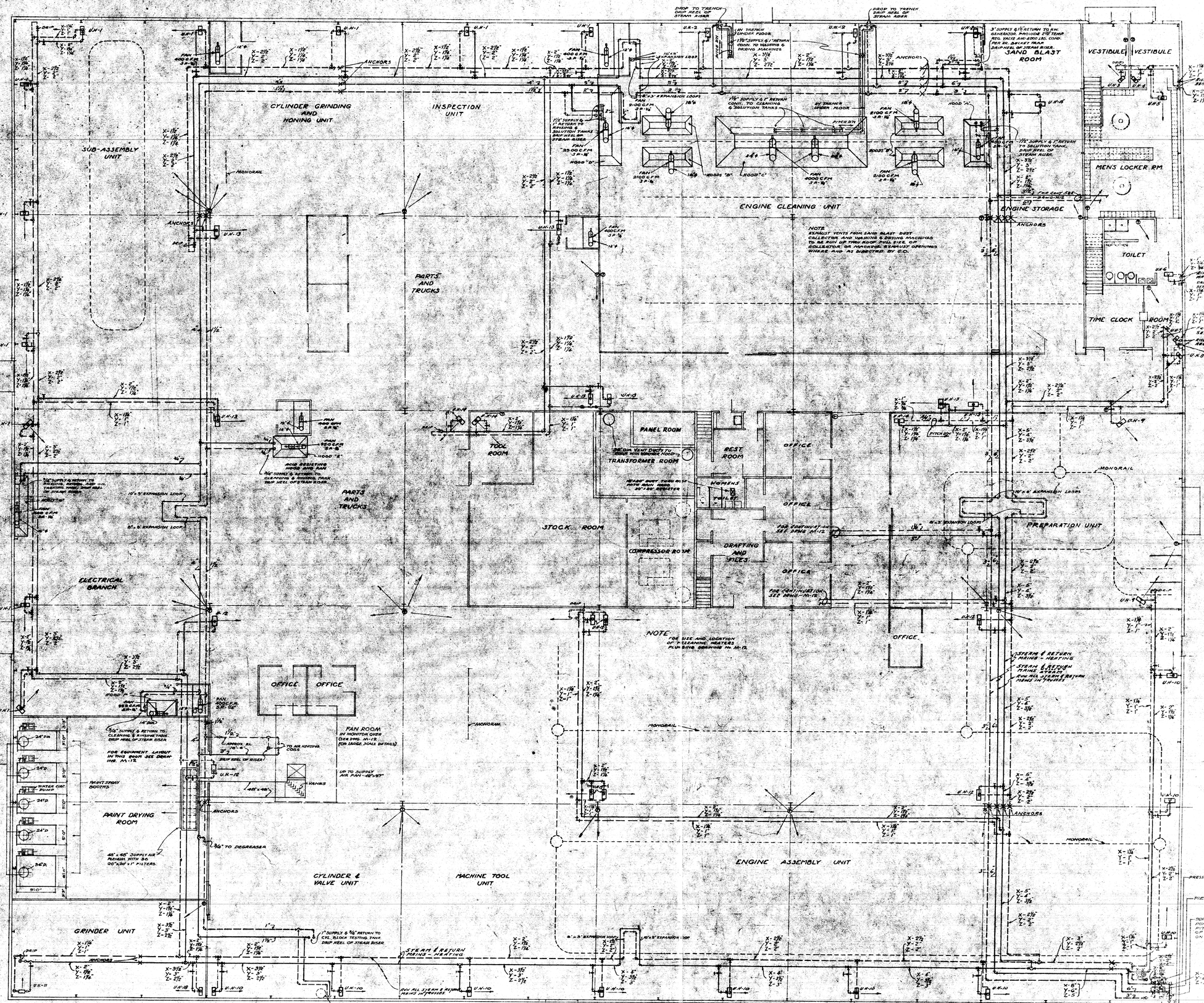
STATE OF UTAH
BILLY K JONES
1327
LICENSED ARCHITECT

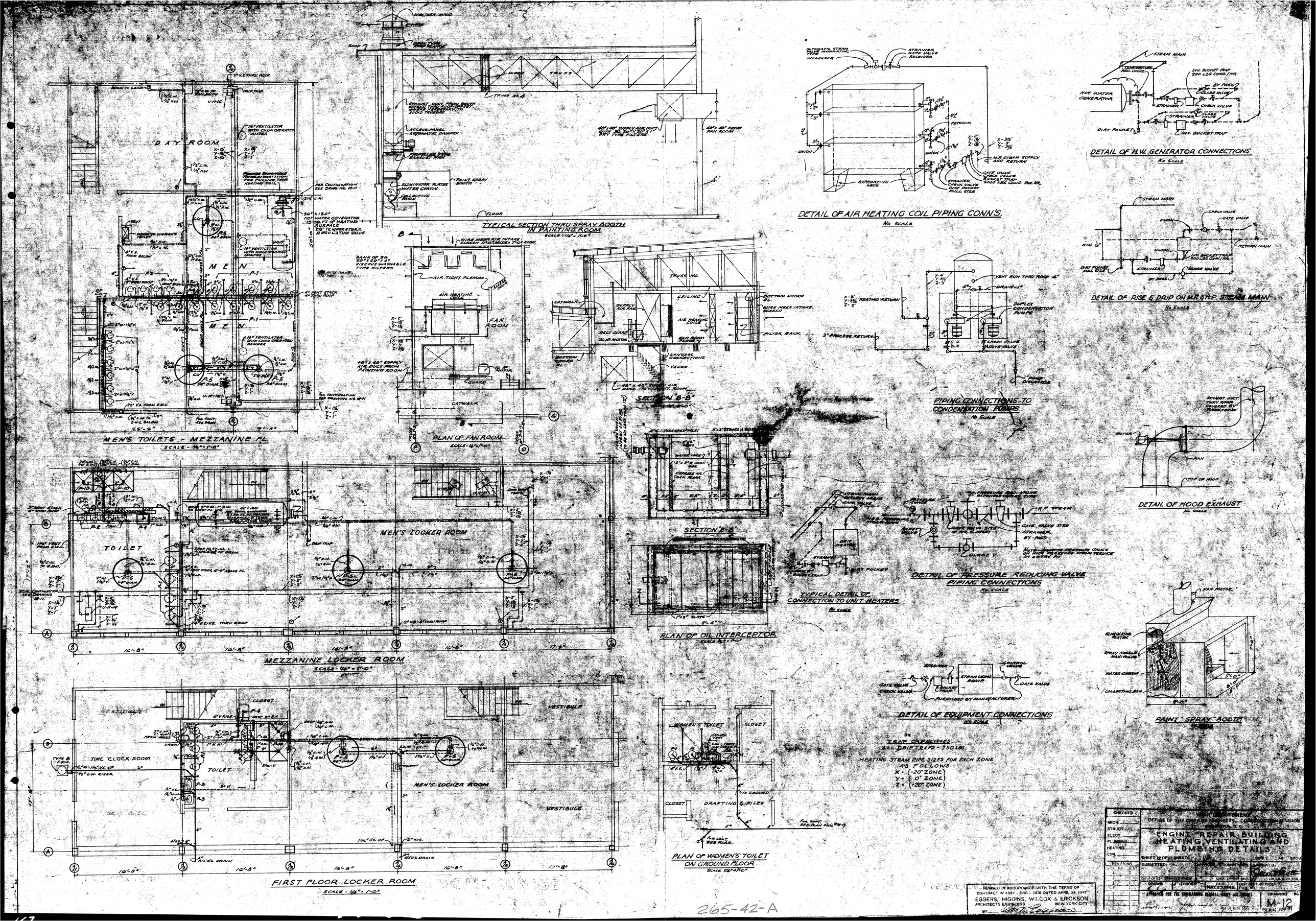
DATE	REVISION	DATE	DESCRIPTION	BY
		11FEB88	AS BUILT	RN

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE, OGDEN, UTAH

DESIGNED BY CHRISTY			RESTROOM RENOVATION BLDG 265
DRAWN BY A.D. Bowden			MECHANICAL FLOOR PLAN
DATE 13 OCT 86			
CHECKED BY DATE			
APPROVED BY DATE			
DEM DATE	CHIEF ENGINEERING DESIGN	CHIEF CONSTRUCTION MANAGEMENT	CHIEF ENGINEERING BRANCH
1881st COMM. SQ. DATE			
ENVIRONMENTAL REVIEW DATE	APPROVED-BASE CIVIL ENGINEER DATE	SAFETY DATE	PROJECT 84 ME 151-7
ENERGY CONSERVATION REVIEW DATE	CORROSION ENGINEER DATE	FIRE DEPARTMENT DATE	DRAWING NO. 86-0191
USING AGENCY DATE	PHYSICAL HANDICAP REVIEW DATE	BIOENVIRONMENTAL DATE	SCALE NOTED
			SHEET 8 OF 8

265


CYLINDER GRINDING AND HONING UNIT
INSPECTION UNIT
SUB-ASSEMBLY UNIT
ENGINE CLEANING UNIT
SAND BLAST ROOM
VESTIBULE
VESTIBULE
MENS LOCKER RM.
ENGINE STORAGE
TOILET
TIME CLOCK
ROOM
PARTS AND TRUCKS
PARTS AND TRUCKS
TOOL ROOM
PANEL ROOM
TRANSFORMER ROOM
BEAM PLANT THRU ROOF PATH MAIN ROOF 24" I-BM. RAFTER
REST ROOM
WOMEN'S TOILET
OFFICE
OFFICE
OFFICE
STOCK ROOM
COMPRESSOR ROOM
DRAFTING AND MFG'S
PREPARATION UNIT
ELECTRICAL BRANCH
OFFICE
OFFICE
FAN ROOM
IN MONITOR OVER
PAINT DRYING ROOM
GRINDER UNIT
CYLINDER & VALVE UNIT
MACHINE TOOL UNIT
ENGINE ASSEMBLY UNIT
MONORAIL
ANCHORS
NOTE
EXHAUST VENTS FROM SAND BLAST DUST COLLECTOR AND WASHING & DRYING MACHINES TO BE RUN UP THRU ROOF FULL SIZE OF COLLECTOR OR MACHINE. EXHAUST OPENINGS WHERE AND AS DIRECTED BY C.O.
NOTE
FOR SIZE AND LOCATION OF CLEANING HEATERS PLUMBING DRAWING No. M-12
NOTE — RADIATION BASED ON OUTSIDE TEMPERATURE OF 0°F INSIDE TEMPERATURE — OFFICES & TOILETS 70°F - WORK SPACE 60°F
HIGH PRESSURE STEAM AND PUMP DISCHARGE LINES IN STEEL PIPE SLEEVES TO WITHIN 6 FEET OF FOUNDATION WALL OF BLDG. AND CAPPED. SLEEVES TO BE ONE SIZE LARGER THAN OVERALL SIZE OF PIPE AND COVERING. EL. BOTTOM OF SLEEVES APPROX. 3'-0" BELOW FIN. GRADE.
STEAM & RETURN MAINS - HEATING
STEAM & RETURN MAINS UNDER FLOOR
STEAM & RETURN MAINS OVERHEAD
PAINT SPRAY BOOTHS
WATER CIRC. PUMP
EXHAUST DUCTS FROM BOOTHS RUN TO ROOF OUTLETS. PROVIDE FLASHING TO WATER PROOF ROOF. PROVIDE WEATHER HOODS OVER
TO AIR HEATING COILS
UP TO SUPPLY AIR FAN -42"x57"
VANES
TO DEGREASER
ACID RESISTING HOOD AND FAN
SUPPLY & RETURN TO CLEANING & RINSING TANK DRIP WELL OF STEAM RISER
SUPPLY & RETURN TO CYL. BLOCK TESTING TANK DRIP WELL OF STEAM RISER
SUPPLY & RETURN TO H.W. GENERATOR. PROVIDE 3/8" TEMP. REG. VALVE & 200 LBS. COND. PER HR. BUCKET TRAP DRIP WELL OF STEAM RISER.
SUPPLY & RETURN TO CLEANING & RINSING TANKS DRIP WELL OF STEAM RISER
SUPPLY & RETURN TO WASHING & DRYING MACHINES
SUPPLY & RETURN TO BLASTING & SOLUTION TANKS DRIP WELL OF STEAM RISER
SUPPLY & RETURN CONN. TO CLEANING & SOLUTION TANKS
SUPPLY & RETURN TO SOLUTION TANK. DRIP WELL OF STEAM RISER.
SUPPLY & RETURN TO SOLUTION TANKS DRIP WELL OF STEAM RISER
SUPPLY & RETURN TO GENERATOR. PROVIDE 2½" TEMP. REG. VALVE AND 4000 LBS. COND. PER HR. BUCKET TRAP. DRIP WELL OF STEAM RISER.
DROP TO TRENCH DRIP WELL OF STEAM RISER
DROP TO TRENCH DRIP WELL OF STEAM RISER
DROP TO TRENCH DRIP WELL OF STEAM RISER
RISE TO HEATING COILS
RISE TO MAINS ABOVE HERE
RISE TO MAINS ABOVE HERE - DRIP WELL OF STEAM RISER
SEE PLUMBING DRAWING M-12
SEE PLUMBING DRAWING M-12
SEE PLUMBING DRAWING M-12



MEN'S TOILETS - MEZZANINE FL.
SCALE - 1/4" = 1'-0"
DAY ROOM
MEN
MEN'S LOCKER ROOM
TOILET
MEZZANINE LOCKER ROOM
SCALE - 1/4" = 1'-0"
TIME CLOCK ROOM
TOILET
MEN'S LOCKER ROOM
VESTIBULE
FIRST FLOOR LOCKER ROOM
SCALE - 1/4" = 1'-0"
TYPICAL SECTION THRU SPRAY BOOTH IN PAINTING ROOM
SCALE - 1/4" = 1'-0"
PLAN OF FAN ROOM
SCALE - 1/4" = 1'-0"
FAN ROOM
SECTION "B-B"
SECTION "E-E"
PLAN OF OIL INTERCEPTOR
SCALE - 1/4" = 1'-0"
PLAN OF WOMEN'S TOILET ON GROUND FLOOR
SCALE - 1/4" = 1'-0"
WOMEN'S TOILET
CLOSET
DRAFTING & FILES
DETAIL OF AIR HEATING COIL PIPING CONN'S.
NO SCALE
TYPICAL DETAIL OF CONNECTION TO UNIT HEATERS
NO SCALE
DETAIL OF H.W. GENERATOR CONNECTIONS
NO SCALE
DETAIL OF RISE & DRIP ON M.P. & H.P. STEAM MAIN
NO SCALE
PIPING CONNECTIONS TO CONDENSATION PUMPS
NO SCALE
DETAIL OF HOOD EXHAUST
NO SCALE
DETAIL OF PRESSURE REDUCING VALVE PIPING CONNECTIONS
NO SCALE
DETAIL OF EQUIPMENT CONNECTIONS
NO SCALE
PAINT SPRAY BOOTH
TRAP CAPACITIES
ALL DRIP TRAPS - 750 LBS
HEATING STEAM PIPE SIZES FOR EACH ZONE AS FOLLOWS
X - (-20° ZONE)
Y - (0° ZONE)
Z - (+20° ZONE)
CHECKED
ARCH.
STRUCT.
ELECT.
PLUMBING
HEATING
CIVIL
REVISIONS
NAVY DEPARTMENT
OFFICE OF THE CHIEF OF ENGINEERS - CONSTRUCTION DIVISION
WASHINGTON, D.C.
ENGINE REPAIR BUILDING
HEATING, VENTILATING AND PLUMBING DETAILS
SHEET 12 OF 17 SHEETS
SUBMITTED:
APPROVED:
DRAWN
TRACED
DATE MAY 23, 1942
DISTRICT OFFICE FILE NO.
APPROVED FOR THE COMMANDING GENERAL, SHORE AIR BASES
DRAWING NO.
M-12
PLAN NO. 21
REVISED IN ACCORDANCE WITH THE TERMS OF CONTRACT W-1097 - ENG - 2870 DATED APRIL 24, 1942
EGGERS, HIGGINS, WILCOX & ERICKSON
ARCHITECTS ENGINEERS
NEW YORK CITY
BY
265-42-A

MECHANICAL LEGEND

PIPING SYMBOLS

SYMBOL	DESCRIPTION
	HIGH PRESSURE STEAM
--C--	PUMPED CONDENSATE
	LOW PRESSURE STEAM
	CONDENSATE
	GLOBE VALVE
	CONTROL VALVE
	PRESSURE REDUCING VALVE
	SAFETY OR RELIEF VALVE
	GATE VALVE
	UNION
	CHECK VALVE
	FLOAT & THERMOSTATIC TRAP
	STRAINER
	AIR VENT
	THERMOMETER
P	PRESSURE GAGE
DN	DIRECTION OF PITCH

DUCT SYMBOLS

SYMBOL	DESCRIPTION
	AIR DUCT-SUPPLY
	AIR DUCT-RETURN OR EXHAUST
36×14	DUCT SIZE WIDTH × DEPTH
T	THERMOSTAT
FS	EXHAUST FAN SWITCH
	EXHAUST FAN
D SYMBOL / CFM	CEILING DIFFUSER (SEE SCHEDULE)
R SYMBOL / CFM	EXHAUST REGISTER (SEE SCHEDULE)
	VOLUME DAMPER

EQUIPMENT DESIGNATIONS

EQUIPMENT TYPE
EQUIPMENT NUMBER

DIFFUSER & REGISTER SCHEDULE

SYMBOL	TYPE	SERVICE	CFM RANGE	NECK SIZE	FACE SIZE	AIR PATTERN	MANUFACTURER (OR APPROVED EQUAL)	REMARKS
D-1	MULTI-DEFLECTION	SUPPLY	3500-4375	36×36	37¾×37¾	4-WAY	KRUEGER - 180	
D-2	"	"	280-395	9×9	14¾×19¾	"	" -S-4	
R-1	SINGLE DEFLECTION	EXHAUST	3645-4050	48×30	50⅜×32⅜	—	" -S80H-5FF	WITH 2" FILTERS & FRAME
R-2	"	"	1500-2000	30×30	31¾×31¾	—	" -80H	
R-3	"	"	1320-1610	30×18	31¾×19¾	—	" -S80	

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION
AC 1	PACKAGE AIR CONDITIONING UNIT, 2780 CFM, 72,000 BTUH COOLING, 1½ HP, 480V, 3 Ø, 60 HZ EVAPORATOR BLOWER, (2) 3/4 HP, 480 V, 3 Ø, 60 HZ, CONDENSER FAN (2) 16X20X2 DISPOSABLE FILTERS, TRANE MODEL SACB B754 OR APPROVED EQUAL.
B 1	BLOWER, POSITIVE DISPLACEMENT, 840 ACFM @ 10" HG, 30 HP, 480V, 3 Ø, 60 HZ, SUTORBILT SERIES B SIZE 7MVB OR EQUIVALENT MULTISTAGE TURBINE (SEE SPECS).
CP 1	CONDENSATE RECEIVER & PUMP, SINGLE, 15 3/4 GAL RECEIVER, 2000 EDR RATING, 3 GPM @ 30 PSI PUMP CAPACITY, ½ HP, 3450 RPM, 120V, 3 Ø, 60 HZ MOTOR, DUNNHAM-BUSH MODEL CH-230 OR APPROVED EQUAL.
DC 1	DUST COLLECTOR, CARTRIDGE TYPE, 552 SQ FT FILTER AREA, AUTOMATIC PULSE JET CLEANING WITH SOLID STATE CONTROLS, VALVES & 10.9 CU FT HOPPER (MIN), 120V, 3 Ø, 60 HZ CONTROLS, TORIT TD 573 OR APPROVED EQUAL (SEE SPECS).
EF 1	ROOF TOP EXHAUST FAN, 1900 CFM @ .25" S.P. 18¼" Ø F.C. WHEEL, ¼ HP, 1750 RPM, 120V, 3 Ø, 60 HZ MOTOR N.C. 30,W/ROOF CURB,PACE CRE-18F OR APPROVED EQUAL.
HV 1	ROOF TOP HEATING/VENTILATING UNIT, 24,000 CFM @ 1.0" S.P. W/STEAM HEATING COIL SC-2, COMBINATION FILTER & MIXING BOX W/DAMPERS, FACE & BYPASS DAMPERS, 36½ Ø F.C. WHEEL SWSI, 2200 RPM, 10 HP, 480V, 3 Ø, 60 HZ MOTOR, (18) 20X25X2 FILTERS W/ROOF CURB, PACE MODEL A-36 HORIZONTAL DRAW THRU OR APPROVED EQUAL.
UH 1	UNIT HEATER, 100 PSI STEAM, 13,500 BTU/HR 208 CFM @ 70°F., .15 HP, 850 RPM, 120V, 3 Ø, 60 HZ, NOISE LEVEL I, DUNNHAM-BUSH MODEL H100CA OR APPROVED EQUAL.

ABBREVIATIONS

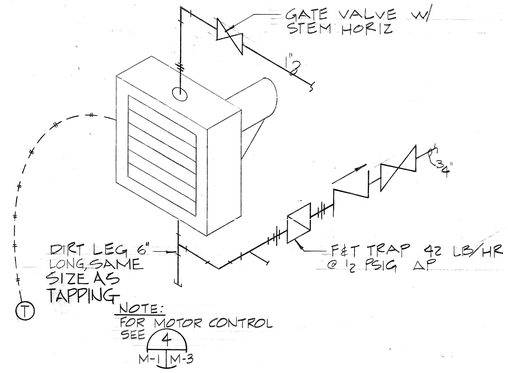
AFF	ABOVE FINISH FLOOR
@	AT
AVE	AVERAGE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
BLDG	BUILDING
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
CO	CONDENSATE
CONC	CONCRETE
DIA	DIAMETER
DN	DOWN
DB	DRY BULB
EF	EXHAUST FAN
ENT	ENTERING
EC	EVAPORATIVE COOLER
EWT	ENTERING WATER TEMPERATURE
EAT	ENTERING AIR TEMPERATURE
EQUIP	EQUIPMENT
EA	EACH
F&T	FLOAT AND THERMOSTATIC
FL	FLOOR
FT	FEET
°F	DEGREES FAHRENHEIT
GALV	GALVANIZED
GPM	GALLONS PER MINUT
GFGI	GOVERNMENT FURNISHED-GOVERNMENT INSTALLED
GFCI	GOVERNMENT FURNISHED-CONTRACTOR INSTALLED
HP	HORSEPOWER
HW	HOT WATER
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
HZ	HERTZ
HTG	HEATING
HORIZ	HORIZONTAL
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HV	HEATING, VENTILATING
LBS/HR	POUNDS PER HOUR
LF	LINEAR FOOT
MIN	MINIMUM
MAX	MAXIMUM
MISC	MISCELLANEOUS
MAINT	MAINTENANCE
MECH	MECHANICAL
OC	ON CENTER
OBD	OPPOSED BLADE DAMPER
OPN'G	OPENING
Ø	PHASE
PSIG	POUNDS PER SQUARE INCH GAGE
P	PRESSURE DIFFERENTIAL
PSI	POUNDS PER SQUARE INCH
PL	PLATE
PRV	PRESSURE REDUCING VALVE
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
ST	STEAM
SH	SHEET
SIM	SIMILAR
SP	STATIC PRESSURE
SCFM	STANDARD CUBIC FEET PER MINUTE
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC.
TYP	TYPICAL
TEMP	TEMPERATURE
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
VTR	VENT THRU ROOF
V	VOLTS
VAC	VOLTS ALTERNATING CURRENT
VD	VOLUME DAMPER
W/	WITH
WC	WATER COLUMN
WB	WET BULB

PRESSURE REDUCING VALVE SCHEDULE

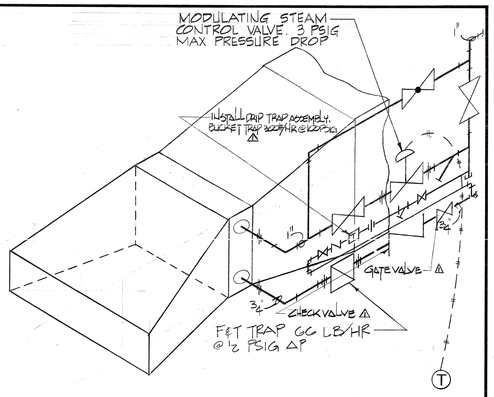
ITEM	PRESSURE PSIG INLET	PRESSURE PSIG OUTLFT	CAPACITY LBS/HR	MEDIA	Cv(MIN)	REMARKS
PRV-1	100	5	36	STEAM	.36	SELF CONTAINED
PRV-2	100	5	849	STEAM	6.2	PILOT OPERATED
PRV-3	100	5	117	STEAM	.86	SELF CONTAINED

STEAM COIL SCHEDULE

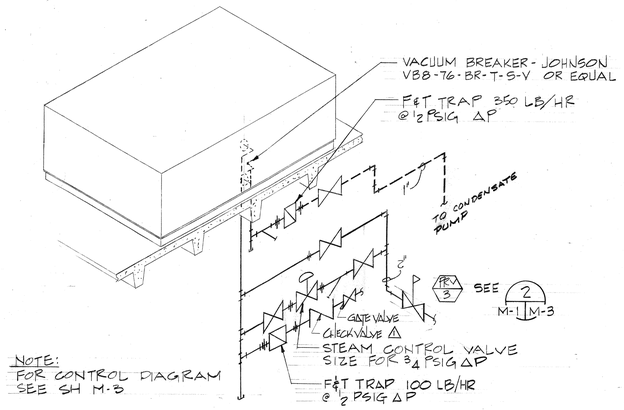
ITEM	SYSTEM	NO REQD	ENTER AIR DB°F	ENTER AIR WB°F	LEAVE AIR DB°F	LEAVE AIR WB°F	MAX FACE VELOCITY FPM	CFM	PRESSURE PSIG	COND RATE LBS/HR	MAX AIR FRICTION	REMARKS
SC-1	AC-1	1	56	-	65	-	800	2780	5	22	.15 IN.WC	
SC-2	HV-1	1	58	-	65.5	-	800	13,330	5	117	.15 IN.WC	

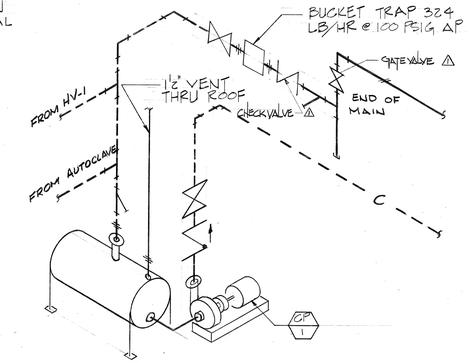


1 M-2 M-1 UNIT HEATER PIPING
NO SCALE



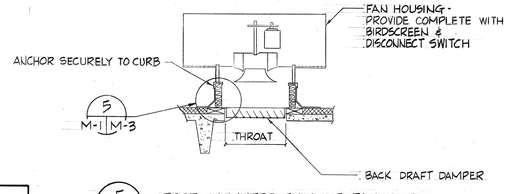
2 M-2 M-1 DUCT COIL PIPING
NO SCALE



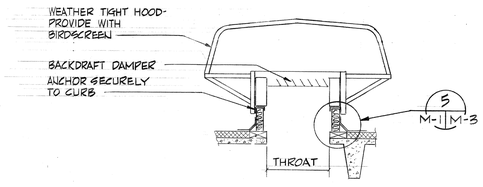


3 M-2 M-1 ROOF-TOP HV UNIT COIL PIPING
NO SCALE

4 M-2 M-1 CONDENSATE PUMP & DRIP TRAP PIPING
NO SCALE



5 M-2 M-1 ROOF MOUNTED EXHAUST FAN DETAIL
NO SCALE



6 M-2 M-1 ROOF RELIEF VENT
NO SCALE

REVISION	DATE	DESCRIPTION	BY
	APR 82	"AS BUILT"	NRM
1	20 NOV 80	INSTALL DRIP TRAP ASSEMBLIES & CHECK VALVES	HWD

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE, OGDEN, UTAH

DESIGNED BY RMD
DRAWN BY RMD
DATE 15 FEB 1980
CHECKED BY DATE
APPROVED BY DATE

ADAL BLDG 265

MECHANICAL LEGEND, SCHEDULES AND DETAILS

CHIEF ENGINEERING DESIGN	CHIEF CONSTRUCTION MANAGEMENT	CHIEF ENGINEERING BRANCH	
Robert K. Mikone	Herman Hunter	Richard Mecklenburg	Br Chf
APPROVED-BASE CIVIL ENGINEER	DATE	GROUND SAFETY	DATE
Stuart G. Knapp	MAR 80	M. Jaux	10 APR 80
CORROSION ENGINEER	DATE	FIRE DEPARTMENT	DATE
[illegible]	11 April 80	C. M. Myers	11 APR 80
USING AGENCY	DATE	BIOENVIROMENTAL	DATE
Mark Kuhnley	11 APR 80	[illegible]	10 April 80

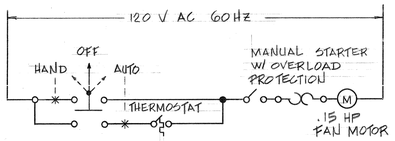
PROJECT NO. HIL 98-0
DRAWING NO. 80-9221
SCALE NONE
SHEET 12 OF 17

M-1

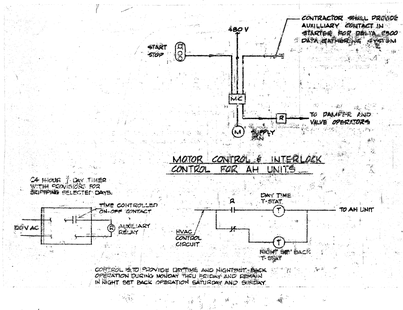
265

REGISTERED PROFESSIONAL ENGINEER No. 4539 E. Bryce Garrett State of Utah

MONSEN ENG.® MC 354

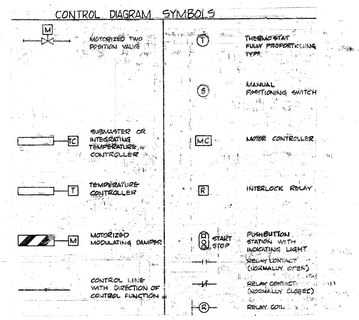


4 UNIT HEATER FAN MOTOR CONTROL
M-1 | M-3 SCALE: NONE

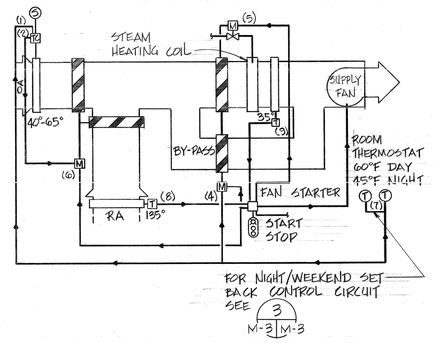


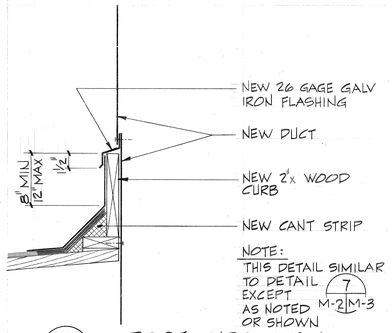
3 NIGHT/WEEKEND SETBACK CONTROL CIRCUIT DETAIL
M-2,M-3 | M-3 SCALE: NONE

CONTROL DIAGRAM SYMBOLS

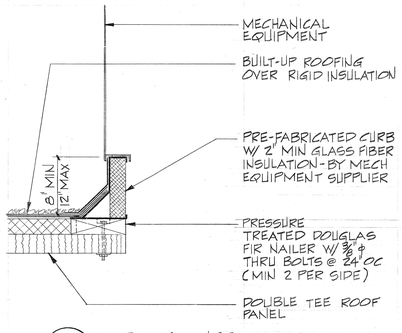


CONTROL FOR HEATING VENTILATING UNIT HV-1

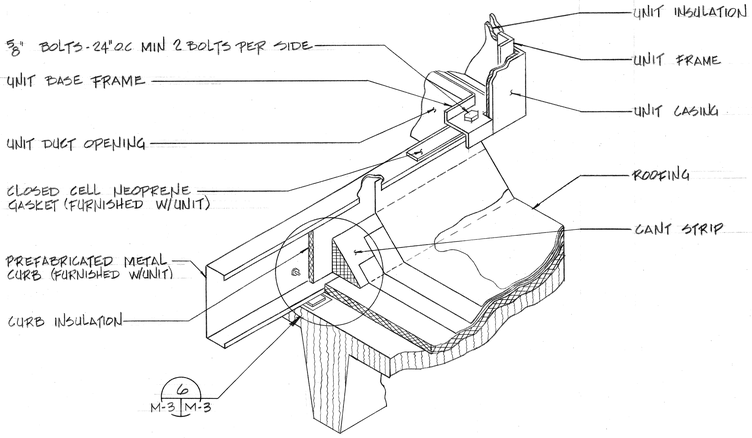




8 ROOF CURB DETAIL
M-2 | M-3 SCALE: 1½"=1'-0"



5 ROOF CURB DETAIL
M-1,M-2 | M-3 SCALE: 1½"=1'-0"



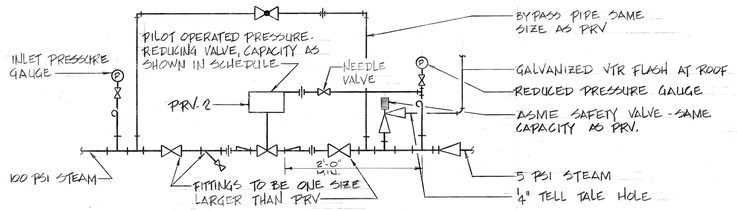
6 M-3 | M-3

1 CURB DETAIL FOR HV UNIT
M-2 | M-3 SCALE: NONE

NOTES:

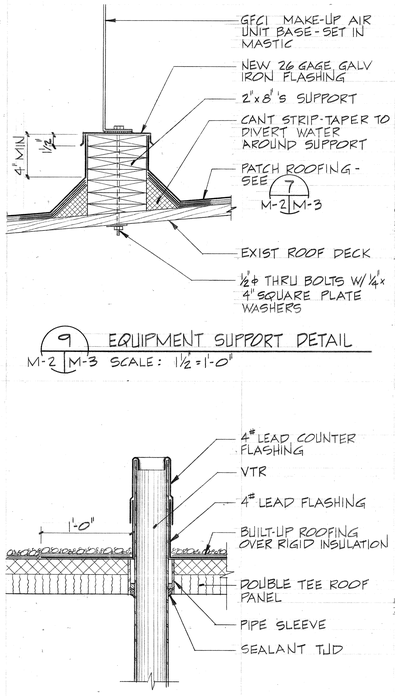
1. A TEMPERATURE CONTROLLER (2) LOCATED IN THE OUTSIDE AIR SHALL CAUSE OPERATOR (6) TO MODULATE THE OUTSIDE AIR DAMPER TOWARD OPEN AND THE RETURN AIR DAMPER TOWARD CLOSED AS THE OUTSIDE AIR TEMPERATURE RISES THROUGH THE CONTROLLER RANGE.
2. THE OUTDOOR AIR DAMPER SHALL OPEN WIDE AND THE RETURN AIR DAMPER SHALL CLOSE WHEN THE OUTSIDE AIR TEMPERATURE IS AT THE TOP OF THE RANGE OF THE CONTROLLER.
3. THE OUTDOOR DAMPER SHALL CLOSE TO A MINIMUM POSITION (SEE TABLE) DETERMINED BY THE SETTING OF A MANUAL MINIMUM POSITION SWITCH (1) WHEN THE OUTDOOR AIR TEMPERATURE IS AT THE BOTTOM OF THE RANGE OF THE CONTROLLER.
4. THE HEATING COIL SHALL BE CONTROLLED BY A NORMALLY OPEN-TWO POSITION STEAM VALVE WHOSE OPERATOR (5) SHALL BE CONTROLLED BY OPERATOR (4). OPERATOR (4) SHALL CAUSE THE OPERATOR(S) TO CLOSE THE STEAM VALVE WHEN THE FACE DAMPER IS CLOSED AND ALLOW THE VALVE TO OPEN WHEN THE FACE DAMPER IS OPEN.
5. THE ROOM THERMOSTAT (7) SHALL CAUSE OPERATOR (4) TO MODULATE THE FACE DAMPER TOWARD OPEN AND THE BY-PASS DAMPER TOWARD CLOSED AS THE SPACE TEMPERATURE DROPS BELOW THE DESIRED THERMOSTAT SETTING.
6. THE FACE DAMPER SHALL CLOSE AND THE BY-PASS DAMPER SHALL OPEN WIDE WHEN THE DESIRED ROOM TEMPERATURE IS MAINTAINED.
7. THE ROOM THERMOSTAT SHALL OVERRIDE THE TEMPERATURE CONTROLLER (2) AND CAUSE OPERATOR (6) TO CLOSE THE OUTSIDE AIRE DAMPER TO MINIMUM POSITION (SEE TABLE) AND THE RETURN AIR DAMPER TO OPEN WHEN THE SPACE TEMPERATURE DROPS BELOW THE DESIRED THERMOSTAT SETTING.
8. WHEN THE SUPPLY FAN IS TURNED OFF, THE OUTDOOR AIR DAMPER AND THE FACE DAMPER SHALL CLOSE AND THE HEATING COIL STEAM VALVE SHALL OPEN WIDE.
9. FAN SAFETY SHUT OFF T (8) WILL TURN OFF FAN IF RETURN AIR TEMPERATURE GOES ABOVE 135°F. FAN SAFETY SHUT OFF WILL ALSO BE INTERLOCKED WITH BUILDING FIRE ALARM SYSTEM.
10. TEMPERATURE CONTROLLER T (9) IS A LOW TEMPERATURE FREEZE STAT (WITH MANUAL RESET) AND WILL SHUT DOWN SYSTEM IF MIXED AIR TEMPERATURE DROPS BELOW 35°F.

MINIMUM POSITION TABLE		
UNIT NO	MINIMUN OA QUANITY CFM	PERCENTAGE OF SUPPLY AIR
AH-1	1000	2.4

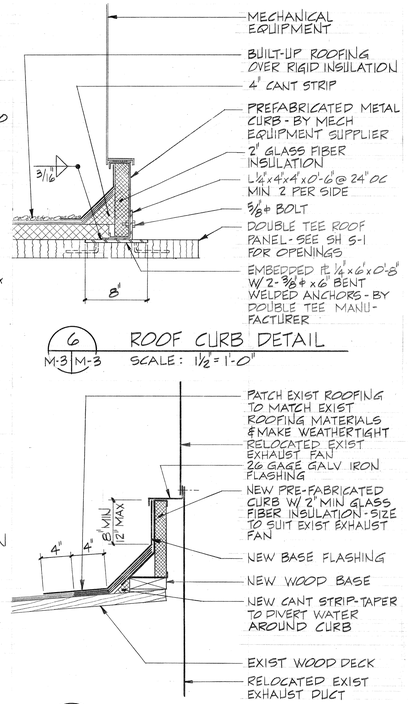


NOTE: PIPING FOR PRV-1 AND PRV-3 SIMILAR.

2 TYPICAL PRESSURE REDUCING SET
M-1,M-2 | M-3 SCALE: NONE



9 EQUIPMENT SUPPORT DETAIL
M-2 | M-3 SCALE: 1½"=1'-0"



6 ROOF CURB DETAIL
M-3 | M-3 SCALE: 1½"=1'-0"

10 VENT THRU ROOF
A-5, P-1 | M-3 SCALE: NONE

7 ROOF CURB DETAIL
M-2 | M-3 SCALE: 1½"=1'-0"

REGISTERED PROFESSIONAL ENGINEER No. 4538 B. Bryce Garding State of Utah

1' 9" 6" 3" 0" 1'
GRAPHIC SCALE 1½"=1'-0"

REVISION	DATE	DESCRIPTION	BY
	4-12-82	"AS BUILT"	NSM

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
OFFICE OF CIVIL ENGINEERING
HILL AIR FORCE BASE, OGDEN, UTAH

DESIGNED BY MM/PME
DRAWN BY PCT/PME
DATE 15 FEB 1980
CHECKED BY DATE
APPROVED BY DATE

ADAL BLDG 265

MECHANICAL DETAILS & CONTROL DIAGRAMS

CHIEF ENGINEERING DESIGN	CHIEF CONSTRUCTION MANAGEMENT	CHIEF ENGINEERING BRANCH		
Robert K. Johnson	Hamid Hanbali	Mechanical SOLEC-10		
DATE	APPROVED-BASE CIVIL ENGINEER DATE	GROUND SAFETY DATE	PROJECT NO. HIL 98-0	
	Howard C. Knapp 11 Apr 80	M. Faux 10 APR 80		
DATE	CORROSION ENGINEER DATE	FIRE DEPARTMENT DATE	DRAWING NO. 80-3221	
	Jim Capps 11 Apr 80	A. Mercer 11 APR 80		
USING AGENCY DATE		BIOENVIRONMENTAL DATE	SCALE AS SHOWN	
Mark Bilodeau 11 APR 80		R. Hall 10 April 80	SHEET 14 OF 17	

M

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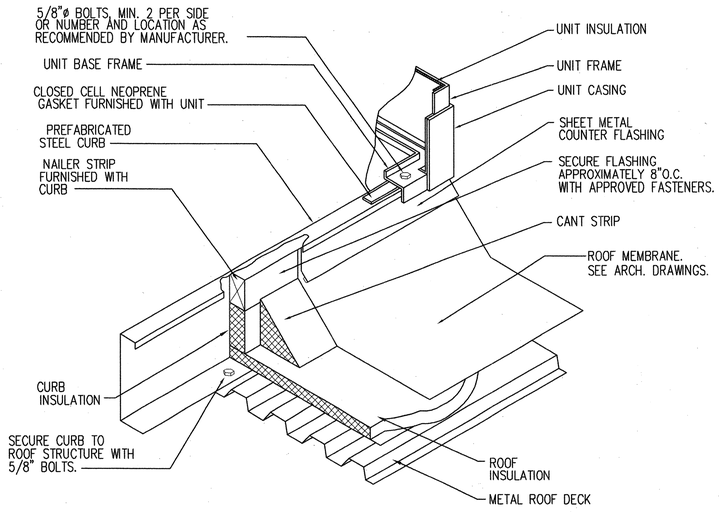
M-3

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	SUPPLY DUCT (CROSS SECTION)
	RETURN AIR OR EXHAUST DUCT (CROSS SECTION)
	ROUND DUCT (CROSS SECTION)
24" X 12"	DUCT SIZE, INSIDE CLEAR DIMENSION IN INCHES
RISE	DUCT RISE
	DROP OR RISE IN SUPPLY DUCT
	ACOUSTICAL LINING IN DUCT
	TURNING VANES IN DUCT
H.D.	HAND DAMPER
D.M.	MOTORIZED DAMPER
	FACTORY MADE DUCT CONNECTION
	SUPPLY AIR DIRECTION
	RETURN AIR OR EXHAUST DIRECTION
	SUPPLY DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
	BRANCH DUCT TAKE-OFF
T	THERMOSTAT

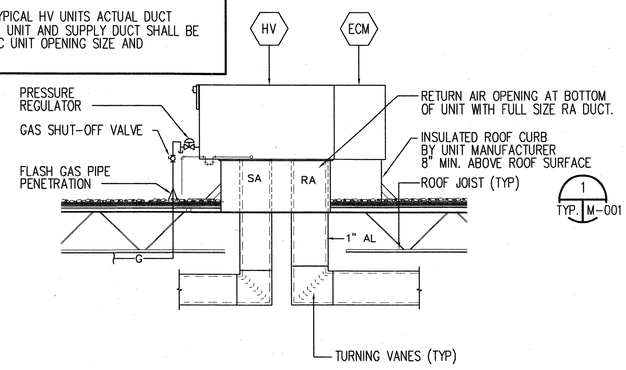
LOUVER (LVR)

SYMBOL	APPROX. SIZE	DUTY	RUSKIN MODEL	CFM	MAX. P.D.	REMARKS
LVR-1	56"H x 48"W	RELIEF AIR	ELF 837	3250	.03" W.C.	WITH MOTOR OPERATED DAMPER
LVR-2	56"H x 48"W	RELIEF AIR	ELF 837	3250	.03" W.C.	WITH MOTOR OPERATED DAMPER
LVR-3	56"H x 48"W	RELIEF AIR	ELF 837	3250	.03" W.C.	WITH MOTOR OPERATED DAMPER
LVR-4	56"H x 48"W	RELIEF AIR	ELF 837	3250	.03" W.C.	WITH MOTOR OPERATED DAMPER
LVR-5	56"H x 48"W	RELIEF AIR	ELF 837	3250	.03" W.C.	WITH MOTOR OPERATED DAMPER
LVR-6	56"H x 48"W	RELIEF AIR	ELF 837	3250	.03" W.C.	WITH MOTOR OPERATED DAMPER
LVR-7	56"H x 48"W	RELIEF AIR	ELF 837	3250	.03" W.C.	WITH MOTOR OPERATED DAMPER
LVR-8	56"H x 48"W	RELIEF AIR	ELF 837	3250	.03" W.C.	WITH MOTOR OPERATED DAMPER
LVR-9	18"H x 18"W	EXHAUST AIR	ELF 15J	300	.03" W.C.	-



ROOFTOP EQUIPMENT FLASHING DETAIL
SCALE: NONE — 1 / TYP. M-001

NOTE:
SECTION INDICATES TYPICAL HV UNITS ACTUAL DUCT CONNECTION BETWEEN UNIT AND SUPPLY DUCT SHALL BE BASED ON ACTUAL AC UNIT OPENING SIZE AND CONFIGURATION.



HV UNIT DETAIL
SCALE: NONE — 2 / M-102 | M-001

HEATING VENTILATING UNITS, INDIRECT GAS FIRED (HV)

SYMBOL	AIR FLOW CFM	STATIC PRESSURE DROP MAX IN WC	SERVICE	MIN. INPUT CAPACITY BTUH (1)	MIN. INPUT CAPACITY BTUH (4)	TYPE OF GAS	TYPE OF VENTING	FAN MOTOR HP	ELECTRICAL VOLTS	ELECTRICAL PHASE	ELECTRICAL HZ	MFR.	REMARKS
HV-1	6,500	0.8	OUTDOOR	400,000	262,400	NAT.	POWER	5	460	3	60	REZNOR RPB-400	(2)(3)(5)(6)
HV-2	6,500	0.8	OUTDOOR	400,000	262,400	NAT.	POWER	5	460	3	60	REZNOR RPB-400	(2)(3)(5)(6)

(1) AT SEA LEVEL.
(2) SPARK IGNITED INTERMITTENT SAFETY PILOT.
(3) TWO STAGE GAS BURNER CONTROLS.
(4) AT 4800 FT. ELEVATION
(5) REMOTE PANEL WITH START-STOP, EVAP. COOLER, VENT AND HEAT CONTROLS AND STATUS/ALARM LIGHTS.
(6) FURNISH WITH ECM NOTED BELOW.

DIRECT EVAPORATIVE COOLER MODULES (ECM)

SYMBOL	CFM	MEDIA FT^2(MIN.)	MEDIA THICKNESS	MAX APD IN. W.C.	MIN EFF. %	REMARKS
ECM-1	6,500	9.33	12"	0.22	89	SUMP SHALL BE 316 STAINLESS STEEL. 1/70 HP PUMP SHALL BE INTERNALLY MOUNTED. FURNISH WITH INTAKE LOUVER/DAMPER. FURNISH AS PART OF HV UNITS.
ECM-2	6,500	9.33	12"	0.22	89	

EXHAUST FANS (EF)

SYMBOL	MINIMUM AIR FLOW CFM	TOTAL STATIC PRESSURE IN WC	UNIT TYPE	DRIVE	FAN MOTOR MIN. HP	FAN MOTOR VOLTS	FAN MOTOR PHASE	FAN MOTOR HERTZ	MANUFACTURER	REMARKS
EF-1	300	.5	CEILING	DIRECT	1/10	115	1	60	COOK GC-420	(1)

(1) FURNISH WITH VARIABLE SPEED CONTROL AND BACKDRAFT DAMPER.

SINGLE STAGE EVAPORATIVE COOLING UNITS (EC)

SYMBOL	MIN. AIR FLOW CFM	EXTERNAL SP IN. WC	MOTOR HP	MOTOR VOLTS	MOTOR PHASE	MOTOR HERTZ	ESSICK MODEL	REMARKS
EC-1	6500	0.3	1	115	3	60	PCRN 11000-2	PROVIDE AUTOMATIC WATER MAKEUP, MANUALLY ADJUSTABLE BLEED VALVE, TWO-SPEED
EC-2	6500	0.3	1	115	3	60	PCRN 11000-2	PROVIDE AUTOMATIC WATER MAKEUP, MANUALLY ADJUSTABLE BLEED VALVE, TWO-SPEED

REGISTER AND GRILLE SCHEDULE

SYMBOL	TYPE	SERVICE	RANGE CFM	NECK SIZE inches	FACE SIZE inches	AIR PATTERN (1)	MFR TITUS	REMARKS
S-1	DOUBLE DEFLECTION	SUPPLY AIR	1250	20"x20"	21-3/4"x21-3/4"	2 WAY	301FS	ALL ALUMINUM, SURFACE FRAME, OBD
S-2	DOUBLE DEFLECTION	SUPPLY AIR	1625	36"x14"	37-3/4"x15-3/4"	2 WAY	301FS	ALL ALUMINUM, SURFACE FRAME, OBD
S-3	DOUBLE DEFLECTION	SUPPLY AIR	2000	36"x18"	37-3/4"x19-3/4"	2 WAY	301FS	ALL ALUMINUM, SURFACE FRAME, OBD
S-4	DOUBLE DEFLECTION	SUPPLY AIR	3250	46"x22"	47-3/4"x23-3/4"	2 WAY	301FS	ALL ALUMINUM, SURFACE FRAME, OBD

(1) UNLESS OTHERWISE NOTED



DESCRIPTION | DATE | APPR'L MARK

DESIGNED BY: B. GARDNER
DRAWN BY: G. MINSON
CHECKED BY: B. GARDNER
PROJECT NUMBER: KRSM 050030
GOVERNMENT REVIEWER: -

HILL AIR FORCE BASE

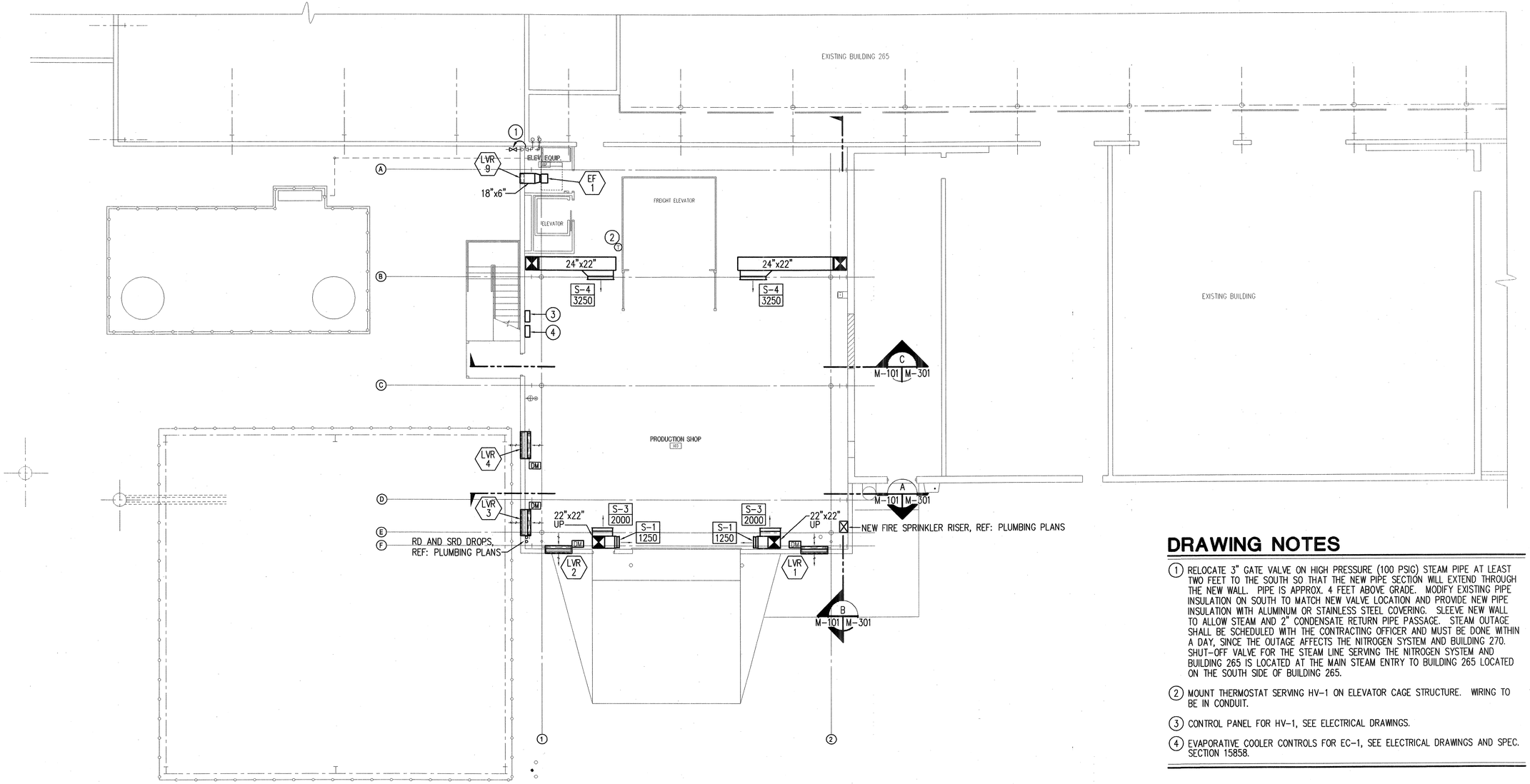
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
775TH CIVIL ENGINEERING SQUADRON

CONSTRUCT 2 STORY ADDITION
EAST SIDE BUILDING 265

MECHANICAL SCHEDULES AND DETAILS

M-001

SHEET 35 OF 54



FIRST FLOOR HVAC PLAN

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

10 5 0 10 20

DRAWING NOTES

1. RELOCATE 3" GATE VALVE ON HIGH PRESSURE (100 PSIG) STEAM PIPE AT LEAST TWO FEET TO THE SOUTH SO THAT THE NEW PIPE SECTION WILL EXTEND THROUGH THE NEW WALL. PIPE IS APPROX. 4 FEET ABOVE GRADE. MODIFY EXISTING PIPE INSULATION ON SOUTH TO MATCH NEW VALVE LOCATION AND PROVIDE NEW PIPE INSULATION WITH ALUMINUM OR STAINLESS STEEL COVERING. SLEEVE NEW WALL TO ALLOW STEAM AND 2" CONDENSATE RETURN PIPE PASSAGE. STEAM OUTAGE SHALL BE SCHEDULED WITH THE CONTRACTING OFFICER AND MUST BE DONE WITHIN A DAY, SINCE THE OUTAGE AFFECTS THE NITROGEN SYSTEM AND BUILDING 270. SHUT-OFF VALVE FOR THE STEAM LINE SERVING THE NITROGEN SYSTEM AND BUILDING 265 IS LOCATED AT THE MAIN STEAM ENTRY TO BUILDING 265 LOCATED ON THE SOUTH SIDE OF BUILDING 265.
2. MOUNT THERMOSTAT SERVING HV-1 ON ELEVATOR CAGE STRUCTURE. WIRING TO BE IN CONDUIT.
3. CONTROL PANEL FOR HV-1, SEE ELECTRICAL DRAWINGS.
4. EVAPORATIVE COOLER CONTROLS FOR EC-1, SEE ELECTRICAL DRAWINGS AND SPEC. SECTION 15858.

LICENSED PROFESSIONAL ENGINEER
No. 154099
B. BRYCE GARDNER
STATE OF UTAH
12/5/08

DESCRIPTION	DATE	APPR	MARK

DESIGNED BY: B. GARDNER
DRAWN BY: G. MINSON
CHECKED BY: B. GARDNER
PROJECT NUMBER: KRSM 052030
GOVERNMENT REVIEWER: -

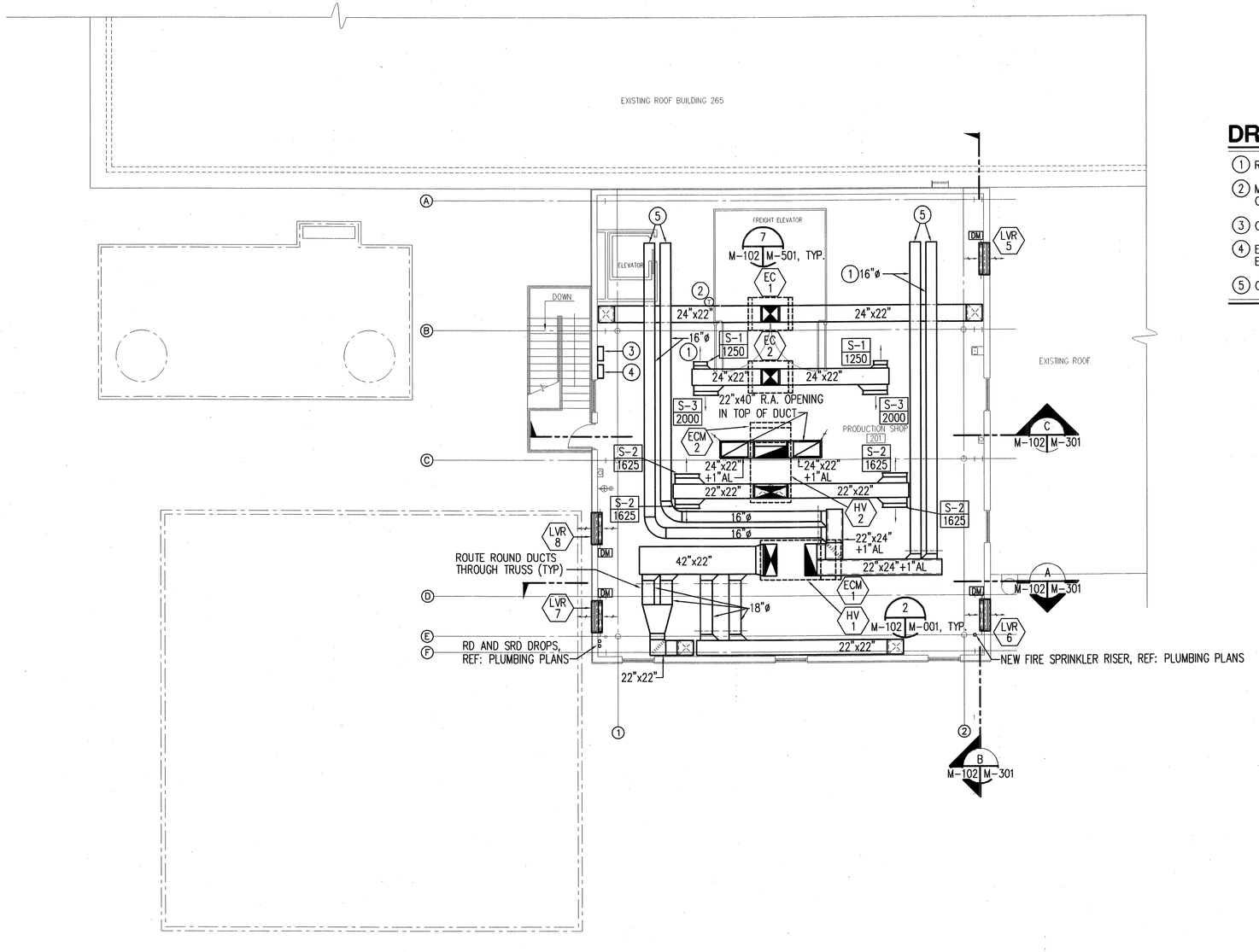
HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
775TH CIVIL ENGINEERING SQUADRON

CONSTRUCT 2 STORY ADDITION
EAST SIDE BUILDING 265

FIRST FLOOR HVAC PLAN

M-101



SECOND FLOOR HVAC PLAN

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

10 5 0 10 20

DRAWING NOTES

1. ROUTE 16"ø R.A. DUCT THROUGH JOISTS.
2. MOUNT THERMOSTAT SERVING HV-2 ON ELEVATOR CAGE STRUCTURE. WIRING TO BE IN CONDUIT.
3. CONTROL PANEL FOR HV-2, SEE ELECTRICAL DRAWINGS.
4. EVAPORATIVE COOLER CONTROLS FOR EC-2, SEE ELECTRICAL DRAWINGS AND SPEC SECTION 15858.
5. OPEN ENDED DUCT.

DESCRIPTION	DATE	APPR	MARK

DESIGNED BY: B. GARDNER
DRAWN BY: G. MINSON
CHECKED BY: B. GARDNER
PROJECT NUMBER: KRSM 052030
GOVERNMENT REVIEWER: -

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
775TH CIVIL ENGINEERING SQUADRON

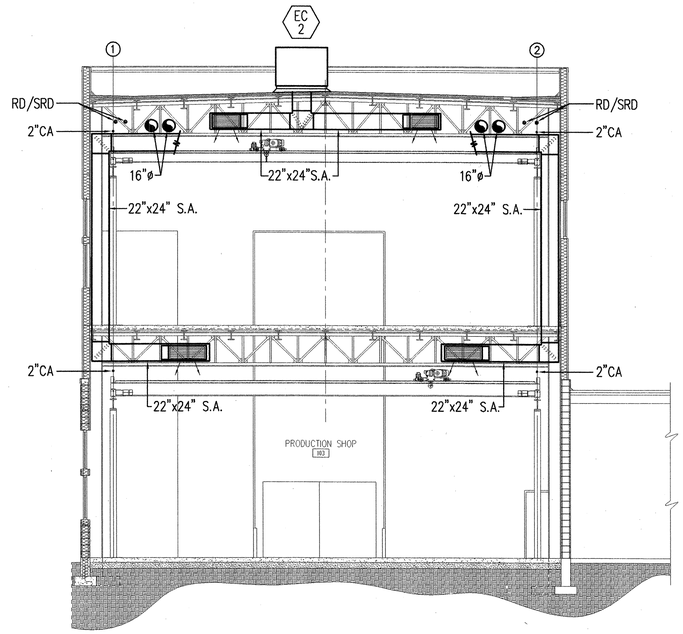
CONSTRUCT 2 STORY ADDITION
EAST SIDE BUILDING 265

SECOND FLOOR HVAC PLAN



M-102

SHEET 37 OF 54

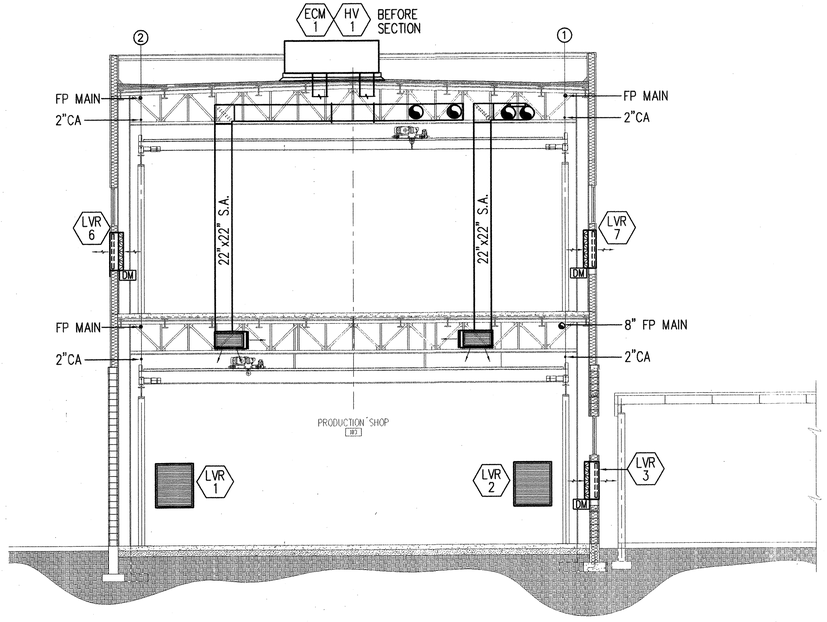


HVAC SECTION

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

C — M-101, M-102 | M-301

10 5 0 10 20

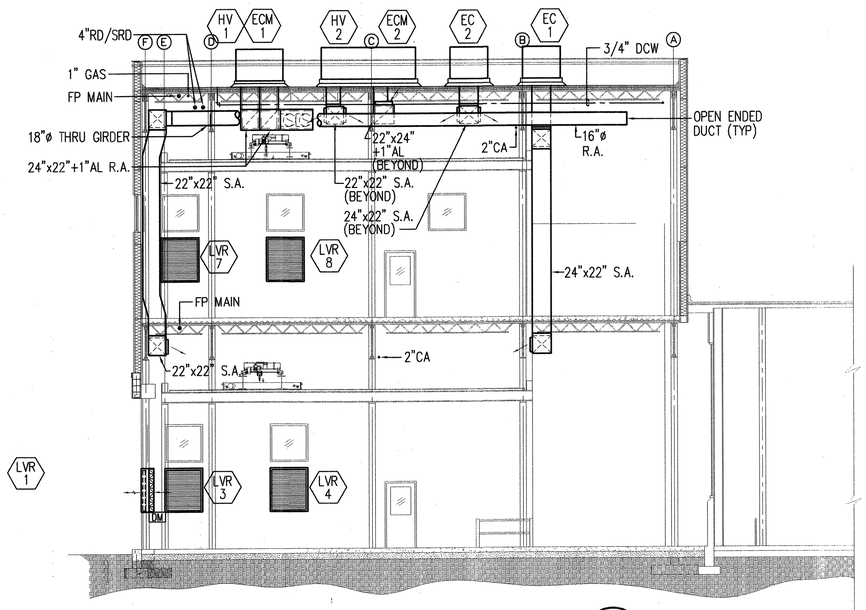


HVAC SECTION

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

A — M-101, M-102 | M-301

10 5 0 10 20



HVAC SECTION

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

B — M-101, M-102 | M-301

10 5 0 10 20



12/5/05

DESCRIPTION	DATE	APPR	MARK

DESIGNED BY: B. GARDNER
DRAWN BY: J. HARRIS
CHECKED BY: B. GARDNER
PROJECT NUMBER: KRSM 052030
GOVERNMENT REVIEWER: -

HILL AIR FORCE BASE

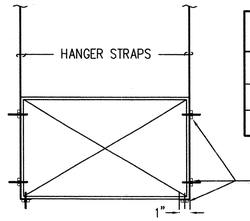
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
775TH CIVIL ENGINEERING SQUADRON

CONSTRUCT 2 STORY ADDITION
EAST SIDE BUILDING 265

HVAC SECTIONS

M-301

SHEET 38 OF 54

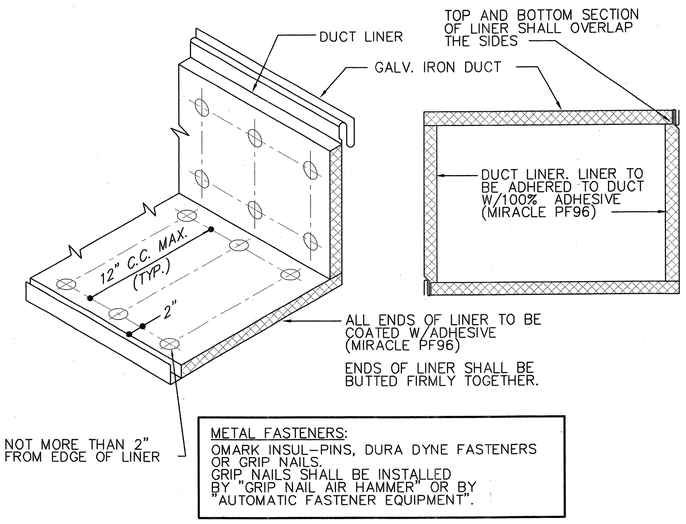


HANGER SIZES FOR RECTANGULAR DUCT		
LONGEST DIM OF DUCT	HANGER STRAPS	MAXIMUM SPACING
UP THRU 60"	1" x 16 Ga.	10'-0"
61" THRU 96"	1-1/2" x 16 Ga.	8'-0"

NO POP RIVETS ALLOWED

DUCT HANGER DETAIL

SCALE: NONE — 4 / TYP. M-501

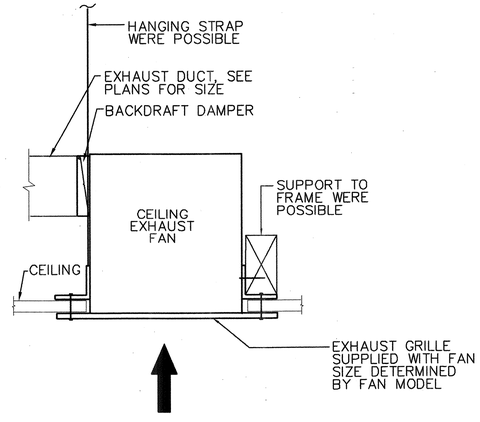


METAL FASTENERS:
OMARK INSUL-PINS, DURA DYNE FASTENERS OR GRIP NAILS.
GRIP NAILS SHALL BE INSTALLED BY "GRIP NAIL AIR HAMMER" OR BY "AUTOMATIC FASTENER EQUIPMENT".

DUCT LINER DETAIL

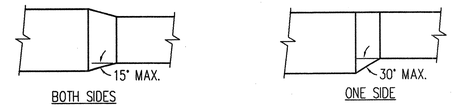
SCALE: NONE — 5 / TYP. M-501

NOTE:
REFER TO PLANS FOR LOCATION. SEE EQUIPMENT SCHEDULE FOR SIZE AND SPECS.



CEILING EXHAUST FAN DETAIL

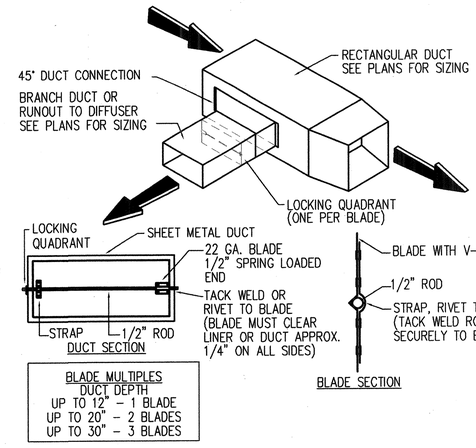
SCALE: NONE — 6 / M-101 | M-501



NOTES:
1. ALL DUCTS (SUPPLY, RETURN AND EXHAUST) TO HAVE TURNING VANES IN SQUARE ELBOW.
2. INSIDE SQUARE, OUTSIDE RADIUS ELBOWS NOT ALLOWED.

RECTANGULAR DUCT FITTINGS

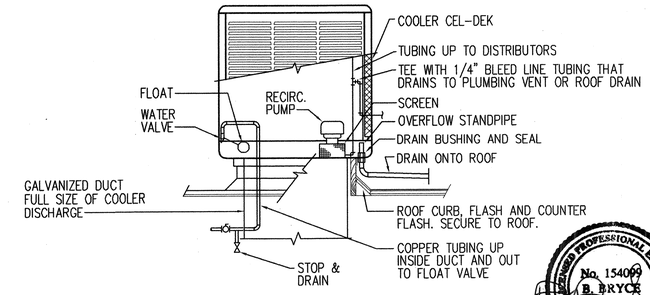
SCALE: NONE — 1 / TYP. M-501



BLADE MULTIPLES
DUCT DEPTH
UP TO 12" – 1 BLADE
UP TO 20" – 2 BLADES
UP TO 30" – 3 BLADES

BRANCH DUCT AND DAMPER DETAIL

SCALE: NONE — 2 / TYP. M-501



EVAPORATIVE COOLER DETAIL

SCALE: NONE — 3 / M-102 | M-501

LICENSED PROFESSIONAL ENGINEER
No. 154009
B. BRYCE GARDNER
STATE OF UTAH
12/5/05

DESIGNED BY: B. GARDNER | CHECKED BY: B. GARDNER
DRAWN BY: G. MINSON | PROJECT NUMBER: KRSM 052030 | GOVERNMENT REVIEWER:

HILL AIR FORCE BASE

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CONSTRUCT 2 STORY ADDITION
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SHEET 39 OF 54