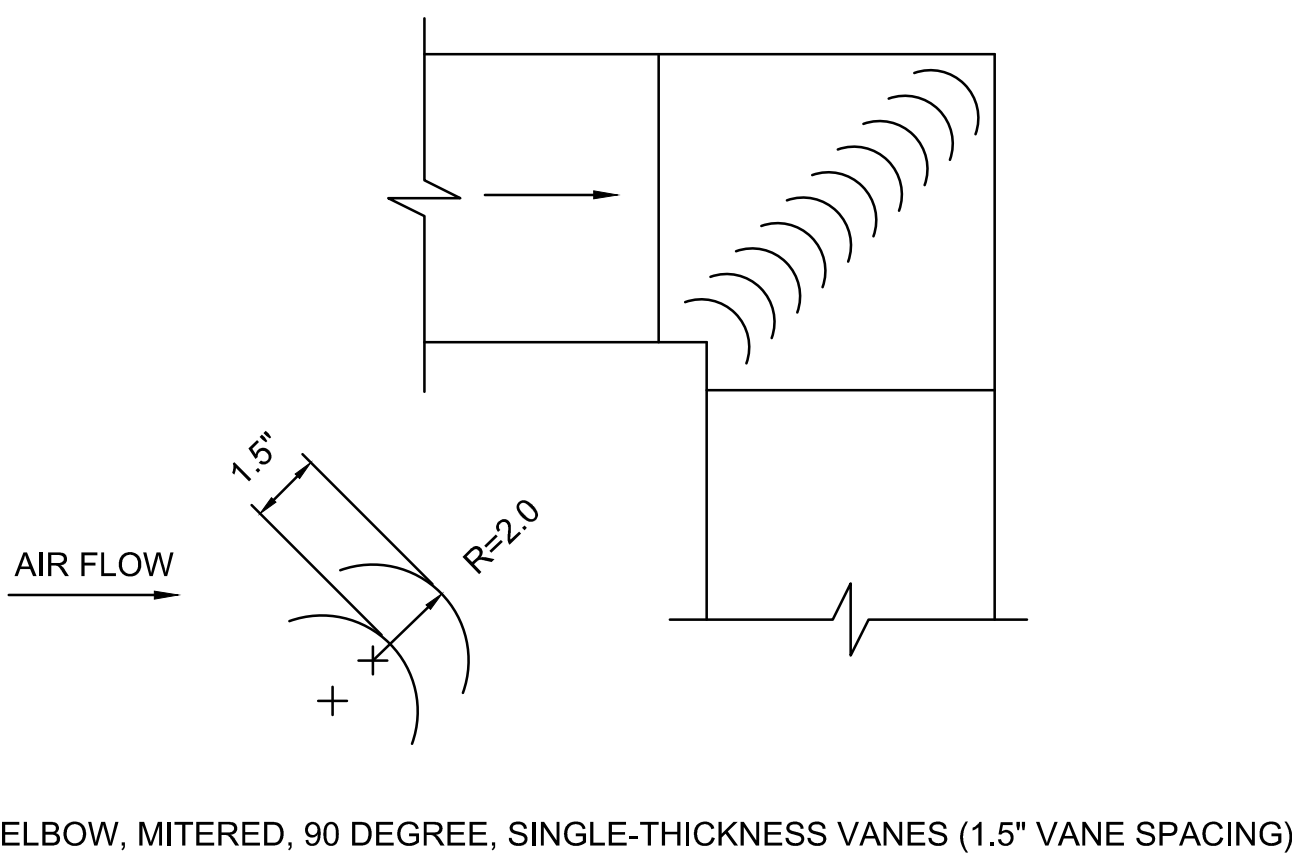
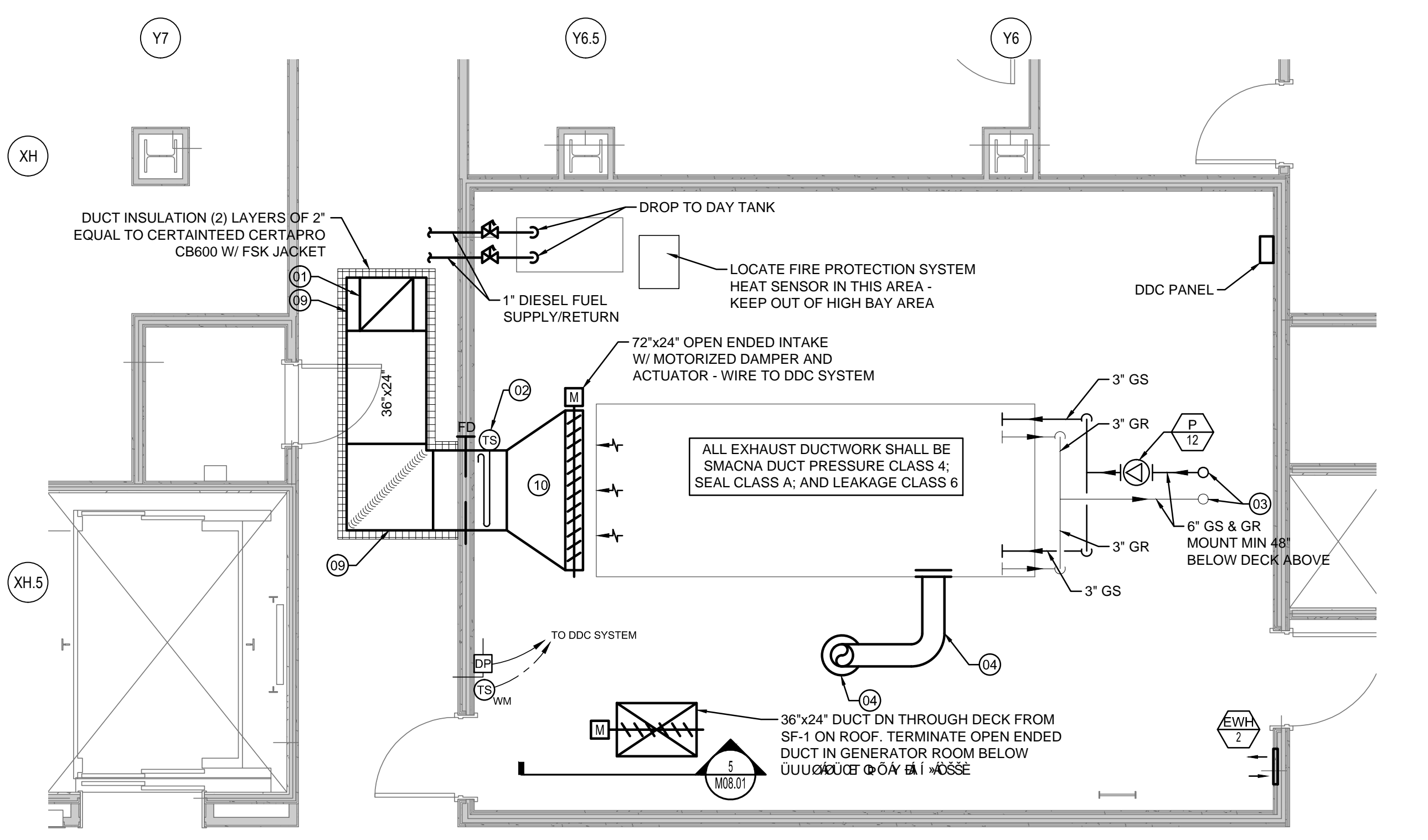


DIESEL GENERATOR ROOM FAN SCHEDULE																						
UNIT NO.	LOCATION	SERVES	FAN TYPE	DRIVE TYPE	CFM	SP IN WG	HP (WATTS)	FAN RPM	MOTOR RPM	ELECTRICAL DATA								MANUFACTURER AND MODEL NUMBER	NOTES			
										VOLTS	PH	HZ	1	2	3	4	5			6	7	8
DGSF-1	ABOVE GENERATOR ROOM	COMB AIR/VENTILATION	UTILITY SET - DOWNBLAST	BELT	33,000	2.07	50	1522	1750	460	3	60	111	117	112	107	102	97	93	87	COOK 330CA-SWS1	1.2,3,4
DGEF-1	OUTSIDE GENERATOR ROOM	EXHAUST AIR	ROOF UPBLAST	BELT	28,000	4.5	40	1448	1750	460	3	60	97	99	101	95	92	87	83	84	COOK 330QMU-HP	1.2,3,5

NOTES:
 1. FURNISH AND INSTALL VARIABLE FREQUENCY DRIVE, TO CONTROL FAN FROM TEMPERATURE SENSOR.
 2. FURNISH WITH FACTORY MOUNTED DISCONNECT.
 3. DDC CONTRACTOR TO FURNISH MOTOR OPERATED DAMPER AND ACTUATOR, INSTALLED BY SHEET METAL CONTRACTOR, WIRE TO DDC SYSTEM.
 4. FURNISH FAN WITH EPOXY PAINT W/UV COATING, WEATHER HOOD AND SMOOTH BELL INLET WITH ALUMINUM INTAKE SCREEN.
 5. FURNISH WITH EPOXY PAINT W/UV COATING.



GENERATOR EXHAUST MITERED ELBOW DETAIL 4
 SCALE: NOT TO SCALE



GENERATOR ROOM 3517 ENLARGED PLAN 1
 SCALE: 1/4" = 1'-0"

PORTLAND JETPORT TERMINAL EXPANSION

DIESEL GENERATOR VENTILATION SYSTEM SEQUENCE OF OPERATION

THE SYSTEM CONSISTS OF A SUPPLY FAN DGSF-1 AND ASSOCIATED MOTOR OPERATED DAMPER, AN EXHAUST FAN DGEF-1 AND ASSOCIATED MOTOR OPERATED DAMPER, DUCTWORK, A DUCT MOUNTED TEMPERATURE SENSOR, A WALL MOUNTED TEMPERATURE SENSOR AND A SPACE DIFFERENTIAL PRESSURE SENSOR. DAMPERS ARE FURNISHED WITH END SWITCHES TO INDICATE FULL OPEN AND THE DAMPER MOTORS SHALL HAVE SPRING RETURNS ARRANGED TO OPEN ON A POWER FAILURE. WALL MOUNTED SWITCHES WITH ON-OFF-AUTO SETTINGS SHALL BE FURNISHED AND INSTALLED AND WIRED FOR EACH FAN. THE FANS, SENSORS, AND DAMPER MOTORS ARE CONNECTED TO THE DDC SYSTEM. THE SYSTEM SHALL BE ARRANGED TO OPERATE AS FOLLOWS:

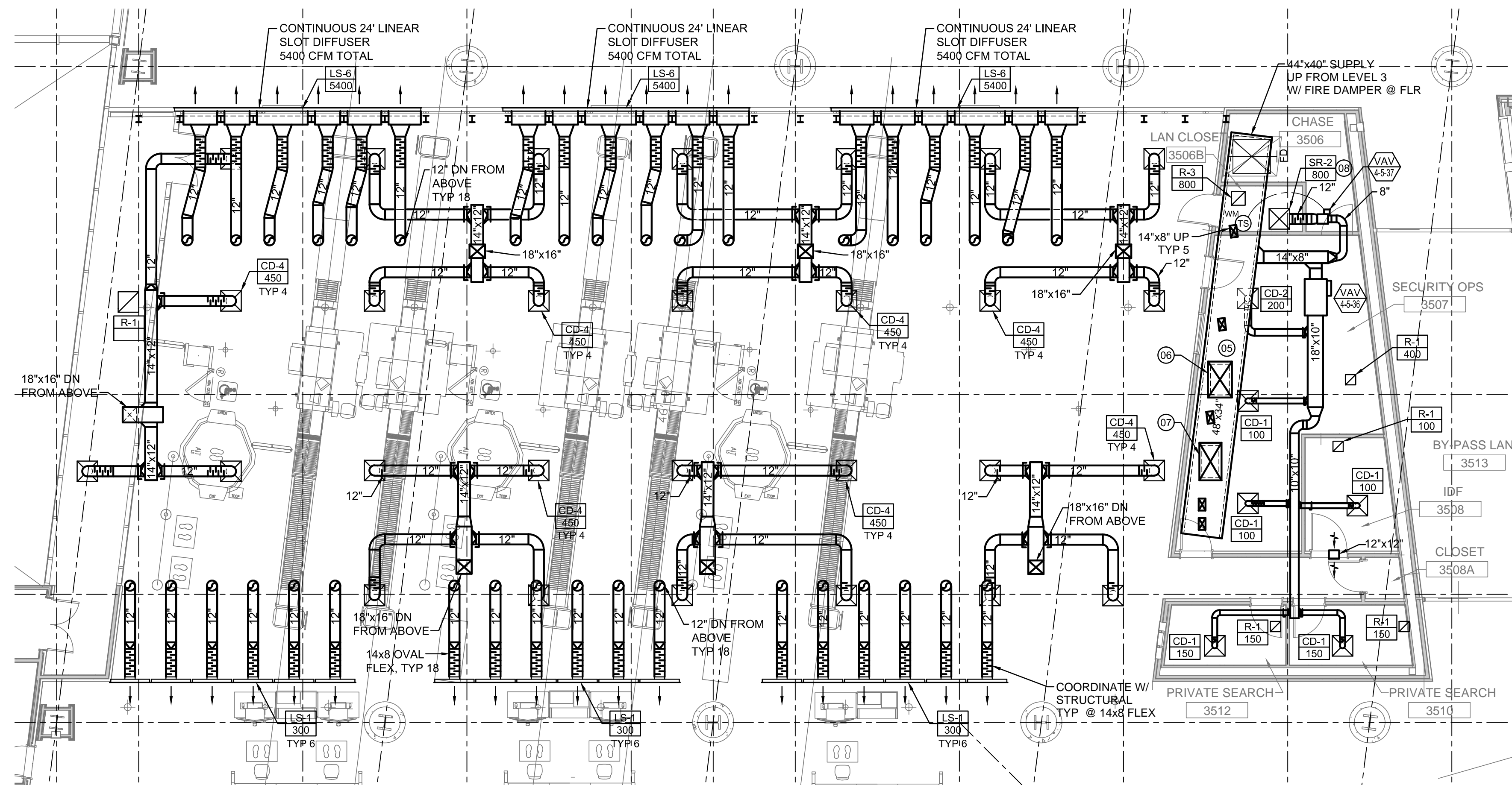
ON
 THE MOTOR OPERATED DAMPERS FOR EACH FAN OPEN, IF THE ROOM TEMPERATURE IS BELOW THE WALL MOUNTED TEMPERATURE SET POINT OF 90 DEG F (ADJUSTABLE BY SOFTWARE) THE FANS WILL REMAIN OFF. IF THE ROOM TEMPERATURE RISES TO THE WALL MOUNTED TEMPERATURE SENSOR SET POINT, THE FANS WILL START AND RUN AS PER THE SEQUENCE OF OPERATION "AUTO" NOTED BELOW.

OFF
 THE MOTOR OPERATED DAMPERS REMAIN CLOSED AND THE FANS REMAIN OFF.

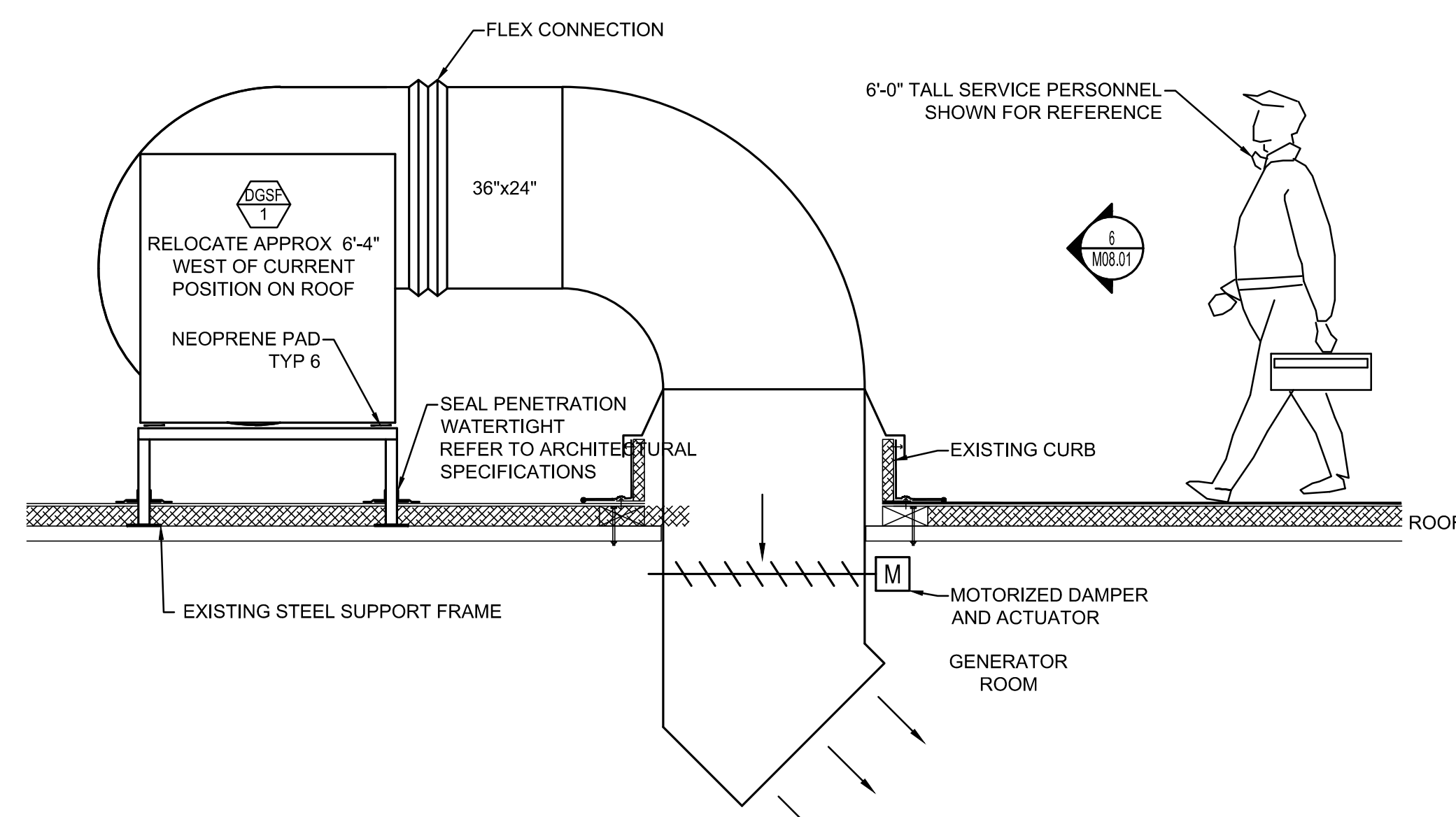
AUTO
 WHEN THE DIESEL GENERATOR STARTS, A SIGNAL SHALL BE SENT TO THE DDC SYSTEM LOCAL PANEL OPERATING OFF EMERGENCY POWER NOTIFYING OF AN ENGINE START. UPON RECEIPT OF THIS SIGNAL, THE DGSF AND DGEF MOTOR OPERATED DAMPERS SHALL OPEN FULLY BUT BOTH FANS SHALL REMAIN OFF. WHEN THE WALL MOUNTED TEMPERATURE SENSOR SET POINT OF 90 DEG F (ADJUSTABLE BY SOFTWARE) IS MET AND THE DAMPERS INDICATE THEY ARE FULLY OPEN, FANS DGSF-1 AND DGEF-1 SHALL SOFT-START FROM THEIR ASSOCIATED VFDs. ONCE THE FANS ARE STARTED, THE SUPPLY FAN SPEED SHALL INITIALLY BE SET AT 33% OF FULL FLOW; THE EXHAUST FAN SHALL CONTROL OFF THE SPACE PRESSURE AS NOTED BELOW, AND THE DDC SYSTEM SHALL MONITOR THE WALL MOUNTED AND DUCT MOUNTED TEMPERATURE SENSORS. IF THE WALL MOUNTED SENSOR READING EXCEEDS 90 DEG F (ADJUSTABLE BY SOFTWARE) OR THE DUCT MOUNTED SENSOR READING EXCEEDS 100 DEG F (ADJUSTABLE BY SOFTWARE), THE SUPPLY FAN VFD SPEED SETTING SHALL BE INCREASED BY 5% AND HELD AT THAT LEVEL FOR 2 MINUTES. IF EITHER TEMPERATURE SET POINT IS STILL EXCEEDED, THE FAN SPEED SETTING SHALL BE INCREASED STEPWISE AS PREVIOUSLY NOTED UNTIL EITHER THE SETPOINTS ARE SATISFIED OR THE FAN IS RUNNING AT 100% OF CAPACITY. IF THE TEMPERATURE SET POINTS ARE NOT HELD, THE ROOM HEAT DETECTOR SHALL ALARM TO THE OWNER VIA THE FIRE ALARM CONTROL PANEL. FAN DGSF-1 SHALL TRACK IN RESPONSE TO A PRESSURE DIFFERENTIAL CONTROLLER TO MAINTAIN A ROOM PRESSURE 0.05" WG LESS THAN THE SPACE PRESSURE IN THE ADJOINING CORRIDOR. EXHAUST FAN PRESSURE CONTROLS SHALL BE ARRANGED TO ALLOW FOR DOOR ENTRY/EGRESS TRANSIENTS WITHOUT OVER SPEEDING THE FAN. WHEN THE GENERATOR IS STOPPED, THE FANS SHALL CONTINUE TO RUN UNTIL THE ROOM TEMPERATURE DROPS BELOW 90 DEG F. (ADJUSTABLE BY SOFTWARE) AT THIS POINT, THE FANS SHALL BE SHUT DOWN, AFTER A THREE MINUTE INTERVAL (ADJUSTABLE BY SOFTWARE) THE DAMPERS SHALL BE DRIVEN CLOSED.

DIESEL GENERATOR VENTILATION SYSTEM SEQUENCE OF OPERATION 2

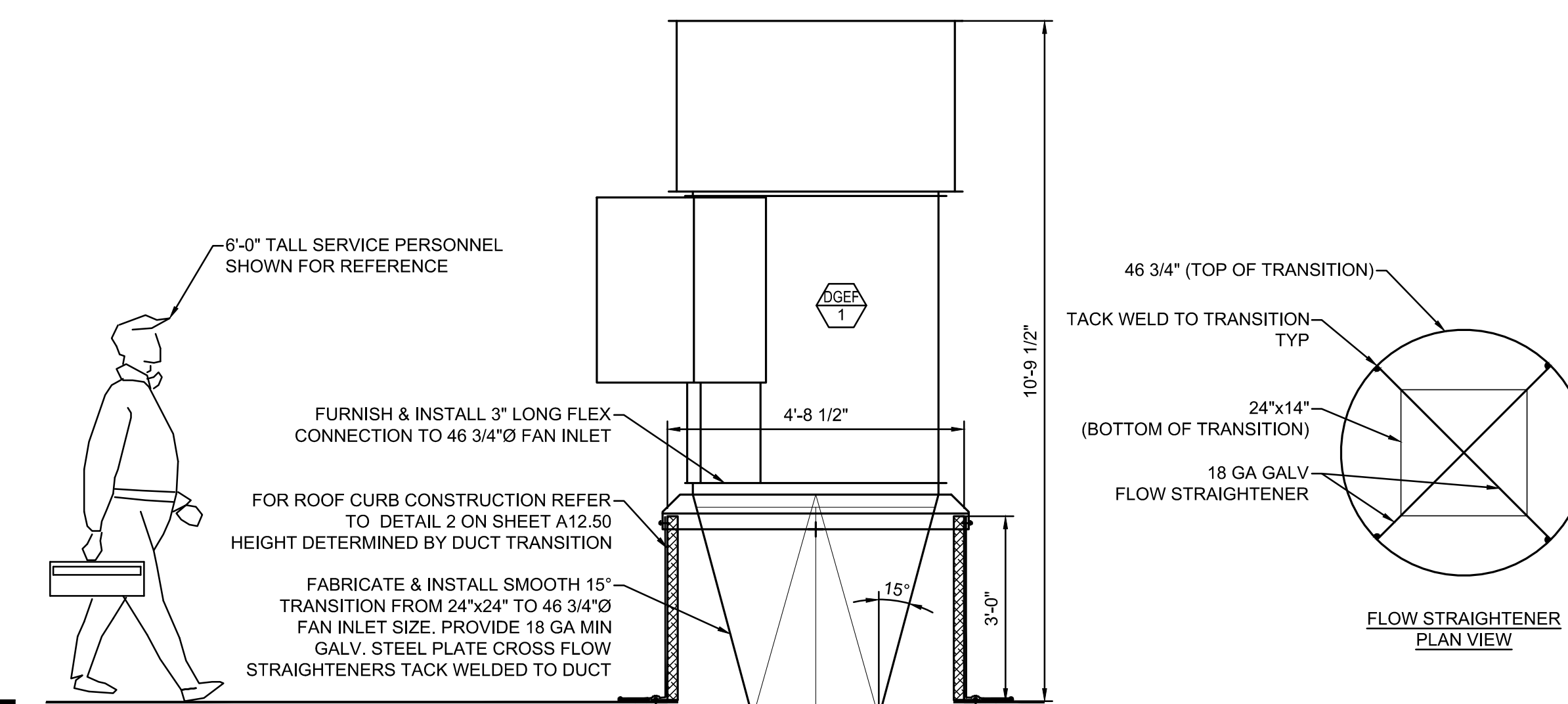
SCALE: 1/8" = 1'-0"



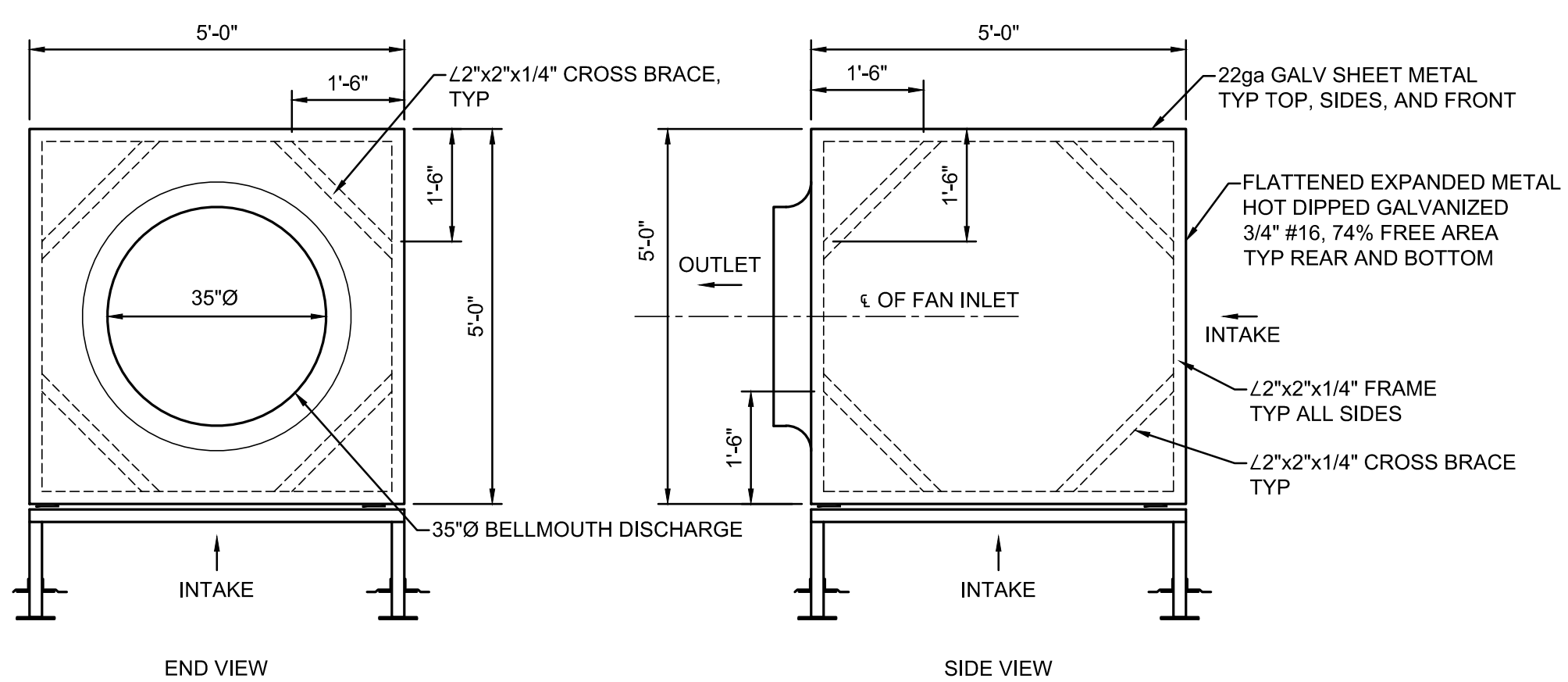
SECURITY SCREENING CHECKPOINT DUCTWORK PART PLAN - LEVEL 4 - ZONE 5 2
 SCALE: 1/8" = 1'-0"



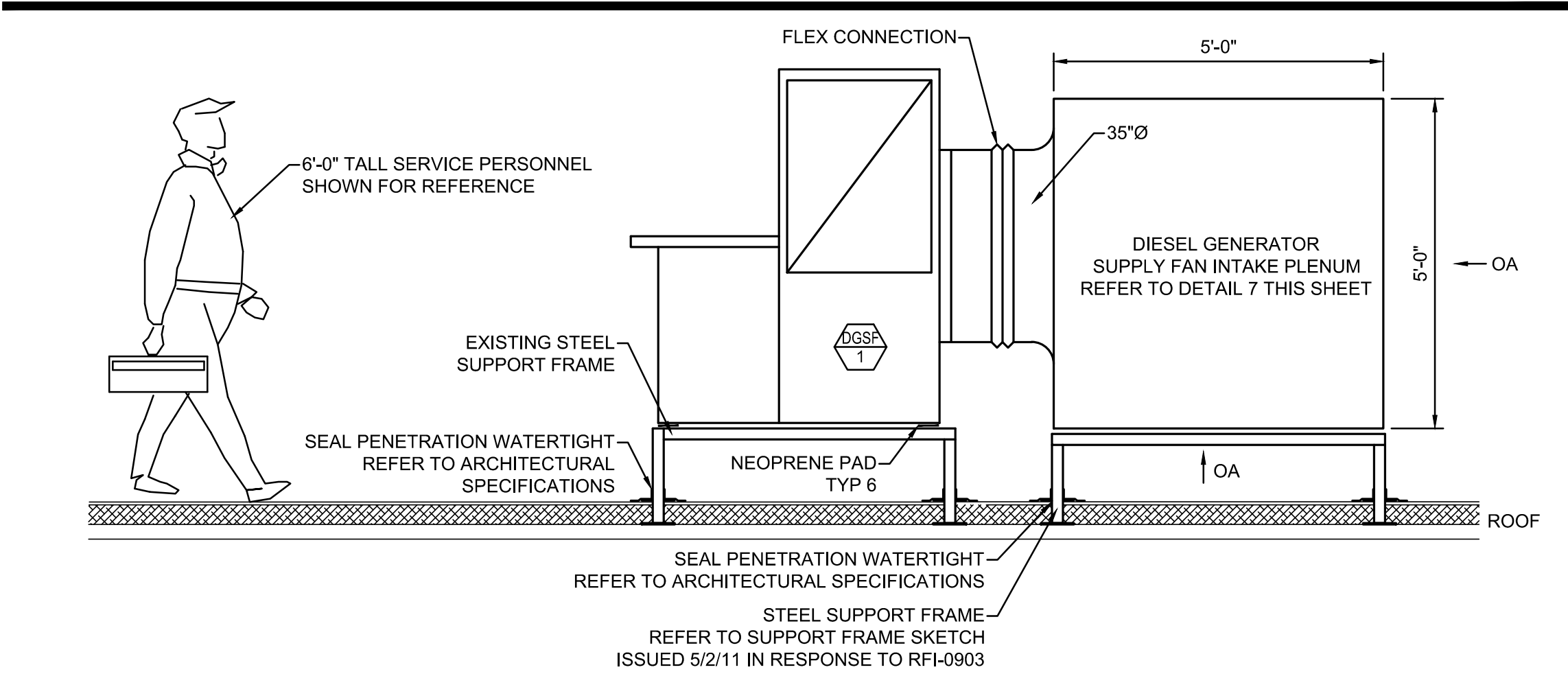
DIESEL GENERATOR SUPPLY FAN CURB DETAIL 5
 SCALE: 1/2" = 1'-0"



DIESEL GENERATOR EXHAUST FAN CURB DETAIL 3
 SCALE: 1/2" = 1'-0"



DIESEL GENERATOR SUPPLY FAN INTAKE PLENUM DETAIL 7
 SCALE: 1/2" = 1'-0"



DIESEL GENERATOR SUPPLY FAN CURB DETAIL 6
 SCALE: 1/2" = 1'-0"

SHEET NOTES

- PROVIDE SMOOTH DUCT TRANSITION FROM 36"x 24" TO 24"x24" IN VERTICAL RISE THROUGH OPENING IN ROOF DECK TO EXHAUST FAN DGEF-1
- DUCT MOUNTED TEMPERATURE SENSOR TO DDC SYSTEM.
- 6" GS & GR LINES UP TO REMOTE RADIATOR ON ROOF
- 10" DIESEL ENGINE EXHAUST WITH 4" THICK HIGH TEMPERATURE INSULATION. INSULATE FROM ENGINE CONNECTION TO UNDERSIDE OF ROOF THIMBLE. LEAVE CLEARANCE FOR AIRFLOW THROUGH THIMBLE. RISE THROUGH ROOF. FOR CONT REFER TO M04.RP.05
- 48"x34" SUPPLY DUCT RUN IN BEAM POCKET. FURNISH AND INSTALL 1" DUCT LINER ON 48"x34" MAIN DUCT FROM PENETRATION AT DUCT CHASE TO END OF DUCT. PROVIDE 54"x30" CLEAR INSIDE DIMENSIONS. DUCT LINER EQUAL TO INDUSTRIAL NOISE CONTROL ACOUSTIC DUCTLINER.
- DUCT RISER OFF TOP OF 48"x34" SUPPLY MAIN. FURNISH AND INSTALL WITH 1" DUCT LINER EQUAL TO INDUSTRIAL NOISE CONTROL ACOUSTIC DUCTLINER. PROVIDE 44"x28" CLEAR INSIDE DIMENSION.
- DUCT RISER OFF TOP OF 48"x34" SUPPLY MAIN. FURNISH AND INSTALL WITH 1" DUCT LINER EQUAL TO INDUSTRIAL NOISE CONTROL ACOUSTIC DUCTLINER. PROVIDE 44"x28" CLEAR INSIDE DIMENSION.
- PROVIDE 24"x24"x16" HIGH SUPPLY AIR PLENUM ON TOP OF REGISTER W/ 12" DUCT COLLAR ON SIDE. INSULATE PER SPECIFICATIONS.
- ALL EXHAUST DUCT ELLS TO BE FABRICATED TO ASHRAE CR3-9 STANDARDS. REFER TO DETAIL 4 THIS SHEET.
- ROLL TOP OF DUCT DN AT 15" TO AVOID CONFLICT WITH ROOF DRAIN PIPING AND ELECTRICAL CONDUITS

GENERAL NOTES

- A SEE SHEET M00.00 FOR LEGEND AND GENERAL NOTES.

Portland International Jetport

1001 Westbrook Street
 Portland, Maine 04102

Gensler

AMEC ASSOCIATES, INC.
 343 GORHAM ROAD, SOUTH PORTLAND, ME 04106
 P: (207) 761-1770 F: (207) 774-1246 www.amec.com

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THESE DRAWINGS ARE ISSUED FOR CONSTRUCTION AND REFLECT ALL AMEC ISSUED BULLETINS AND SKETCHES.

Issue	Date & Issue Description	By	Check
01	07/11/08	PWZ	RHB
02	09/22/08	PWZ	RHB
03	12/03/08	PWZ	RHB
04	01/23/09	PWZ	RHB
05	10/26/09	PWZ	RHB
06	11/12/09	PWZ	RHB
07	01/12/10	PWZ	RHB
08	05/03/10	PWZ	RHB
09	10/20/10	PWZ	RHB
10	03/30/11	PWZ	RHB
11	07/29/11	PWZ	RHB
12	09/01/11	PWZ	RHB

ROBERT BROWN
 No. 4602
 09/01/11

Project Name
 P1W Terminal Enhancement

Project Number
 08.0395.000

CAD File Name
 T:8330101@sets\M08.01.dwg

Description
 MECHANICAL PART & ENLARGED PLANS

Scale
 AS NOTED

M08.01

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