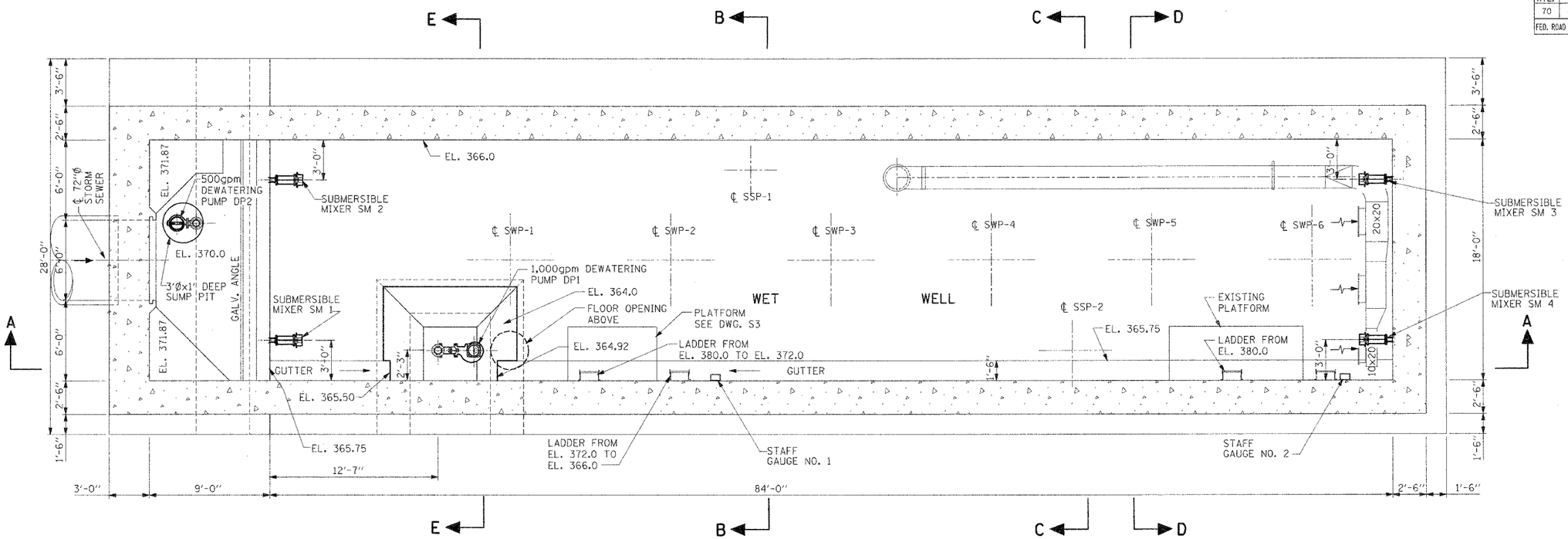
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-(1,2)T-17	ST. CLAIR	77	36
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN @ EL. 366.0

PUMP STATION HVAC

SUMMER/WINTER VENTILATION SEQUENCE

AUTOMATIC OPERATION

EACH FAN IS ENERGIZED BY WALL THERMOSTAT SETTING OF 85° F (ADJUSTABLE) THAT OPENS AN OUTDOOR MAKEUP AIR DAMPER THRU INTERLOCKING. WHEN THE DAMPER IS IN THE FULL OPEN POSITION AS PROVEN BY AN END SWITCH, THE INTERLOCKED FAN SHALL BE ENERGIZED.

MANUAL OPERATION

AN INDOOR ON-OFF SWITCH LOCATED AT EACH BUILDING/ROOM ENTRANCE OPERATES THE FAN FOR ENTRANCE/EXIT.

SF 2 IS INTERLOCKED WITH DM1, DM2 & DM3
SF 5 IS INTERLOCKED WITH DM4 & DM5A & DM5B

SF 5 SHALL OPERATE AT LOW SPEED UNTIL WALL THERMOSTAT SETTING IS EXCEEDED. WHEN WALL THERMOSTAT SETTING IS EXCEEDED, SF 5 SHALL OPERATE AT HIGH SPEED.

COLD WEATHER STATION HEATING

EACH ELECTRIC UNIT HEATER, EUH, WILL OPERATE FROM AN ADJUSTABLE SETTING REMOTE THERMOSTAT WITH A HAND SWITCH.

EMERGENCY VENTILATION

DETECTION OF COMBUSTIBLE GASES IN AREA DETECTORS WILL AUTOMATICALLY ENERGIZE EXHAUST FAN EF 4, SUPPLY FAN SF 2 AND SUPPLY FAN SF 5 AND OPEN INTERLOCKED DAMPERS. AUDIO AND VISUAL ALARMS WILL BE ENERGIZED.

SUPPLY FAN SF 5 SHALL OPERATE AT HIGH SPEED UPON DETECTION OF COMBUSTIBLE GASES ABOVE THE DETECTOR SETTING.

UPON COMBUSTIBLE GAS CONCENTRATION FALLING BELOW THE DETECTOR SETTING, EXHAUST FAN EF 4, SUPPLY FAN SF 2 AND SUPPLY FAN SF 5 WILL STOP AND INTRLOCKED DAMPERS WILL CLOSE AND ALARMS WILL BE DEENERGIZED.

AIR HANDLING UNIT SCHEDULE

ITEM	DETAIL
UNIT	AHU-1
AIRFLOW	
CFM	2,000
STATIC PRESSURE INCH W.G.(EXTERNAL)	1.0
DISCHARGE	DOWN
SEER	13.0
POWER SUPPLY	
V-PH-Hz	460/3/60
MCA	41.5
MCCP	45
COMPRESSOR INPUT Kw	4.62
COMPRESSOR RLA(EACH)	9
COMPRESSOR LRA(EACH)	62
SUPPLY FAN SF-6	
DRIVE	BELT
RPM	1362
POWER BHP	1.7
MOTOR HP	3.0
DAMPER MOTOR HP	1/12
CONDENSOR	
EAT, °F	98.0
OUTDOOR FAN (2) FLA	8 EACH
EVAPORATOR	
TYPE	DX, R22
ENT DB, °F	80.0
ENT WB, °F	67.0
ENTHRALPHY, BTU/lb	31.73
INDOOR FAN FLA	3.4
INDOOR FAN MOTOR CONTINOUS BHP	29
ITEM	**DETAIL**
UNIT	
DISCHARGE DB, °F	58.5
DISCHARGE WB, °F	57.1
DISCHARGE ENTHALPHY, BTU/lb	24.63
COOLING	
CAPACITY, MBH	62.74
NET CAPACITY, MBH	57.8
SENSIBLE	
CAPACITY, MBH	45.66
NET CAPACITY, MBH	40.72
COIL BYPASS	0.110
ELECTRICAL HEATING COIL	
FULL LOAD AMPS	27.7
ELECTRIC INPUT Kw	23
ENT AIR TEMP., °F	35.0
LVG AIR TEMP., °F	72.0

0' 2' 4' 8'
SCALE: 1"= 4'

M3

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BOWMAN AVENUE PUMP STATION REHABILITATION

MECHANICAL PLAN

SCALE: AS SHOWN
DATE: 09-12-05
DRAWN BY: CTM
CHECKED BY: KC

PLOT DATE: *DATE-TIME*

ALVORD, BURDICK & HOWSON, L.L.C.
ENGINEERS CHICAGO

PLAN NOTE BOOK NO. ____ SURVEYED ____ PLOTTED ____ PT. OF WAY CHECKED ____ PLOD FILE NAME ____ BY ____ DATE ____

$$DATE$$
DATE-TIME
DGN-SPEC
DGN-FILE
REF