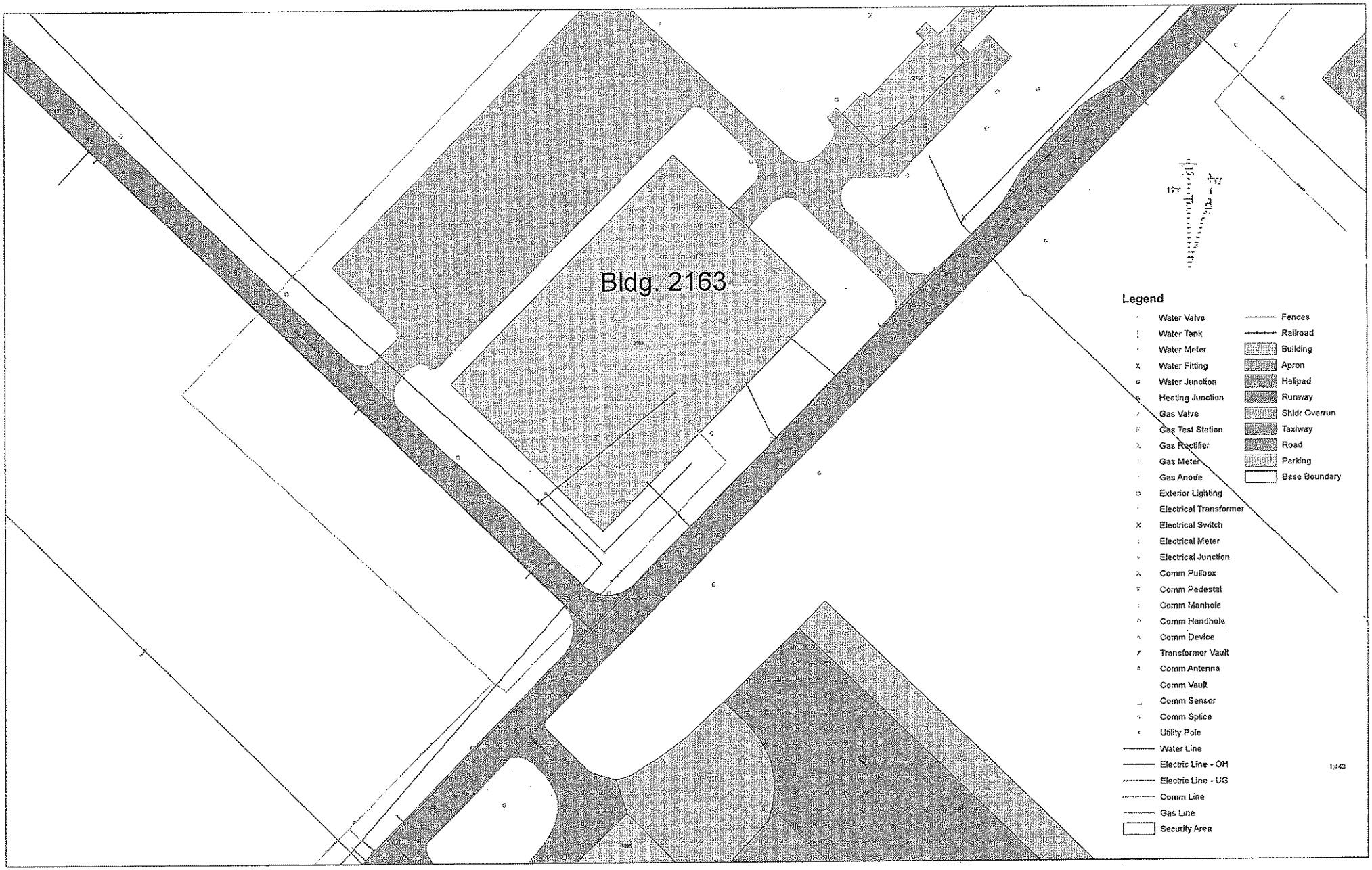

Bldg. 2163
Legend
Water Valve
Water Tank
Water Meter
Water Fitting
Water Junction
Heating Junction
Gas Valve
Gas Test Station
Gas Rectifier
Gas Meter
Gas Anode
Exterior Lighting
Electrical Transformer
Electrical Switch
Electrical Meter
Electrical Junction
Comm Pullbox
Comm Pedestal
Comm Manhole
Comm Handhole
Comm Device
Transformer Vault
Comm Antenna
Comm Vault
Comm Sensor
Comm Splice
Utility Pole
Water Line
Electric Line - OH
Electric Line - UG
Comm Line
Gas Line
Security Area
Fences
Railroad
Building
Apron
Helipad
Runway
Shldr Overrun
Taxiway
Road
Parking
Base Boundary
1:443

I.

II. PAINT COLORS

M. EXTERIOR

1. WALLS - FED. STD. X3578
2. METAL ROOF, FASCIA, SOFFITS, HOLLOW METAL DOORS & FRAMES - FED. STD. 30099
3. SITE EQUIPMENT & MECH & ELEC. EQUIPMENT - X3578 & RANGE BAFFLES & FENCES & 35720.

N. INTERIOR

1. GYP. BD. WALLS & CEILINGS - COLUMBIA PAINT NO. 5830W
2. HOLLOW METAL DOORS & FRAMES - COLUMBIA PAINT NO. 5573M
3. EPOXY FLOOR PAINT - COLUMBIA PAINT NO. 5565M

II. MATERIAL COLORS

A. QUARRY TILE - METRO QUARRY, NO. 105 BUCKSKIN
B. RESTROOM FLOOR - DAL-TILE, NO. DK-27 OATMEAL
C. RESTROOM WALL - DAL-TILE, NO. D1415 FLEECE
D. RESTROOM WALL ACCENT - DAL-TILE, NO. D84 GINGER
E. CARPET - INTERDECOR, CASPIAN 2812 SOPHIA
F. RUBBER BASE - FLEXCO, NO. 6 BEIGE
G. ACOUSTICAL CEILING TILE - ARMSTRONG FISSURED TRAVERTONE, WHITE
H. PLAS. LAM. LAVATORY COUNTERTOP - WILSONART NO. 1550-6 BEIGE
I. PLAS. LAM. WINDOW SILLS - WILSONART NO. 1572-6 ANTIQUE WHITE
J. TOILET PARTITIONS - ACCURATE PARTITIONS NO. 911 CHOCOLATE
K. WHITEBOARDS - GREENSTEEL, BROWN.
L. WINDOW BLINDS - LEVELOR NO. 389 - CINNAMON

III. NOTE

COLORS LISTED ARE FOR COLOR IDENTIFICATION PURPOSE ONLY; THIS LISTING IS NOT INTENDED TO LIMIT SELECTION OF SIMILAR COLORS FROM OTHER MANUFACTURERS.

PLAN GENERAL NOTES:

1. EXT WALL MT'L STUDS ARE 2"x6" @ 16" O.C.
2. INT WALL MT'L STUDS ARE 3 5/8" x 25 GA. @ 24" O.C.
3. PROVIDE BLINDS AT ALL WINDOWS.
4. ▭▭ } DENOTES 1 HR. FIRE RATED WALLS
5. ▭▭ DENOTES 2 HR. FIRE RATED WALLS
6. ▭▭ MT'L STUD PARTITION
7. ▭▭ C.M.U. WALL
8. ▭▭ P.C. CONC. PANEL

GENERAL NOTES CONT.

9. PROVIDE 6" BATT INSULATION IN WALLS AROUND ROOMS 101 & 103 AND BETWEEN ROOMS 106 & 106. INSULATION TO GO UP TO UNDERSIDE OF GYP. BD. CLG. USE SILL SEALER AT WALL BASE.
10. SEAL ALL PENETRATIONS IN GYP. BD CEILINGS & EXTERIOR WALLS (AT INTERIOR FACE) W/ACOUSTICAL SEALANT, JB
11. PROVIDE CHEMICAL HARDENER AT CONC. FLOORS NOT SCHEDULED FOR FINISHES.
12. SEE SHEET G-2 FOR ABBREVIATIONS & LEGENDS

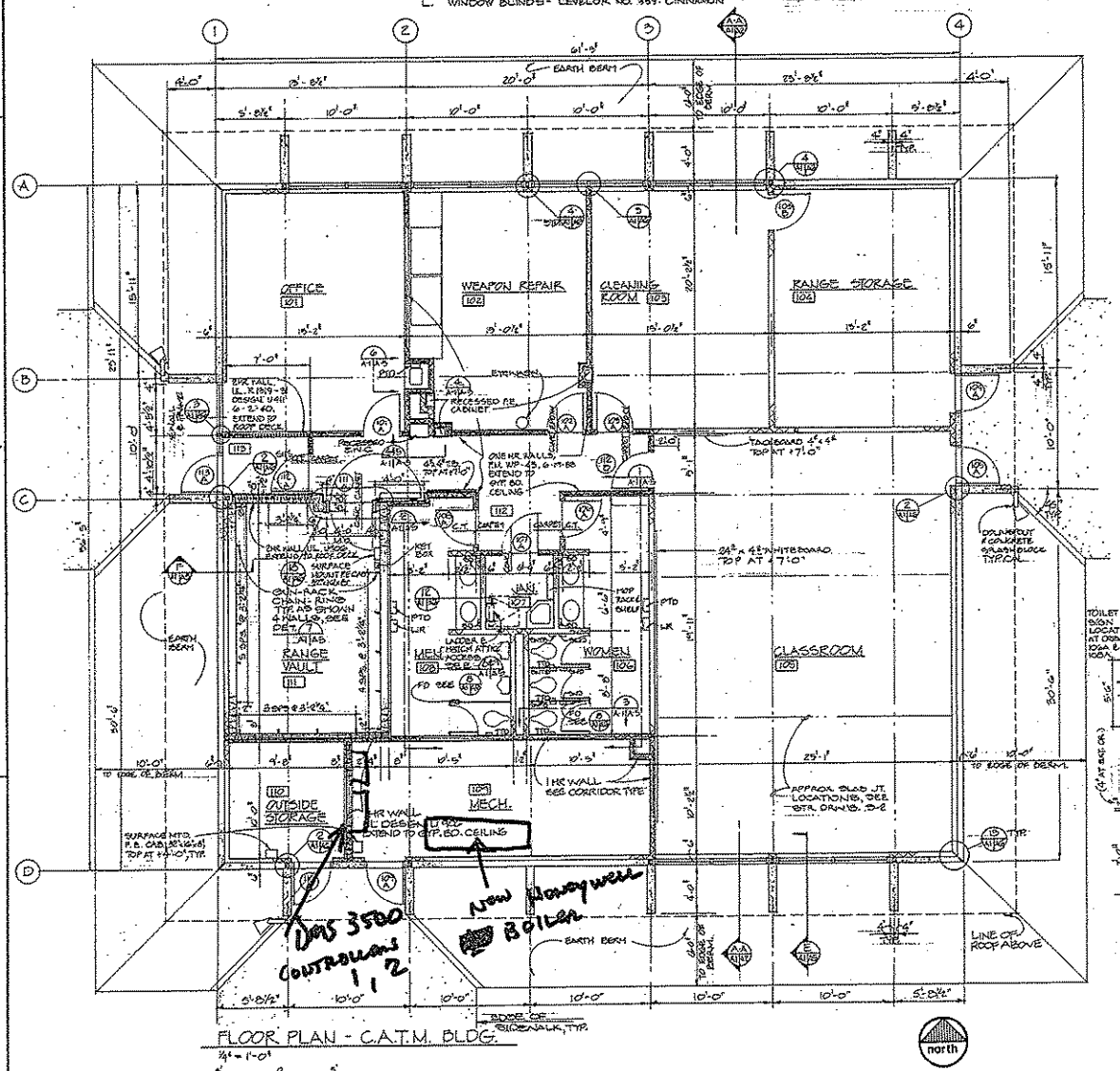
REVISIONS				
SYMBOL	ZONE	DESCRIPTION	DATE	BY
A6	C1	EXIT. 106 A RATING, AS BUILT	4.1795	JMB

ROOM FINISH SCHEDULE

	NO.	NAME	FLOOR	BASE	WALL MATERIAL	WALL FINISH	CEILING MATERIAL	CEILING FINISH	CEILING HT.	INFORMATION / REMARKS
C.A.T.M. BUILDING	101	OFFICE	CARPET	RUBBER	G.W.B.	PAINT	A.C. LAY-IN		8'-0"	
	102	WEAPON REPAIR	EPOXY	RUBBER	G.W.B.	PAINT	G.W.B.	PAINT	9'-0"	1 HR. RATED C.L.G.
	103	CLEANING RM.	EPOXY	RUBBER	G.W.B.	PAINT	G.W.B.	PAINT	9'-0"	
	104	RANGE STORAGE	EPOXY	RUBBER	G.W.B.	PAINT	G.W.B.	PAINT	9'-0"	
	105	CLASSROOM	CARPET	RUBBER	G.W.B.	PAINT	A.C. LAY-IN		8'-0"	
	106	WOMEN	C.T.	C.T.	G.W.B.	SEE INFO.	G.W.B.	PAINT	9'-0"	C.T. WNSCT. TO 5'-0" HT. & PAINT ABOVE - ALL WALLS
	107	JANITOR	CONC.	RUBBER	G.W.B.	SEE INFO.	G.W.B.	PAINT	9'-0"	C.T. WNSCT. TO 5'-0" HT. & PAINT ABOVE - ALL WALLS
	108	MEN	C.T.	C.T.	G.W.B.	SEE INFO.	G.W.B.	PAINT	9'-0"	C.T. WNSCT. TO 5'-0" HT. & PAINT ABOVE - ALL WALLS
	109	MECHANICAL	CONC.	RUBBER	G.W.B. & C.M.U.	PAINT	G.W.B.	PAINT	9'-0"	RATED CEILING 1HR.
	110	STORAGE	CONC.	RUBBER	G.W.B. & C.M.U.	PAINT	G.W.B.	PAINT	9'-0"	" " "
	111	RANGE VAULT	CONC.	RUBBER	C.M.U.	PAINT	CONC.	PAINT	8'-0"	" " "
	112	CORRIDOR	CARPET	RUBBER	G.W.B.	PAINT	G.W.B.	PAINT	9'-0"	RATED CEILING 1HR.
	113	VESTIBULE	Q.T.	Q.T.	G.W.B.	PAINT	G.W.B.	PAINT	9'-0"	
SHELTER A	201	RANGE SHELTER	CONC.	—	CONC.	PAINT	STRUCTURE	PAINT	VARIES	
	202	ELEC. CLOSET	CONC.	—	CONC.	PAINT	STRUCTURE	PAINT	VARIES	
	203	ELEC. CLOSET	CONC.	—	CONC.	PAINT	STRUCTURE	PAINT	VARIES	
SHELTER B	301	RANGE SHELTER	CONC.	—	CONC.	PAINT	STRUCTURE	PAINT	VARIES	
	302	ELEC. CLOSET	CONC.	—	CONC.	PAINT	STRUCTURE	PAINT	VARIES	

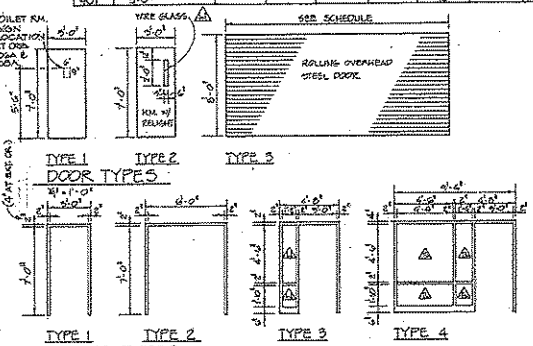
DOOR SCHEDULE

	NO.	SIZE	TYPE	FRAME ELEV.	HEAD	JAMB	HDW.	KEYSIDE ROOM	RATING	GRADE	REMARKS
C.A.T.M. BUILDING	101A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	1	112	20 MIN.	H.D.	
	102A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	1	112	45 MIN.	H.D.	
	103A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	1	112	20 MIN.	H.D.	
	103B	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	2	103		H.D.	
	104A	3'-0" x 7'-0"	1	1	2/A-6	2/A-6	3	EXTERIOR		H.D.	
	105A	3'-0" x 7'-0"	1	1	2/A-6 SIM	2/A-6 SIM	4	———			ACOUSTICAL DOOR
	106A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	5	———	20 MIN.	H.D.	SEE THRESHOLD DETAIL 9/A-6
	107A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	6	112	20 MIN.	H.D.	
	108A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	5	———	20 MIN.	H.D.	SEE THRESHOLD DETAIL 9/A-6
	109A	3'-0" x 7'-0"	1	1	2/A-6	2/A-6	7	EXERIOR		H.D.	
	110A	3'-0" x 7'-0"	1	1	2/A-6	2/A-6	8	EXTERIOR		H.D.	
	111A	3'-6" x 6'-0" O.H.S.	—	—	18/A-6 SIM	18/A-6		112	20 MIN.		VAULT DOOR
	112A	3'-0" x 7'-0"	2	1	1/A-6 SIM	1/A-6 SIM	10	———	1 HR.	H.D.	
	112B	3'-0" x 7'-0"	1	3	1/A-6	1/A-6	11	112	20 MIN.	H.D.	
	113A	3'-0" x 7'-0"	1	4	2/A-6 SIM	2/A-6 SIM	12	EXTERIOR		EXTRA H.D.	FEATHERDGE @ EXT. CONC.
SHELTER A	201A	3'-0" x 7'-0" PR.	1	2	9/A-6	9/A-6	13	EXTERIOR		H.D.	
	201B	3'-0" x 7'-0" PR.	1	2	9/A-6	9/A-6	13	———		H.D.	
	201C	11'-0" x 8'-0"	3	MFG.	D/A-6	10A/A-6	14	———			
	201D	11'-0" x 8'-0"	3	MFG.	D/A-6	6/A-6	14	———			
	201E	11'-0" x 8'-0"	3	MFG.	D/A-6	6/A-6	14	———			
	201F	11'-0" x 8'-0"	3	MFG.	D/A-6	6/A-6	14	———			
	201G	11'-0" x 8'-0"	3	MFG.	D/A-6	6/A-6	14	———			
	201H	11'-0" x 8'-0"	3	MFG.	D/A-6	10A/A-6	14	———			
	202A	3'-0" x 7'-0" PR.	1	2	9/A-6	9/A-6	15	201		H.D.	
	203A	3'-0" x 7'-0" PR.	1	2	9/A-6	9/A-6	15	201		H.D.	
SHELTER B	301A	3'-0" x 7'-0" PR.	1	2	9/A-6	9/A-6	15	EXTERIOR		H.D.	
	302A	3'-0" x 7'-0" PR.	1	2	9/A-6	9/A-6	17	301		H.D.	
	301	3'-0"					16				CHAINLINK GATE



FLOOR PLAN - C.A.T.M. BLDG.

1/4" = 1'-0"



Board Wall Construction

Type 1A, B, 2, 3 & 4

BASE LAYER 5/8" GYPSUM BOARD TYPE X ON 3 5/8" METAL STUDS AT 24" OC WITH 1" TYPE S DRYWALL SCREWS 9" OC AT EDGES AND 12" OC AT INTERMEDIATE STUDS. FACE LAYER 5/8 GYPSUM BOARD TYPE X OVER BASE LAYER WITH LAMINATING COMPOUND OVER ENTIRE SURFACE. METAL BASE AND TOP RETAINER CHANNELS STAGGER JOINTS 24" OC. ON EACH LAYER AND SIDE.

Wall Type 5

1" LAYER 5/8" TYPE X GYPSUM BOARD ON 3 5/8" METAL STUDS WITH 1" TYPE S DRYWALL SCREWS 8" OC. TO VERTICAL EDGES AND 12" OC. TO TOP AND BOTTOM. STAGGER ALL VERTICAL AND HORIZONTAL JOINTS 24" OC. ON EACH SIDE AND OPPOSITE SIDE.

Wall 205

8"x8"x16" CONCRETE MASONRY CLASS D-1 (2 HR.).

BLDG. 2075

DRWG #3001

ALBERT ARCHITECTS P.S. ARCHITECT - ENGINEERS SPOKANE, WA.	U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON

COMBAT ARMS TRAINING AND MAINTENANCE FACILITY

FAIRCHILD AFB, WASHINGTON

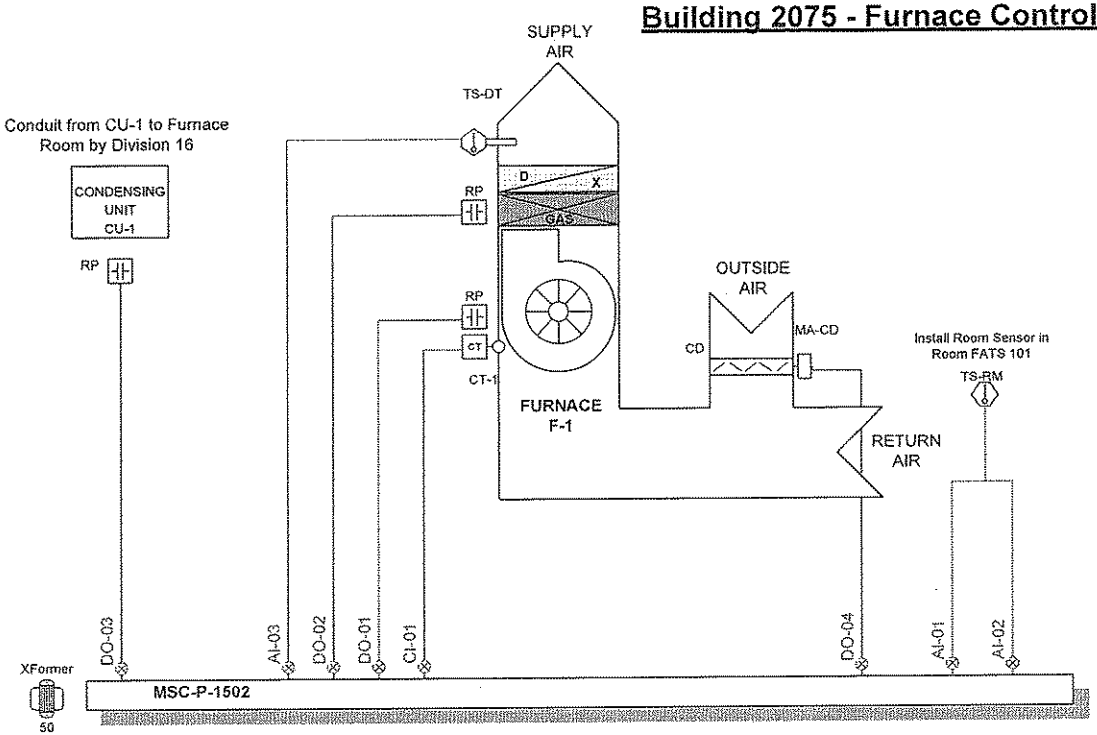
DES.	APPLICATION NO.	FILE NO.	DATE	PLATE
R. G-2001	2246/71-90-01		88 FEB. 20	A-1
DRAWN EDS	CHK. JPG		SHEET 12	

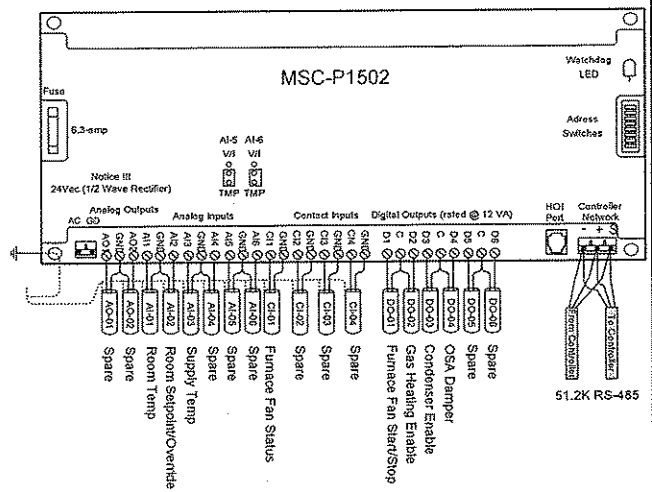
AS-BUILT

40-4-13

Building 2075 - Furnace Controls

This drawing is the property of Control Solutions Northwest. The information contained hereon is confidential and will neither be reproduced in whole or in part nor disclosed to other parties except as authorized by Control Solutions Northwest.





SEQUENCE
SCHEDULE PROVIDED BY TENANT. 365 DAYS SCHEDULE AVAILIBLE

UNOCCUPIED MODE: UNIT WILL CYCLE TO MAINTAIN REDUCED NIGHT HEATING SETPOINT OF 55 DEGREES. DX COOLING WILL BE LOCKED OUT. OSA DAMPER SHALL BE CLOSED.

WARM-UP: OSA DAMPER SHALL BE CLOSED DURING WARM-UP.

OCCUPIED MODE: FAN SHALL RUN CONTINUOUSLY. OSA DAMPER SHALL BE OPENED PROVIDING VENTILATION AIR. HEAT STAGE OR DX STAGE, SHALL CYCLE TO MAINTAIN SETPOINT (HEATING SETPOINT/COOLING SETPOINT ADJUSTABLE). PROVIDE 3 DEGREE DEADBAND OR AS SET. ROOM SENSOR TO PROVIDE OVERRIDE FUNCTION FOR TWO-HOUR PERIOD.

DX LOCKOUT: PROVIDE FAN STATUS INTERLOCK TO LOCKOUT DX STAGE IN THE EVENT OF A FAN FAILURE.

Input/Output Points

Controller	TERM ID	Point ID	I/O Description	I/O Type
F-1	AI-01	ROOMTEMP	Room Temp	Analog Input
F-1	AI-02	ROOMSETP	Room Setpoint/Override	Analog Input
F-1	AI-03	F1-SAT	Supply Temp	Analog Input
F-1	AI-04		Spare	Analog Input
F-1	AI-05		Spare	Analog Input
F-1	AI-06		Spare	Analog Input
F-1	AO-01		Spare	Analog Output
F-1	AO-02		Spare	Analog Output
F-1	CI-01	F1-FNST	Furnace Fan Status	Digital Input
F-1	CI-02		Spare	Digital Input
F-1	CI-03		Spare	Digital Input
F-1	CI-04		Spare	Digital Input
F-1	DO-01	F1-SFSS	Furnace Fan Start/Stop	Digital Output
F-1	DO-02	F1-GHTG	Gas Heating Enable	Digital Output
F-1	DO-03	F1-DXSS	Condenser Enable	Digital Output
F-1	DO-04	F1-OSAD	OSA Damper	Digital Output
F-1	DO-05		Spare	Digital Output
F-1	DO-06		Spare	Digital Output

Bill of Materials - CSN Provided Devices

BOM Tag	Part Number	Device	Qty	Order Notes
CD	Need Exact Duct Size	Control Damper	1	Early Need
CT-1	E112-708	Current Sensor	1	
MA-CD	MA40-7073	2 Pos. 60"-# SR Actuator	1	
MSC-P-1502	MSC-P1502	Controller - Equip	1	
RP	RIB2401C	Relay - Pilot	3	
TS-DT	TS-8201	Temp Sensor - Duct	1	
TS-RM	TS-58801-272	Room Sensor w/Setp/OVR	1	
X-1	AT150F 1022	Xformer 50 VA	1	

Control Solutions Northwest, Inc.
7222 E. Nora Ave.
Spokane, WA 99212
Phone: 509/892-1121
FAX: 509/892-1135
Info@controlsolutionsnw.com

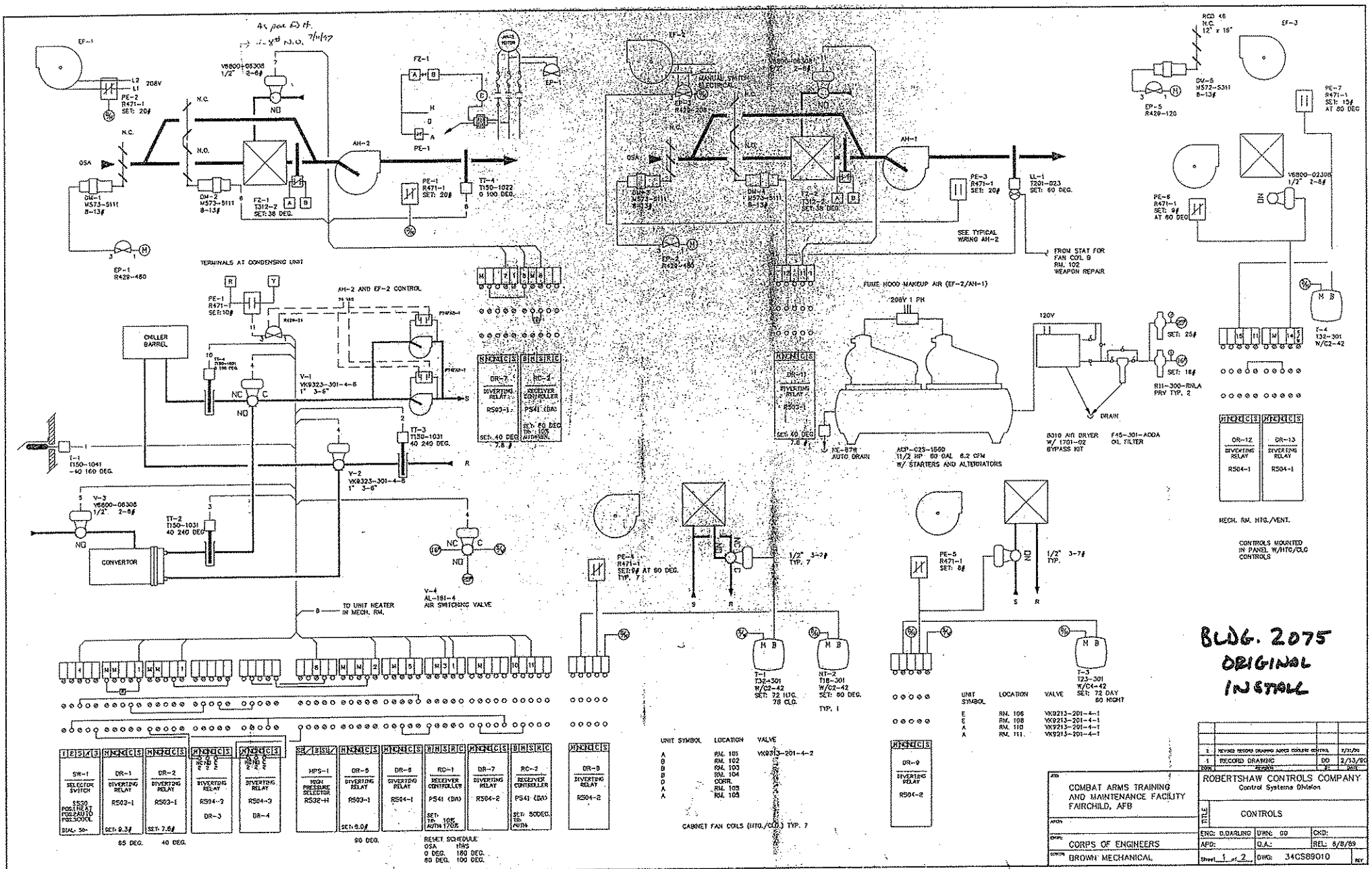
DESCRIPTION	REV.	DESCRIPTION	DATE	BY
	A	Submittals	10-24-03	JN
	B	As-Builts Drawings	11-24-04	JN

DATE	FILENAME
10/01/03	2075 BY MIKE.VSD

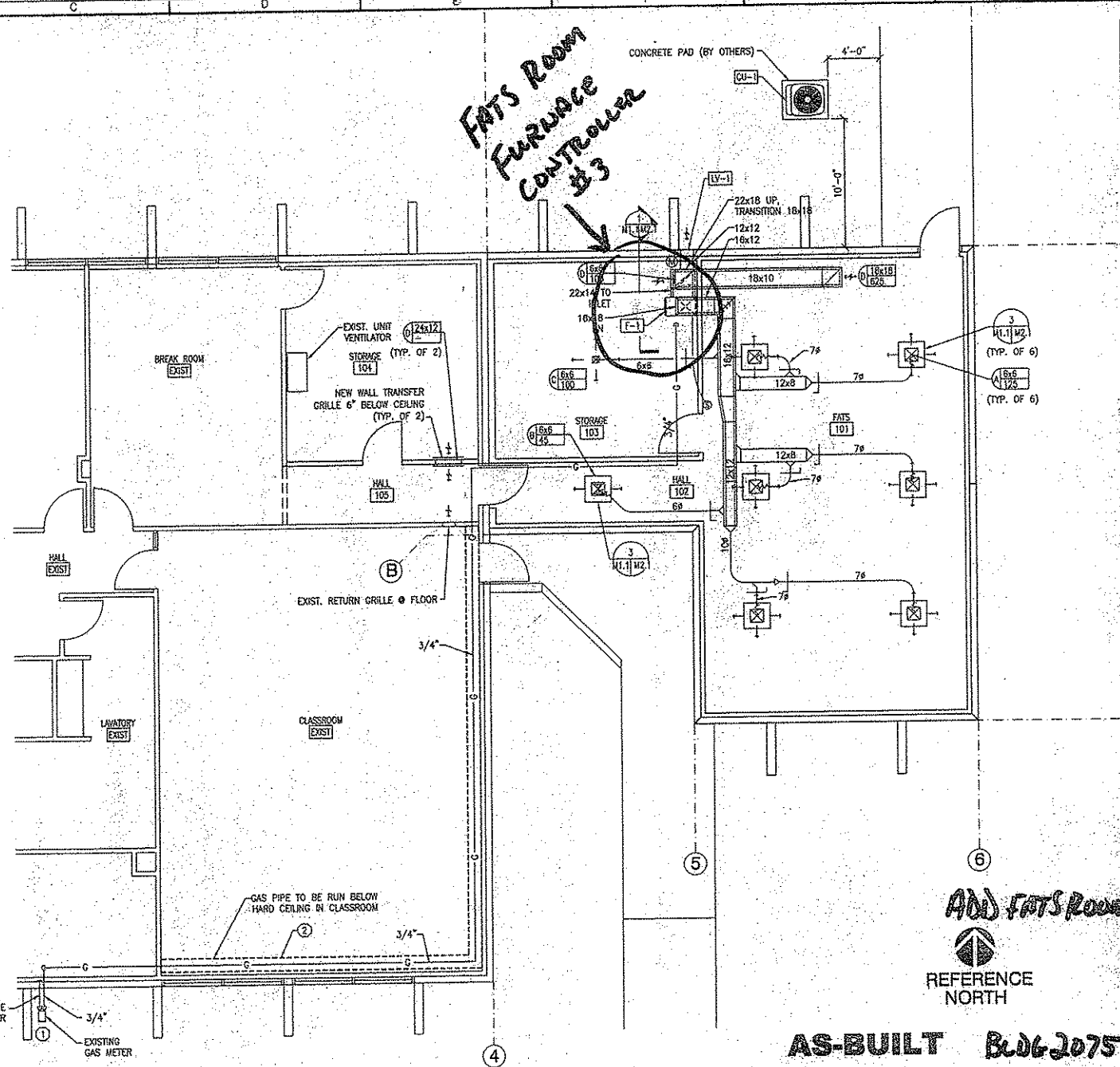
DESCRIPTION: Furnace Controls
PROJECT NAME: FAFB Building 2075
ADDRESS: Fairchild AFB
LOCATION:
ENGINEER: Air Control
CONTRACTOR: Jeff Nelson
ENG'D BY: Jeff Nelson
DRAWN BY:

Job Number 4103-057

Print 09/18/06
Last Edit 04/20/05
PAGE 3 OF 5



EF-1
EF-2
EF-3
AH-1
AH-2
TERMINALS AT CONDENSING UNIT
AH-2 AND EF-2 CONTROL
CHILLER BARREL
CONVERTOR
TO UNIT HEATER IN MECH. RM.
FUME HOOD MAKEUP AIR (EF-2/AH-1)
SEE TYPICAL WIRING AH-2
FROM STAT FOR FAN COIL B RM. 102 WEAPON REPAIR
MECH. RM. HTG./VENT.
CONTROLS MOUNTED IN PANEL W/HTG/CLG CONTROLS
CABINET FAN COILS (HTG./COL.) TYP. 7
RESET SCHEDULE
OSA HWS
0 DEG. 180 DEG.
60 DEG. 100 DEG.
UNIT SYMBOL LOCATION VALVE
A RM. 101 VK9313-201-4-2
B RM. 102
B RM. 103
B RM. 104
D CORR.
A RM. 105
A RM. 103
UNIT SYMBOL LOCATION VALVE
E RM. 106 VK9213-201-4-1
E RM. 108 VK9213-201-4-1
A RM. 110 VK9213-201-4-1
A RM. 111 VK9213-201-4-1
BLDG. 2075 ORIGINAL INSTALL
COMBAT ARMS TRAINING AND MAINTENANCE FACILITY FAIRCHILD, AFB
CORPS OF ENGINEERS
BROWN MECHANICAL
ROBERTSHAW CONTROLS COMPANY
Control Systems Division
CONTROLS
ENG: D.DARLING
DWN: DD
CKD:
APD:
Q.A.:
REL: 8/8/89
Sheet 1 of 2
DWG: 34CS89010



KEY NOTES

1. GAS METER PIPING: PROVIDE 1-1/2" GAS PIPE HEADER. RECONNECT EXISTING 1" GAS PIPE FROM EXISTING BOILER TO HEADER. CONNECT NEW 3/4" GAS PIPE FROM FURNACE TO NEW HEADER.

HVAC & PIPING PLAN

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

1/4"=1'-0" 0 1 2 3 4 6 8 12

Xref 4003-E1.dwg

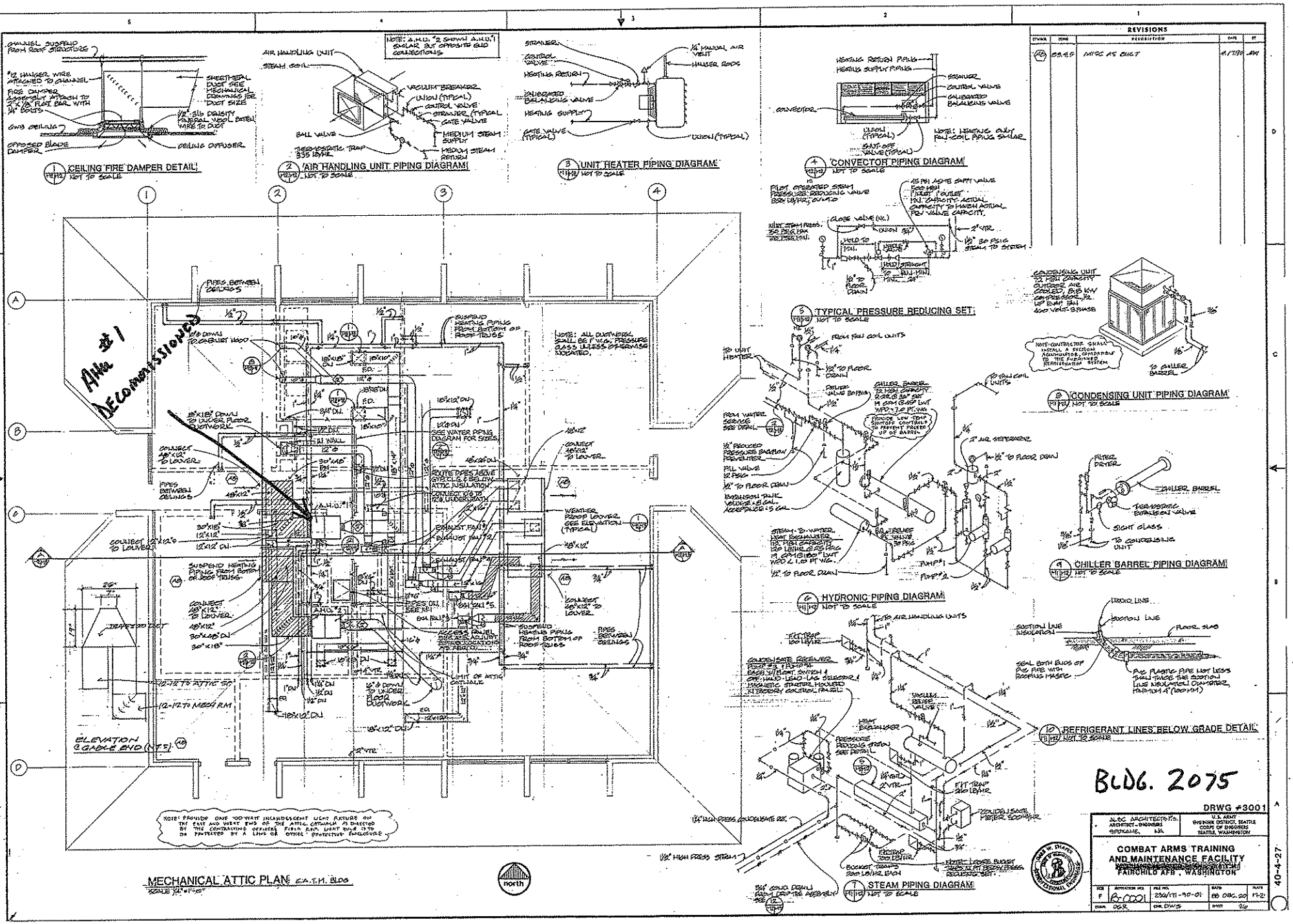
COFFMAN ENGINEERS
201 W. North River Drive Suite 510
Spokane, Washington 99201
509 328 2994 Fax 509 328 2999

DEPARTMENT OF THE AIR FORCE
AIR MOBILITY COMMAND
92 CIVIL ENGINEER SQ

Designed by: JMR
Dwn by: MLC
Chk by: WFM
Date: 22 APR 03
Drawing Number: 4003
Plot Scale: 1:1

PROJECT NUMBER: GJKZ 03-0091
PROJECT NAME: ADD TO / ALTER CATM, BLDG 2075
SHEET NAME:

Sheet reference number: M1.1
Sheet 20 of



REVISIONS
MISC AS BUILT
CEILING FIRE DAMPER DETAIL
NOT TO SCALE
AIR HANDLING UNIT PIPING DIAGRAM
NOT TO SCALE
UNIT HEATER PIPING DIAGRAM
NOT TO SCALE
CONVECTOR PIPING DIAGRAM
NOT TO SCALE
TYPICAL PRESSURE REDUCING SET
NOT TO SCALE
CONDENSING UNIT PIPING DIAGRAM
NOT TO SCALE
CHILLER BARREL PIPING DIAGRAM
NOT TO SCALE
HYDRONIC PIPING DIAGRAM
NOT TO SCALE
REFRIGERANT LINES BELOW GRADE DETAIL
NOT TO SCALE
STEAM PIPING DIAGRAM
NOT TO SCALE
MECHANICAL ATTIC PLAN
ELEVATION @ GABLE END
Area #1 DECOMMISSIONED
BLDG. 2075
DRWG #3001
ALSC ARCHITECTS P.S.
ARCHITECT-ENGINEERS
SPOKANE, WA
U.S. ARMY
ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
COMBAT ARMS TRAINING
AND MAINTENANCE FACILITY
FAIRCHILD AFB, WASHINGTON
40-4-27

KEY NOTES

(1) INVENSYS MSC P1502 HAS:
- (6) AI, ANALOG INPUTS
- (2) AO, ANALOG OUTPUTS
- (4) CI, CONTACT INPUTS (DIGITAL INPUTS)
- (6) DO, DIGITAL OUTPUTS

SEQUENCE: SCHEDULE PROVIDED BY TENTANT. 365 DAYS SCHEDULE AVAILABLE.

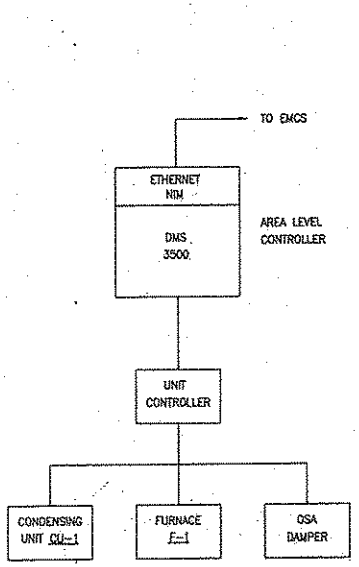
UNOCCUPIED MODE: UNIT WILL CYCLE TO MAINTAIN REDUCED NIGHT HEATING SETPOINT OF 55 DEGREES. D/X COOLING WILL BE LOCKED OUT. OSA DAMPER SHALL BE CLOSED.

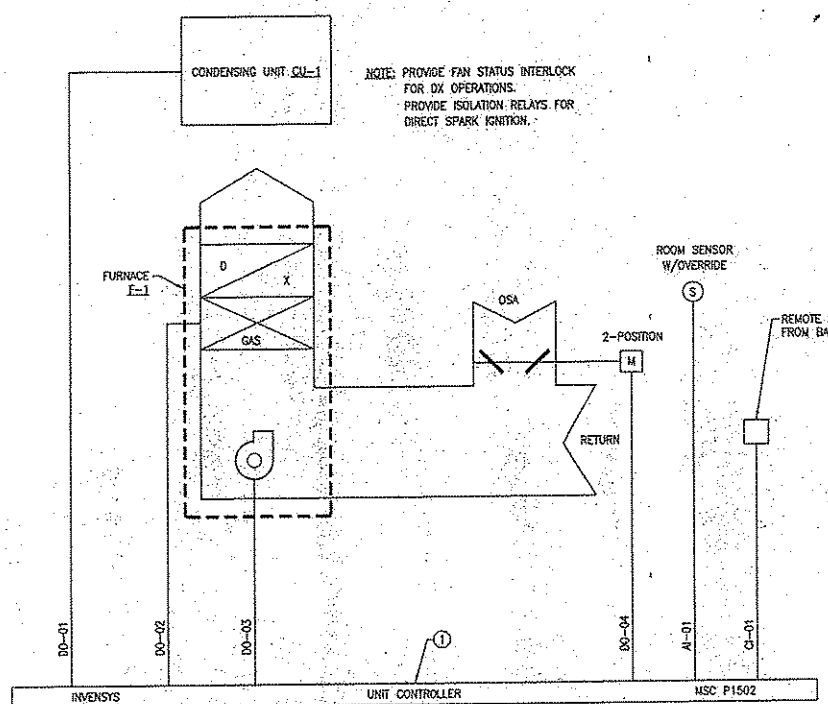
WARM-UP: OSA DAMPER SHALL BE CLOSED DURING WARM UP.

OCCUPIED MODE: FAN SHALL RUN CONTINUOUSLY. OSA DAMPER SHALL BE OPENED PROVIDING VENTILATION AIR. HEAT STAGE OR D/X STAGE, SHALL CYCLE TO MAINTAIN SETPOINT (HEATING SETPOINT/ COOLING SETPOINT ADJUSTABLE). PROVIDE THREE-DEGREE DEADBAND OR AS SET. ROOM SENSOR TO PROVIDE OVERRIDE FUNCTION FOR TWO-HOUR PERIOD.

D/X LOCKOUT: PROVIDE FAN STATUS INTERLOCK TO LOCKOUT D/X STAGE IN THE EVENT OF FAN FAILURE.

EMERGENCY SHUTDOWN: SYSTEM SHALL SHUTDOWN UPON SIGNAL FROM BASE EMCS AND OUTSIDE AIR DAMPER SHALL CLOSE.





INPUT/OUTPUT CONTROL POINTS

TERM ID	I/O DESCRIPTION	I/O TYPE	POINT ID
AI-01	ROOM TEMPERATURE W/ OVERRIDE	ANALOG INPUT	ROOM TEMP
CI-01	REMOTE O.S.A. SHUTDOWN	CONTACT INPUT	
DO-01	S/S CONDENSING UNIT	DIGITAL OUTPUT	
DO-02	S/S GAS BURNER	DIGITAL OUTPUT	
DO-03	S/S FURNACE FAN	DIGITAL OUTPUT	
DO-04	OPEN/CLOSE OSA DAMPER	DIGITAL OUTPUT	

1 M3.1 MECHANICAL CONTROLS
NO SCALE

BLDG. 2075
NEW FATS Room
Furnace

AS-BUILT

COFFMAN ENGINEERS
201 W. North River Drive Suite 510
Spokane, Washington 99201
509 328 2994 Fax 509 328 2999

Designed by: JMR
Drawn by: MLC
Chkd by: WSH
Date: 22 APR 03
Drawing Number: 4003
Plot Scale: 1:1

DEPARTMENT OF THE AIR FORCE
AIR MOBILITY COMMAND
92 CIVIL ENGINEER SQ

PROJECT NUMBER: GMC2 00-0001
PROJECT NAME: ADD TO / ALTER CATM, BLDG 2075
SHEET NAME: MECHANICAL

Sheet reference number: M3.1
Sheet 22 of 2

I. PAINT COLORS

A. EXTERIOR

1. WALLS - FED. STD. 33372
2. METAL ROOF, FASCIA, SOFFITS, HOLLOW METAL DOORS & FRAMES - FED. STD. 30099
3. SITE EQUIPMENT & MECH & ELEC EQUIPMENT - 33578 & RANGE BAFFLES & FENCES 33570

B. INTERIOR

1. GYP. BD. WALLS & CEILINGS - COLUMBIA PAINT NO. 5830W
2. HOLLOW METAL DOORS & FRAMES - COLUMBIA PAINT NO. 5333M
3. EPOXY FLOOR PAINT - COLUMBIA PAINT NO. 5343M

II. MATERIAL COLORS

A. QUARRY TILE - METRO QUARRY, NO. 105 BUCKSKIN
B. RESTROOM FLOOR - DAL-TILE, NO. DK-27 OATMEAL
C. RESTROOM WALL - DAL-TILE, NO. D1415 FLEECE
D. RESTROOM WALL ACCENT - DAL-TILE, NO. D44 GINGER
E. CARPET - INTERDECOR, CASPIAN 2812 SOPHIA
F. RUBBERBASE - FLEXCO NO. 6 BEIGE
G. ACOUSTICAL CEILING TILE - ARMSTRONG FISSURED TRAVERTONE WHITE
H. PLAS. LAM. LAVATORY COUNTERTOP - WILSONART NO. 1530-6 BISQUE
I. PLAS. LAM. WINDOW SILLS - WILSONART NO. 1572-6 ANTIQUE WHITE
J. TOILET PARTITIONS - ACCURATE PARTITIONS NO. 911 CHOCOLATE
K. WHITEBOARDS - GREENSTEEL, BROWN.
L. WINDOW BLINDS - LEVELOR NO. 959 - CINNAMON

III. NOTE

COLORS LISTED ARE FOR COLOR IDENTIFICATION PURPOSES ONLY. THE LISTING IS NOT INTENDED TO LIMIT SELECTION OF SIMILAR COLORS FROM OTHER MANUFACTURERS.

PLAN GENERAL NOTES:

1. EXT. WALL MT'L. STUDS ARE 2"x6"@ 16" O.C.
2. INT. WALL MT'L. STUDS ARE 3 5/8"x2"x6"@ 24" O.C.
3. PROVIDE BLINDS AT ALL WINDOWS.
4. ▨ DENOTES 1 HR. FIRE RATED WALLS
5. ▨ DENOTES 2 HR. FIRE RATED WALLS
6. ▨ ...MT'L. STUD PARTITION
7. ▨ C.M.U. WALL
8. ▨ RC. CONC. PANEL

GENERAL NOTES CONT.

9. PROVIDE 3½" BATT INSULATION IN WALLS AROUND ROOMS 101 & 103 AND BETWEEN ROOMS 103 & 104. INSULATION TO BE UP TO UNDERSIDE OF GYP. BD. CLG. USE SILL SEALER AT WALL BASE.
10. SEAL ALL PENETRATIONS IN GYP. BD. CEILINGS & EXTERIOR WALLS (AT INTERIOR FACE) W/ACOUSTICAL SEALANT, JB
11. PROVIDE CHEMICAL HARDENER AT CONC. FLOORS NOT SCHEDULED FOR FINISHES.
12. SEE SHEET G-2 FOR ABBREVIATIONS & LEGENDS

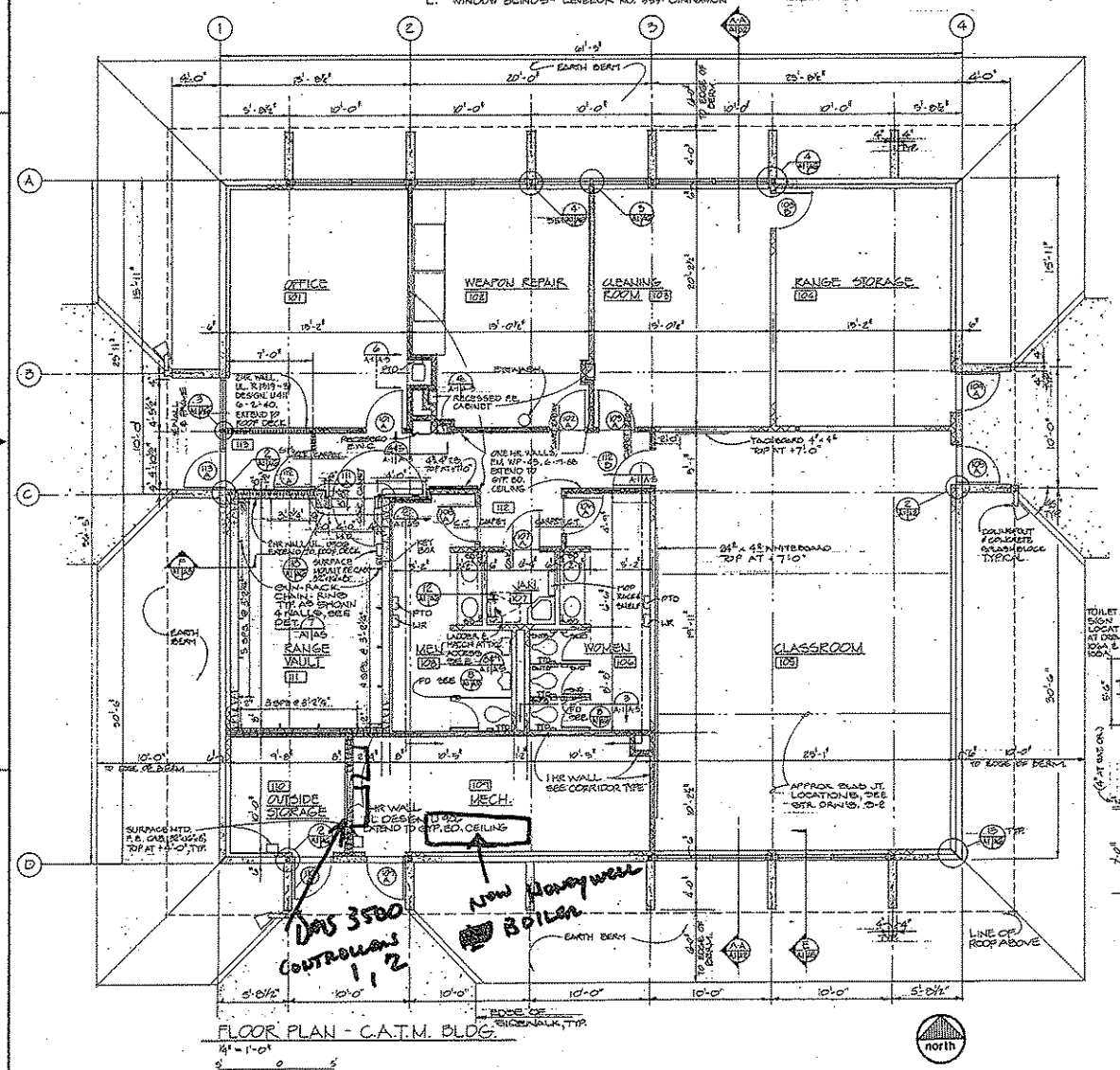
REVISIONS			
SYMBOL	ZONE	DESCRIPTION	DATE
(A4)	C1	DOOR 108 A RATING, AS BUILT	4.1990

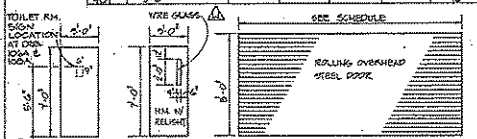
ROOM FINISH SCHEDULE

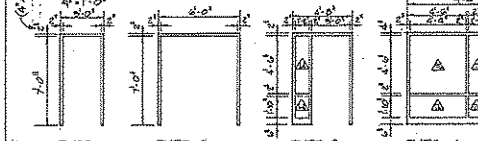
	NO.	NAME	FLOOR	BASE	WALL MATERIAL	WALL FINISH	CEILING MATERIAL	CEILING FINISH	HT.	INFORMATION/REMARKS
CAT.M. BUILDING	101	OFFICE	CARPET	RUBBER	GWB.	PAINT	A.C. LAY-IN		8'-0"	
	102	WEAPON REPAIR	EPOXY	RUBBER	GWB.	PAINT	GWB.	PAINT	9'-4"	1 HR. RATED C.L.G.
	103	CLEANING RM.	EPOXY	RUBBER	GWB.	PAINT	GWB.	PAINT	9'-4"	
	104	RANGE STORAGE	EPOXY	RUBBER	GWB.	PAINT	GWB.	PAINT	9'-4"	
	105	CLASSROOM	CARPET	RUBBER	GWB.	PAINT	A.C. LAY-IN		8'-0"	
	106	WOMEN	C.T.	C.T.	GWB.	SEE INFO.	GWB.	PAINT	9'-4"	C.T. WAINSC. 12'5"-0" HT. & PAINT ABOVE - ALL WALLS
	107	JANITOR	CONC.	RUBBER	GWB.	SEE INFO.	GWB.	PAINT	9'-4"	2'0" HT. C.T. WAINSC. - PAINT 5'-1" ABOVE 2'0"
	108	MEN	C.T.	C.T.	GWB.	SEE INFO.	GWB.	PAINT	9'-4"	C.T. WAINSC. 12'5"-0" HT. & PAINT ABOVE - ALL WALLS
	109	MECHANICAL	CONC.	RUBBER	GWB. & C.M.U.	PAINT	GWB.	PAINT	9'-4"	RATED CEILING 1HR.
	110	STORAGE	CONC.	RUBBER	GWB & C.M.U.	PAINT	GWB.	PAINT	9'-4"	" " "
	111	RANGE VAULT	CONC.	RUBBER	C.M.U.	PAINT	CONC.	PAINT	8'-8"	
	112	CORRIDOR	CARPET	RUBBER	GWB.	PAINT	GWB.	PAINT	9'-4"	RATED CEILING 1HR.
	113	VESTIBULE	Q.T.	Q.T.	GWB.	PAINT	GWB.	PAINT	9'-4"	
SHELTER A	201	RANGE SHELTER	CONC.	——	CONC.	PAINT	STRUCTURE	PAINT	VARIES	
	202	ELEC. CLOSET	CONC.	——	CONC.	PAINT	STRUCTURE	PAINT	VARIES	
	203	ELEC. CLOSET	CONC.	——	CONC.	PAINT	STRUCTURE	PAINT	VARIES	
SHELTER B	301	RANGE SHELTER	CONC.	——	CONC.	PAINT	STRUCTURE	PAINT	VARIES	
	302	ELEC. CLOSET	CONC.	——	CONC.	PAINT	STRUCTURE	PAINT	VARIES	

DOOR SCHEDULE

	NO.	SIZE	TYPE	FRAME ELEV.	HEAD	JAMB	HDW.	KEYSIDE ROOM	RATING	GRADE	REMARKS
CAT.M. BUILDING	101A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	1	112	20 MIN.	H.D.	
	102A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	1	112	45 MIN. (A4)	H.D.	
	103B	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	2	103		H.D.	
	104A	3'-0" x 7'-0"	1	1	2/A-6	2/A-6	3	EXTERIOR		H.D.	
	105A	3'-0" x 7'-0"	—	—	2/A-6 (2)	2/A-6 (2)	4	——			ACOUSTICAL DOOR
	106A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	5	——	20 MIN.	H.D.	SEE THRESHOLD DETAIL 5/A-6
	107A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	6	112	20 MIN.	H.D.	
	108A	3'-0" x 7'-0"	1	1	1/A-6	1/A-6	5	——	20 MIN.	H.D.	SEE THRESHOLD DETAIL 5/A-6
	109A	3'-0" x 7'-0"	1	1	2/A-6	2/A-6	7	EXTERIOR		H.D.	
	110A	3'-0" x 7'-0"	1	1	2/A-6	2/A-6	8	EXTERIOR		H.D.	
	111A	3'-6" x 6'-0" C.L.G.	—	—	15/A-6 SILL	15/A-6		112	20 MIN.		VAULT DOOR
	112A	3'-0" x 7'-0"	2	1	1/A-6 (2)	1/A-6 (2)	10	——	1½ HR.	H.D.	
	112B	3'-0" x 7'-0"	1	3	1/A-6	1/A-6	11	112	20 MIN.	H.D.	
	113A	3'-0" x 7'-0"	1	4	2/A-6 (2)	2/A-6 (2)	12	EXTERIOR		EXTRA H.D.	PEEPHOLE @ EYE LEVEL
SHELTER A	201A	3'-0" x 7'-0" PR.	1	2	4/A-6	4/A-6	13	EXTERIOR		H.D.	
	201B	3'-0" x 7'-0" PR.	1	2	4/A-6	4/A-6	13	——		H.D.	
	201C	11'-8" x 8'-0"	3	MFG.	D/A-4	10/A-6	14	——			
	201D	11'-0" x 8'-0"	3	MFG.	D/A-4	6/A-6	14	——			
	201E	11'-0" x 8'-0"	3	MFG.	D/A-4	6/A-6	14	——			
	201G	11'-0" x 8'-0"	3	MFG.	D/A-4	6/A-6	14	——			
	201H	11'-6" x 8'-0"	3	MFG.	D/A-4	10/A-6	14	——			
	202A	3'-0" x 7'-0" PR.	1	2	4/A-6	4/A-6	15	201		H.D.	
	203A	3'-0" x 7'-0" PR.	1	2	4/A-6	4/A-6	15	201		H.D.	
SHELTER B	301A	3'-0" x 7'-0" PR.	1	2	4/A-6	4/A-6	16	EXTERIOR		H.D.	
	302A	3'-0" x 7'-0" PR.	1	2	4/A-6	4/A-6	17	301		H.D.	
	301	20'-0"					18				CHAIN LINK GATE







Rated Wall Construction

Type UL #U311231

BASE LAYER 5/8" GYPSUM BOARD TYPE X ON 2 5/8" METAL STUDS AT 24" OC WITH 1" TYPE S DRYWALL SCREWS 8" OC. AT EDGES AND 12" OC. AT INTERMEDIATE STUDS. FACE LAYER 5/8 GYPSUM BOARD TYPE X OVER BASE LAYER WITH LAMINATING COMPOUND OVER ENTIRE SURFACE. METAL RUNNER AND TOP RETAINER CHANNELS STAGGER JOINTS 24" OC. ON EACH LAYER AND SIDE.

Rated Wall

1" LAYER 5/8" TYPE X GYPSUM BOARD ON 2 5/8" METAL STUDS WITH 1" TYPE S DRYWALL SCREWS 8" OC. TO VERTICAL EDGES AND 12" OC. TO TOP AND BOTTOM. STAGGER ALL VERTICAL AND HORIZONTAL JOINTS 24" OC. ON EACH SIDE AND OPPOSITE SIDE.

U205

8"X8"X16" CONCRETE MASONRY CLASS D-1 (2 HR.)

BLDG. 2075

DRWG #3001

BLISS GALLIVAN & P.S. ARCHITECT - ENGINEERS SPOKANE, WA.	U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON

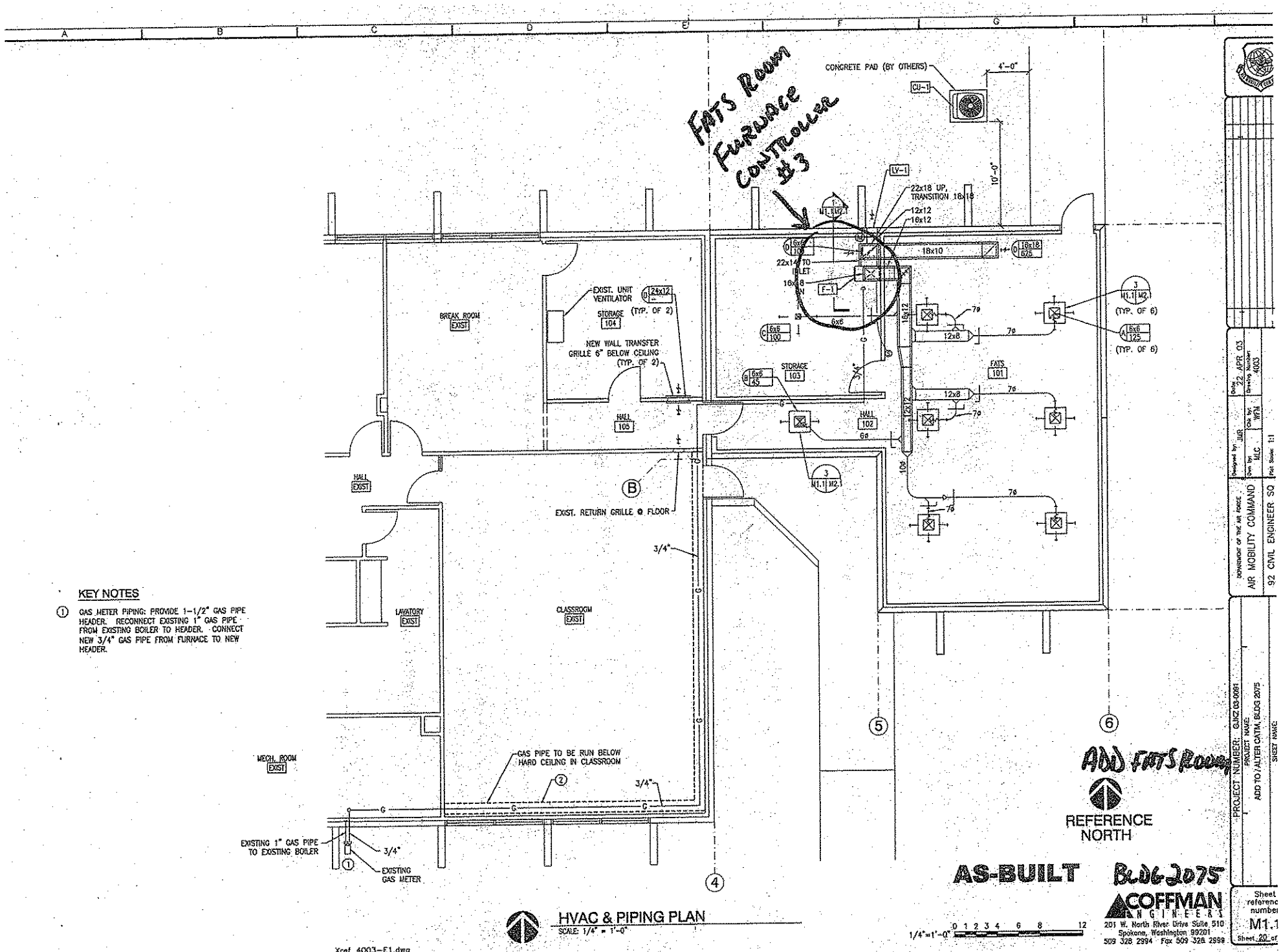
COMBAT ARMS TRAINING AND MAINTENANCE FACILITY

FAIRCHILD AFB, WASHINGTON

SIZE	NUMBER NO.	FILE NO.	DATE	PLATE
K	16-0001	3341/11-90-01	88 DEC 20	A-1
DRN. DCS		CHK. JPD.	SHEET	12

AS-BUILT

40-4-13



KEY NOTES

1. GAS METER PIPING: PROVIDE 1-1/2" GAS PIPE HEADER. RECONNECT EXISTING 1" GAS PIPE FROM EXISTING BOILER TO HEADER. CONNECT NEW 3/4" GAS PIPE FROM FURNACE TO NEW HEADER.

HVAC & PIPING PLAN

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

Xref 4003-E1.dwg

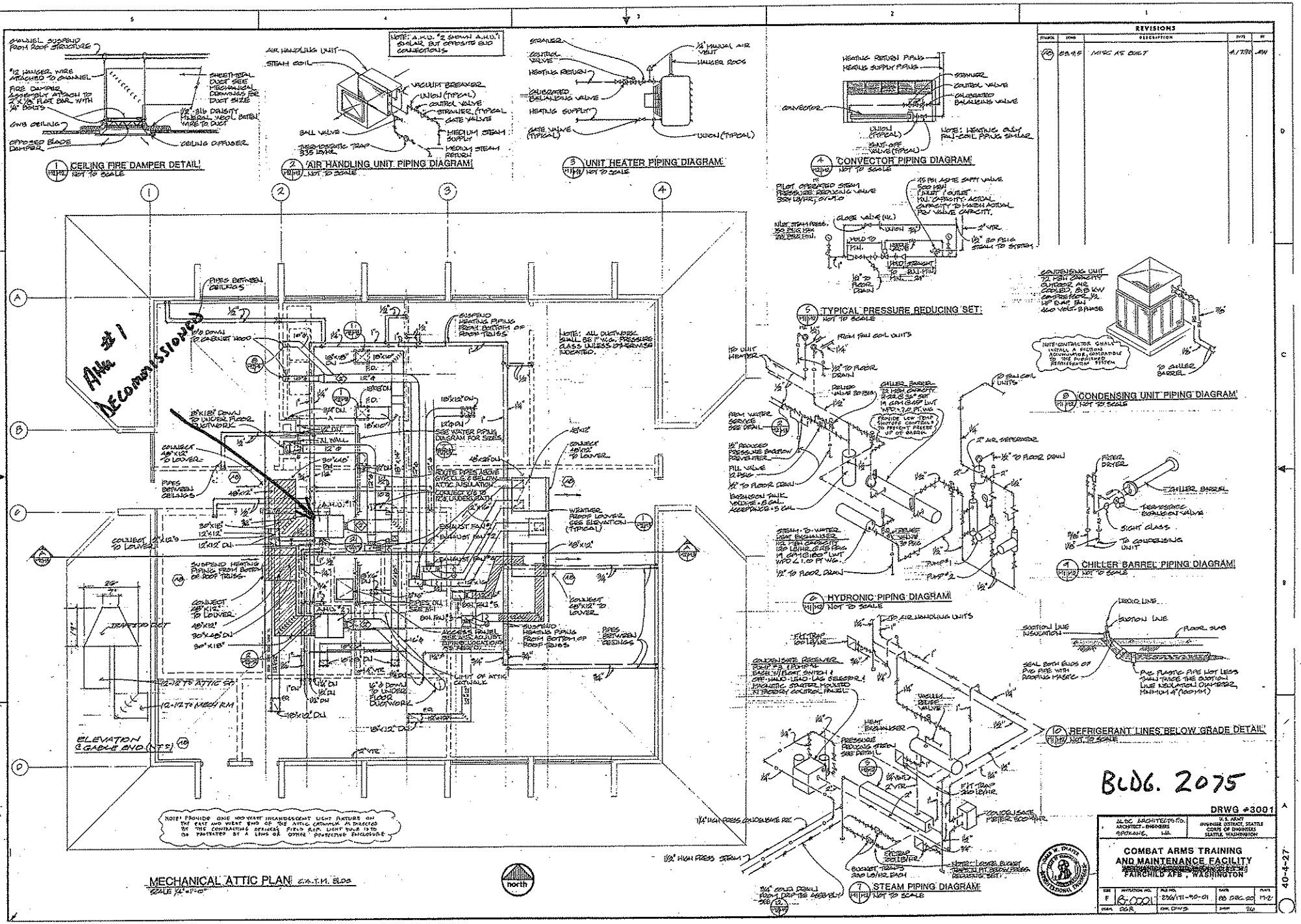
DEPARTMENT OF THE AIR FORCE
AIR MOBILITY COMMAND
92 CIVIL ENGINEER SQ

Designed by: JMR
Dwn by: MLC
Ckd by: WFM
Date: 22 APR 03
Drawing Number: 4003
Plot Scale: 1:1

PROJECT NUMBER: GJKZ 03-0091
PROJECT NAME: ADD TO / ALTER CATM, BLDG 2075
SHEET NAME:

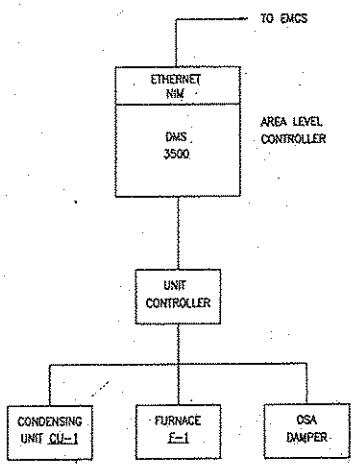
COFFMAN ENGINEERS
201 W. North River Drive Suite 510
Spokane, Washington 99201
509 328 2994 Fax 509 328 2999

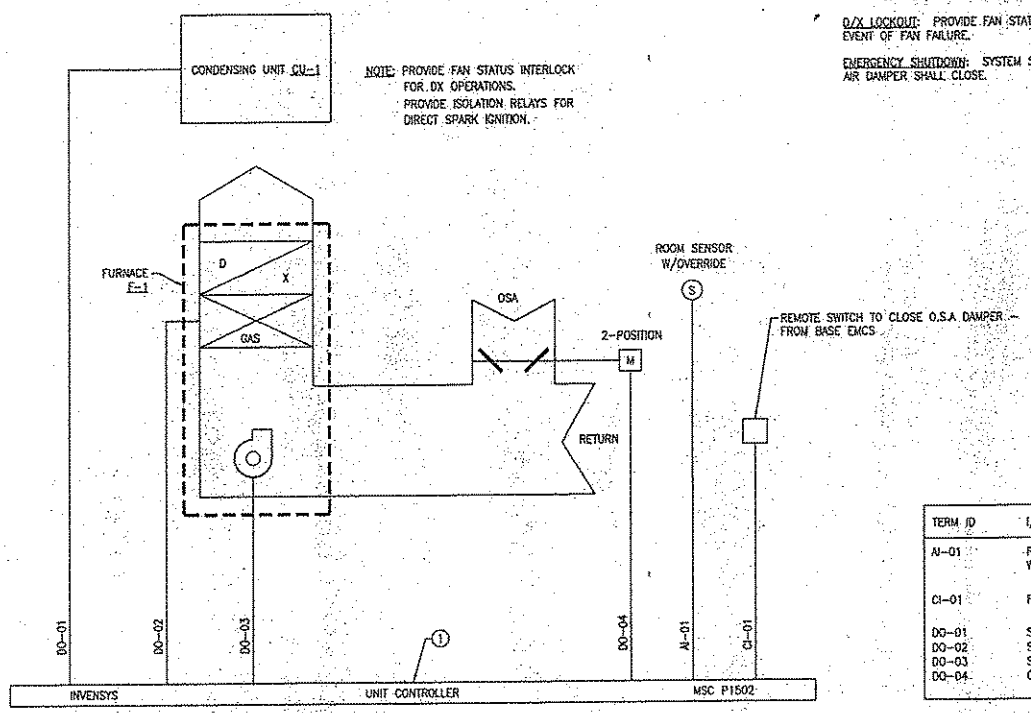
Sheet reference number: M1.1
Sheet 20 of


1 CEILING FIRE DAMPER DETAIL
2 AIR HANDLING UNIT PIPING DIAGRAM
3 UNIT HEATER PIPING DIAGRAM
4 CONVECTOR PIPING DIAGRAM
5 TYPICAL PRESSURE REDUCING SET
6 HYDRONIC PIPING DIAGRAM
7 STEAM PIPING DIAGRAM
8 CONDENSING UNIT PIPING DIAGRAM
9 CHILLER BARREL PIPING DIAGRAM
10 REFRIGERANT LINES BELOW GRADE DETAIL
MECHANICAL ATTIC PLAN C.A.T.M. BLDG
ELEVATION @ GABLE END
REVISIONS
BLDG. 2075
DRWG #3001
COMBAT ARMS TRAINING AND MAINTENANCE FACILITY
FAIRCHILD AFB, WASHINGTON
16-0021
40-4-27

KEY NOTES

1. INVENSYS MSC P1502 HAS:
   (8) AI, ANALOG INPUTS
   (2) AO, ANALOG OUTPUTS
   (4) CI, CONTACT INPUTS (DIGITAL INPUTS)
   (6) DO, DIGITAL OUTPUTS





1 MECHANICAL CONTROLS
M3.1 M3.1 NO SCALE

SEQUENCE: SCHEDULE PROVIDED BY TENTANT. 365 DAYS SCHEDULE AVAILABLE.

UNOCCUPIED MODE: UNIT WILL CYCLE TO MAINTAIN REDUCED NIGHT HEATING SETPOINT OF 55 DEGREES. D/X COOLING WILL BE LOCKED OUT. OSA DAMPER SHALL BE CLOSED.

WARM-UP: OSA DAMPER SHALL BE CLOSED DURING WARM UP.

OCCUPIED MODE: FAN SHALL RUN CONTINUOUSLY. OSA DAMPER SHALL BE OPENED PROVIDING VENTILATION AIR. HEAT STAGE OR D/X STAGE, SHALL CYCLE TO MAINTAIN SETPOINT (HEATING SETPOINT/ COOLING SETPOINT ADJUSTABLE). PROVIDE THREE-DEGREE DEADBAND OR AS SET. ROOM SENSOR TO PROVIDE OVERRIDE FUNCTION FOR TWO-HOUR PERIOD.

D/X LOCKOUT: PROVIDE FAN STATUS INTERLOCK TO LOCKOUT D/X STAGE IN THE EVENT OF FAN FAILURE.

EMERGENCY SHUTDOWN: SYSTEM SHALL SHUTDOWN UPON SIGNAL FROM BASE EMCS AND OUTSIDE AIR DAMPER SHALL CLOSE.

INPUT/OUTPUT CONTROL POINTS

TERM ID	I/O DESCRIPTION	I/O TYPE	POINT ID
AI-01	ROOM TEMPERATURE W/ OVERRIDE	ANALOG INPUT	ROOM TEMP
CI-01	REMOTE O.S.A. SHUTDOWN	CONTACT INPUT	
DO-01	S/S CONDENSING UNIT	DIGITAL OUTPUT	
DO-02	S/S GAS BURNER	DIGITAL OUTPUT	
DO-03	S/S FURNACE FAN	DIGITAL OUTPUT	
DO-04	OPEN/CLOSE OSA DAMPER	DIGITAL OUTPUT	

BLDG. 2075
NEW FATS ROOM
FURNACE

AS-BUILT

COFFMAN ENGINEERS
201 W. North River Drive Suite 510
Spokane, Washington 99201
509 328 2994 Fax 509 328 2999

DEPARTMENT OF THE AIR FORCE
AIR MOBILITY COMMAND
92 CIVIL ENGINEER SQ

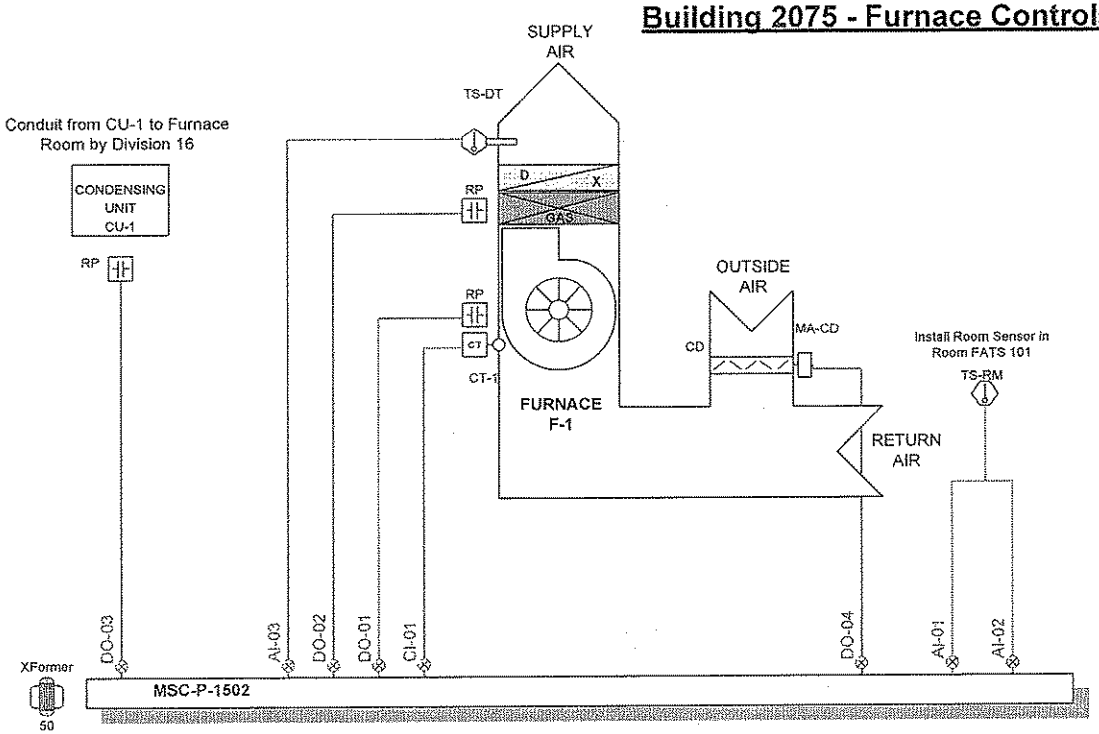
Designed by: JMR
Dwn by: MLC
Chk by: WFM
Plot Scale: 1:1
Date: 22 APR 03
Drawing Number: 4003

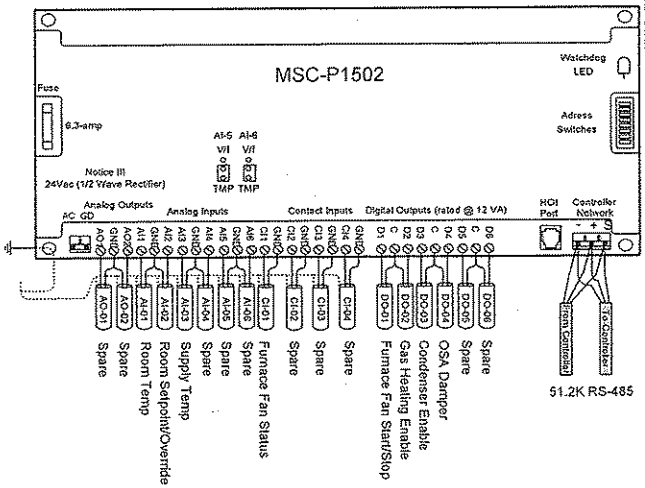
PROJECT NUMBER: GJKZ 03-0091
PROJECT NAME: ADD TO / ALTER CATM, BLDG 2075
SHEET NAME: MECHANICAL

Sheet reference number M3.1
Sheet 22 of 2

Building 2075 - Furnace Controls

This drawing is the property of Control Solutions Northwest. The information contained hereon is confidential and will neither be reproduced in whole or in part nor disclosed to other parties except as authorized by Control Solutions Northwest.





SEQUENCE
SCHEDULE PROVIDED BY TENANT. 365 DAYS SCHEDULE AVAILIBLE

UNOCCUPIED MODE: UNIT WILL CYCLE TO MAINTAIN REDUCED NIGHT HEATING SETPOINT OF 55 DEGREES. DX COOLING WILL BE LOCKED OUT. OSA DAMPER SHALL BE CLOSED.

WARM-UP: OSA DAMPER SHALL BE CLOSED DURING WARM-UP.

OCCUPIED MODE: FAN SHALL RUN CONTINUOUSLY. OSA DAMPER SHALL BE OPENED PROVIDING VENTILATION AIR. HEAT STAGE OR DX STAGE, SHALL CYCLE TO MAINTAIN SETPOINT (HEATING SETPOINT/COOLING SETPOINT ADJUSTABLE). PROVIDE 3 DEGREE DEADBAND OR AS SET. ROOM SENSOR TO PROVIDE OVERRIDE FUNCTION FOR TWO-HOUR PERIOD.

DX LOCKOUT: PROVIDE FAN STATUS INTERLOCK TO LOCKOUT DX STAGE IN THE EVENT OF A FAN FAILURE.

Input/Output Points

Controller	TERM ID	Point ID	I/O Description	I/O Type
F-1	AI-01	ROOMTEMP	Room Temp	Analog Input
F-1	AI-02	ROOMSETP	Room Setpoint/Override	Analog Input
F-1	AI-03	F1-SAT	Supply Temp	Analog Input
F-1	AI-04		Spare	Analog Input
F-1	AI-05		Spare	Analog Input
F-1	AI-06		Spare	Analog Input
F-1	AO-01		Spare	Analog Output
F-1	AO-02		Spare	Analog Output
F-1	CI-01	F1-FNST	Furnace Fan Status	Digital Input
F-1	CI-02		Spare	Digital Input
F-1	CI-03		Spare	Digital Input
F-1	CI-04		Spare	Digital Input
F-1	DO-01	F1-SFSS	Furnace Fan Start/Stop	Digital Output
F-1	DO-02	F1-GHTG	Gas Heating Enable	Digital Output
F-1	DO-03	F1-DXSS	Condenser Enable	Digital Output
F-1	DO-04	F1-OSAD	OSA Damper	Digital Output
F-1	DO-05		Spare	Digital Output
F-1	DO-06		Spare	Digital Output

Bill of Materials - CSN Provided Devices

BOM Tag	Part Number	Device	Qty	Order Notes
CD	Need Exact Duct Size	Control Damper	1	Early Need
CT-1	E112-708	Current Sensor	1	
MA-CD	MA40-7073	2 Pos. 60"-# SR Actuator	1	
MSC-P-1502	MSC-P1502	Controller - Equip	1	
RP	RIB2401C	Relay - Pilot	3	
TS-DT	TS-8201	Temp Sensor - Duct	1	
TS-RM	TS-58801-272	Room Sensor w/Setp/OVR	1	
X-1	AT150F 1022	Xformer 50 VA	1	

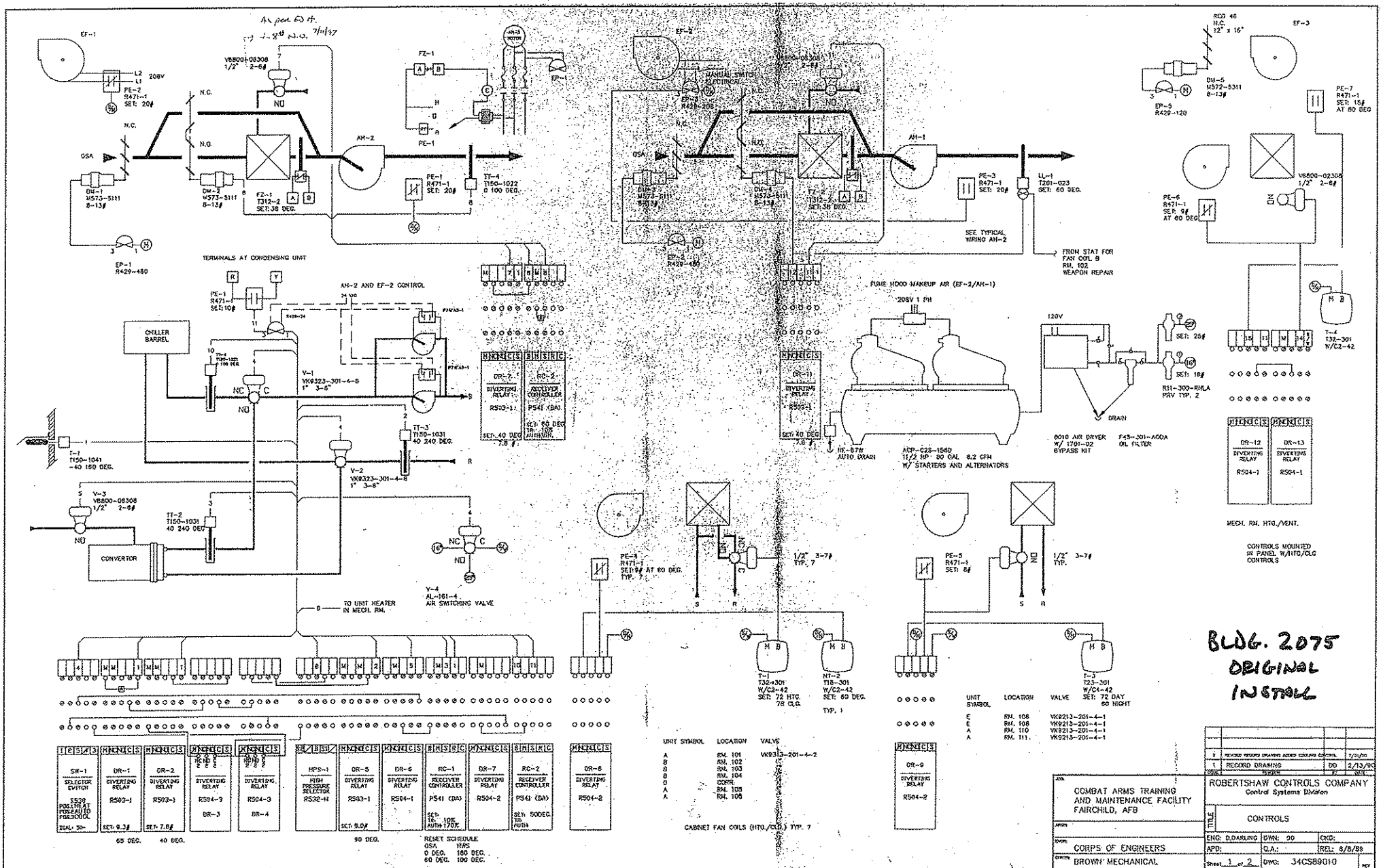
Control Solutions Northwest, Inc.
7222 E. Nora Ave.
Spokane, WA 99212
Phone: 509/892-1121
FAX: 509/892-1135
info@controlsolutionsnw.com

DESCRIPTION	REV.	DESCRIPTION	DATE	BY
Furnace Controls	A	Submittals	10-24-03	JN
	B	As-Builts Drawings	11-24-04	JN
DESCRIPTION	DATE	FILENAME		
PROJECT NAME: FAFB Building 2075	10/01/03	2075 BY MIKE.VSD		
ADDRESS: Fairchild AFB				
LOCATION:				
ENGINEER: Air Control				
CONTRACTOR: Jeff Nelson				
ENG'D BY:				
DRAWN BY: Jeff Nelson				

Job Number 4103-057

Print 09/19/06
Last Edit 04/20/06

PAGE 3 OF 5



EF-1
EF-2
EF-3
AH-1
AH-2
TERMINALS AT CONDENSING UNIT
AH-2 AND EF-2 CONTROL
CHILLER BARREL
CONVERTOR
TO UNIT HEATER IN MECH. RM.
FUME HOOD MAKEUP AIR (EF-2/AH-1)
SEE TYPICAL WIRING AH-2
FROM STAT FOR FAN COIL B RM. 102 WEAPON REPAIR
MECH. RM. HTG./VENT.
CONTROLS MOUNTED IN PANEL W/HTG/CLG CONTROLS
CABINET FAN COILS (HTG./CLG.) TYP. 7
RESET SCHEDULE
OSA HWS
0 DEG. 180 DEG.
60 DEG. 100 DEG.
UNIT SYMBOL LOCATION VALVE
A RM. 101 VK9313-201-4-2
B RM. 102
B RM. 103
B RM. 104
D CORR.
A RM. 105
A RM. 106
E RM. 106 VK9213-201-4-1
E RM. 108 VK9213-201-4-1
A RM. 110 VK9213-201-4-1
A RM. 111 VK9213-201-4-1
BLDG. 2075
ORIGINAL
INSTALL
COMBAT ARMS TRAINING AND MAINTENANCE FACILITY FAIRCHILD, AFB
CORPS OF ENGINEERS
BROWN MECHANICAL
ROBERTSHAW CONTROLS COMPANY
Control Systems Division
CONTROLS
ENG: D.DARLING
DWN: DD
CKD:
APD:
Q.A.:
REL: 8/8/89
Sheet 1 of 2
DWG: 34CS89010