Case Flow Elements
Doors

NAME	SCHEDULE	HEIGHT (FT)	WIDTH (FT)	DISCHARGE COEFFICIENT	MINIMUM TEMPERATURE DIFFERENCE FOR TWO-WAY FLOW (°C)
CAS110429	247OPEN	18.5	18.5	0.78	0.01
CAS110427	247CLOSED	10	12	0.78	0.01
CAS110435	247CLOSED	10	14	0.78	0.01
CAS120431	247CLOSED	7	2.5	0.78	0.01
CAS110409	247CLOSED	7.9	7.2	0.78	0.01
CAS110754	247OPEN	15	15	0.78	0.01
CAS110221	247OPEN	12	12	0.78	0.01
CAS120210	247CLOSED	7	3	0.78	0.01
CAS110209	247OPEN	12	11.7	0.78	0.01
CAS110169	247OPEN	12	12	0.78	0.01
CAS120170	247CLOSED	7	3	0.78	0.01
CAS110168	247OPEN	12	12	0.78	0.01

Fans	Source Numbers	Multiplier	100%	75%	50%	25%
RoofFans	CAS030505, CAS030506, CAS030507, CAS030508, CAS030509, CAS030510	6	38700	29025	19350	9675
Shotblast	CAS030755	1	10000	7500	5000	2500
Wall	CAS030207, CAS030208	2	21600	16200	10800	5400

Winding Flow Elements
Doors

NAME	SCHEDULE	HEIGHT (FT)	WIDTH (FT)	DISCHARGE COEFFICIENT	MINIMUM TEMPERATURE DIFFERENCE FOR TWO-WAY FLOW (°C)
WIN120170	Intermitleak (1% leak)	7	3	0.78	0.01
WIN110169	247Open	12	12	0.78	0.01
WIN110101	Intermitleak (1% leak)	8	12	0.78	0.01
WIN110093	Intermitleak (1% leak)	6	6	0.78	0.01
WIN120085	Intermitleak (1% leak)	7	2.6	0.78	0.01
WIN120086	Intermitleak (1% leak)	7	2.6	0.78	0.01
WIN110067	Intermitleak (1% leak)	8	9.9	0.78	0.01
WIN120068	Intermitleak (1% leak)	7	3	0.78	0.01
WIN110066	Intermitleak (1% leak)	8.3	8.3	0.78	0.01
WIN110051	Intermitleak (1% leak)	11.1	8.5	0.78	0.01
WIN120035	Intermitleak (1% leak)	7	3	0.78	0.01
WIN110034	Intermitleak (1% leak)	6.4	10	0.78	0.01
WIN120018	Intermitleak (1% leak)	7	3	0.78	0.01
WIN110009	Intermitleak (1% leak)	9	7.5	0.78	0.01
WIN120008	Intermitleak (1% leak)	7.25	3.75	0.78	0.01
WIN110007	Intermitleak (1% leak)	8	8	0.78	0.01
CAF120151	Intermitleak (1% leak)	6	7	0.78	0.01
WIN120105	Intermitleak (1% leak)	7	6	0.78	0.01
WIN120106	Intermitleak (1% leak)	7	3	0.78	0.01
WIN110104	Intermitleak (1% leak)	8	12	0.78	0.01

Winding Flow Elements (continued)

Air Handling Systems	Source Numbers	High (cfm)	Low (cfm)
WIN040098	WIN040098, WIN040099, WIN040100	5750	4250
WIN040078	WIN040078, WIN040079, WIN040080	5750	4250
WIN040750	WIN040751, WIN040751, WIN040752	5750	4250
WIN040037	WIN040037, WIN040038, WIN040039	5750	4250
WIN040094	WIN040094, WIN040095, WIN040096	4600	3400
WIN040041	WIN040041, WIN040042, WIN040043	4600	3400

Cafeteria Flow Elements

Doors

NAME	SCHEDULE	HEIGHT (FT)	WIDTH (FT)	DISCHARGE COEFFICIENT	MINIMUM TEMPERATURE DIFFERENCE FOR TWO-WAY FLOW (°C)
WIN120105	1%LEAK	7	6	0.78	0.01
CAF120151	1%LEAK	6	7	0.78	0.01
CAF120158	1%LEAK	6.7	5	0.78	0.01

Air Handling Systems	Source Numbers	High (cfm)	Low (cfm)
CAF040753	CAF040129, CAF040130, CAF040131, CAF040132, CAF040133, CAF040134, CAF040135, CAF040136, CAF040137, CAF040138, CAF040139, CAF040140, CAF040141, CAF040753, CAF040142, CAF040143, CAF040144	**5750**	**4250**
CAF040749	CAF040749, CAF040145, CAF040146, CAF040147, CAF040148, CAF040149, CAF040150	1840	1360

Insulation Flow Elements

Doors

NAME	SCHEDULE	HEIGHT (FT)	WIDTH (FT)	DISCHARGE COEFFICIENT	MINIMUM TEMPERATURE DIFFERENCE FOR TWO-WAY FLOW (°C)
WIN120035	1%LEAK	7	3	0.78	0.01
INS120610	1%LEAK	6.8	3	0.78	0.01
INS120756	1%LEAK	7	3	0.78	0.01

Air Handling Systems	High (cfm)	Low (cfm)
INS-04-0758	**5750**	**4250**
INS-04-0759	5750	4250
INS-04-0760	4600	3400
INS-04-0761	4600	3400
INS-04-0762	4600	3400
INS-04-0763	4600	3400

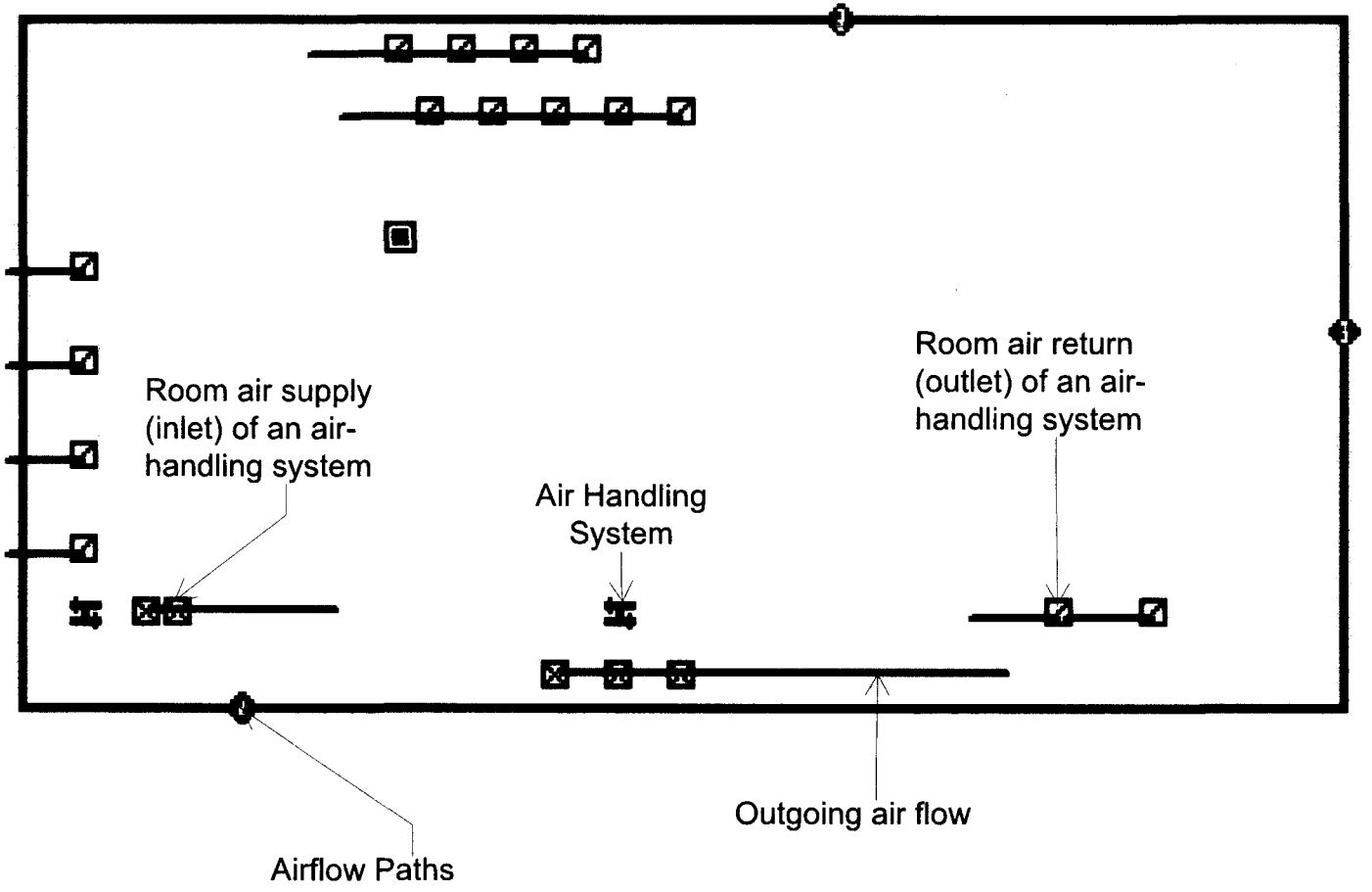
South Plant Flow Elements

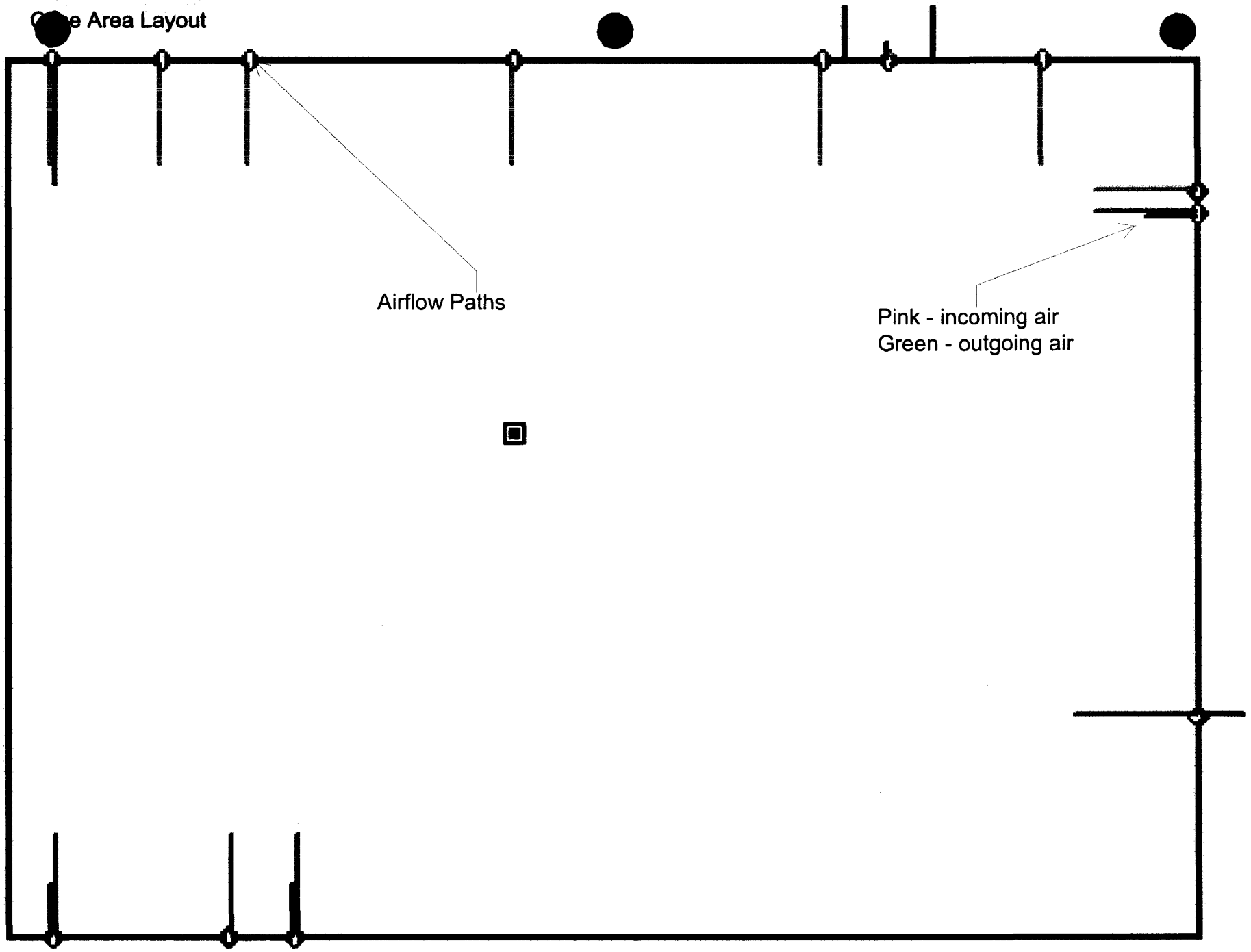
Doors

NAME	SCHEDULE	HEIGHT (FT)	WIDTH (FT)	DISCHARGE COEFFICIENT	MINIMUM TEMPERATURE DIFFERENCE FOR TWO-WAY FLOW (°C)
ASS110285	247OPEN	20	17	0.78	0.01
ASS100291	247OPEN	1.77	1.77	0.78	0.01
ASS100292	247OPEN	1.33	1.33	0.78	0.01
SHI110757	247OPEN	10	12	0.78	0.01
AST110228	247OPEN	8	8	0.78	0.01
AST120262	1%LEAK	7	3	0.78	0.01
COR110403	1%LEAK	12	20	0.78	0.01
COR120393	1%LEAK	7	2.8	0.78	0.01
COR110394	247OPEN	20	12	0.78	0.01
ASS120314	1%LEAK	7	2.5	0.78	0.01
ASS110315	1%LEAK	8	8	0.78	0.01
ASS110286	247OPEN	20	17	0.78	0.01
ASS120299	1%LEAK	7	3	0.78	0.01

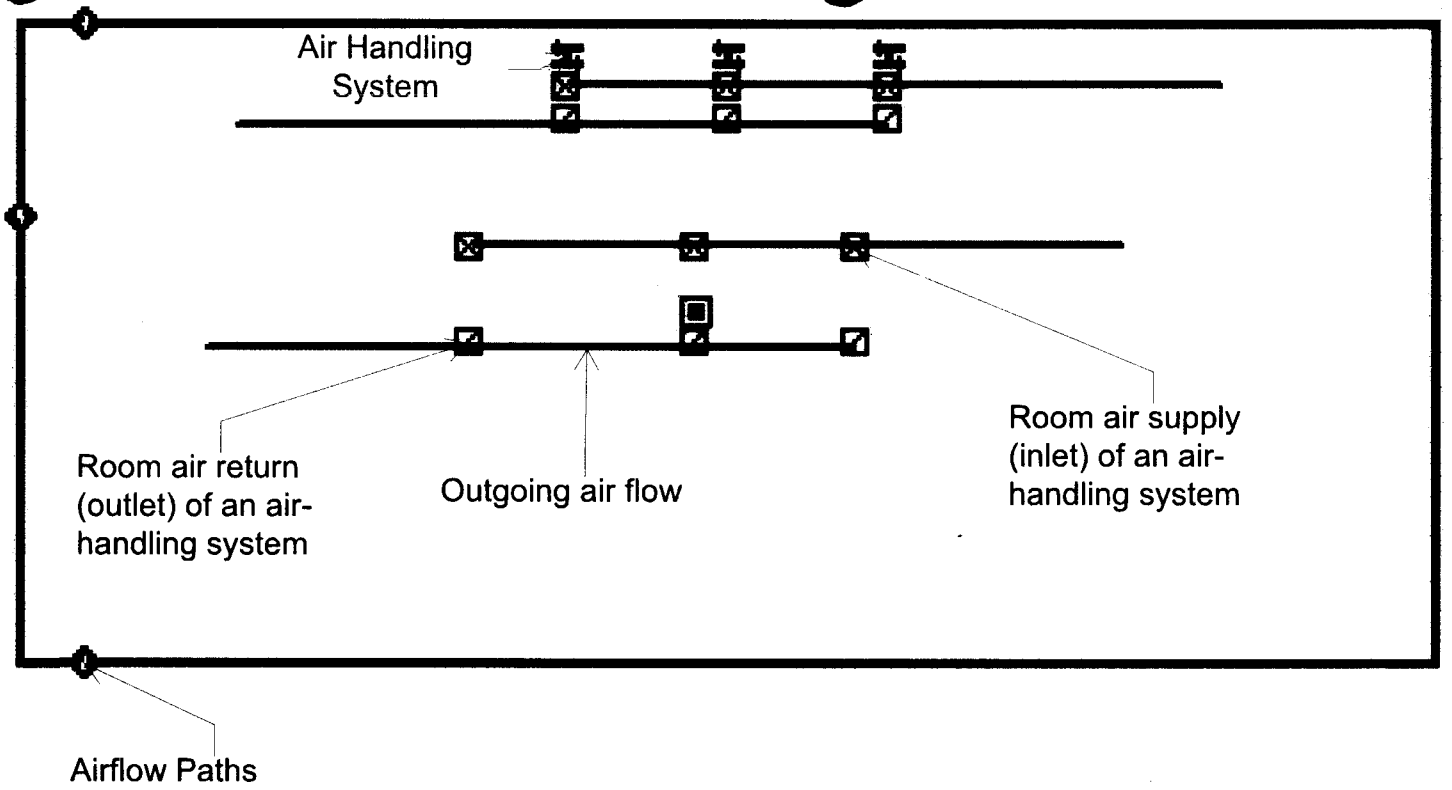
Fans	Source Numbers	Multiplier	100%	75%	50%	25%
RoofFans	ASS-03-0326, ASS-03-0327, ASS-03-0328, ASS-03-0329, COR-03-0330, COR-03-0331, COR-03-0332, COR-03-0333, AST-03-0334	9	38700	29025	19350	9675
Wall	AST-03-0229, AST-03-0230, AST-03-0231	3	21600	16200	10800	5400

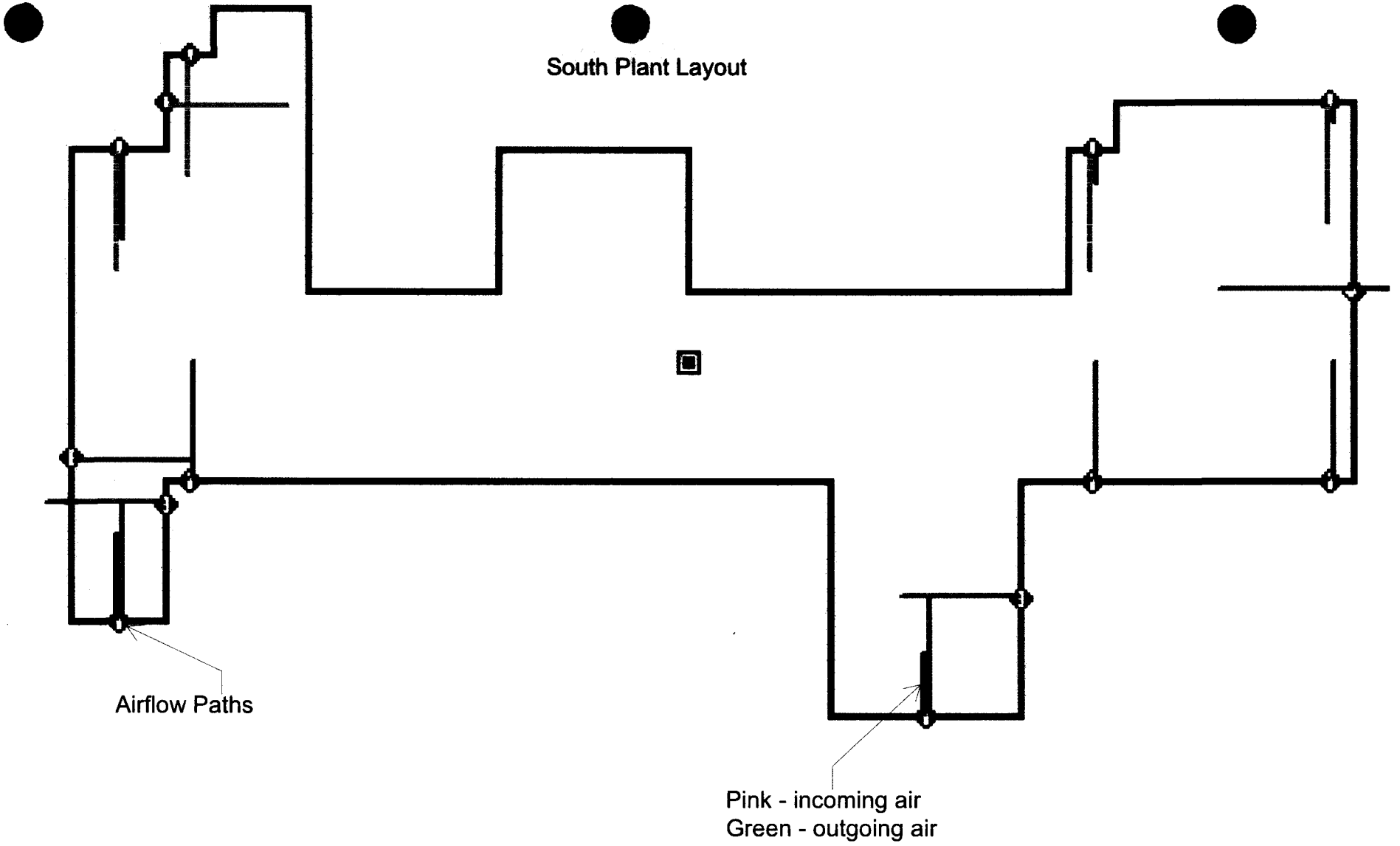
Cafeteria Layout



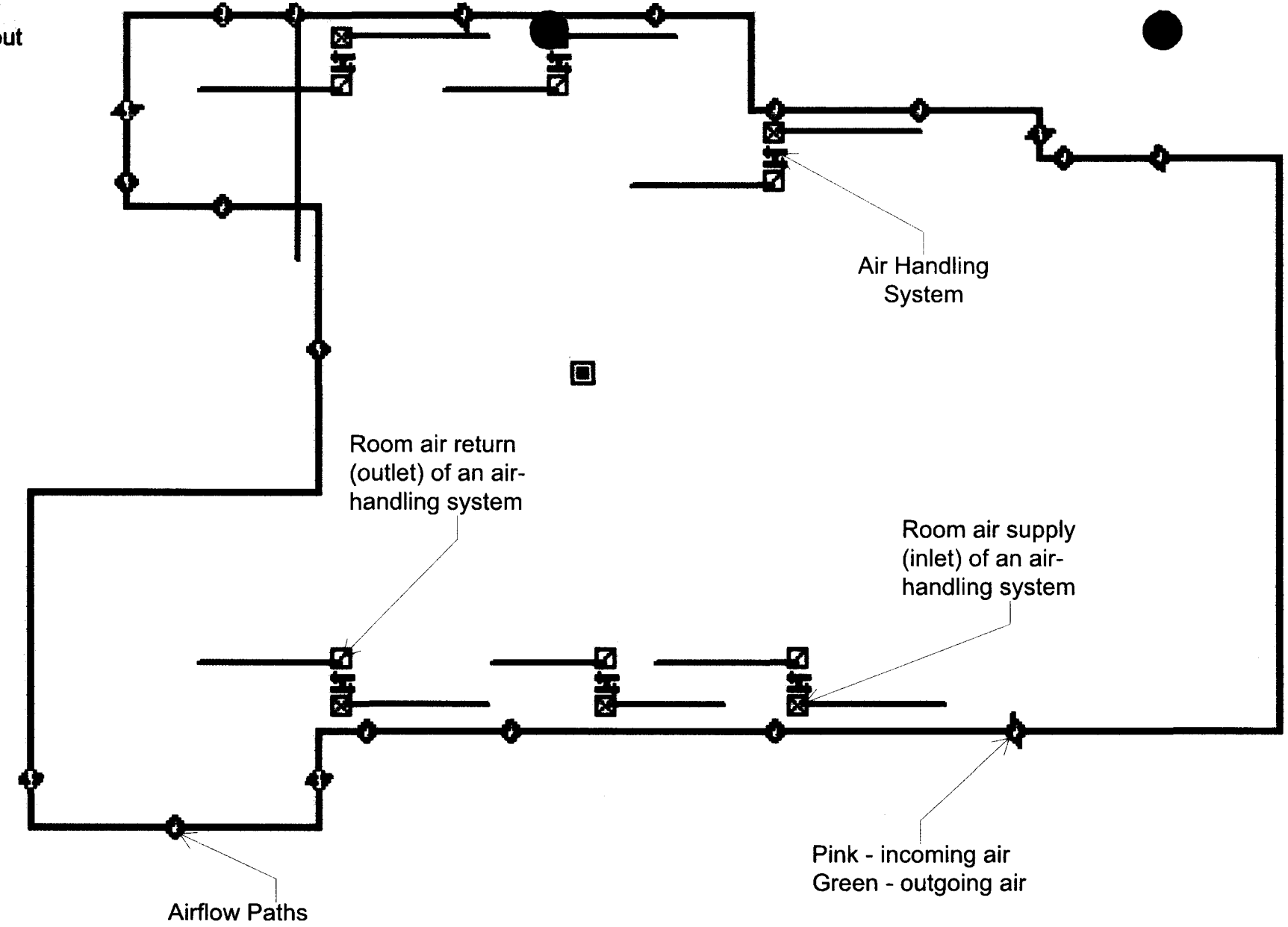

e Area Layout
Airflow Paths
Pink - incoming air
Green - outgoing air

Insulation Area Layout




South Plant Layout
Airflow Paths
Pink - incoming air
Green - outgoing air

Winding Ar Layout



Kuhlman Electric Company
Crystal Springs, Mississippi
Building Volume per Hour

Non-Conditioned Spaces

Department	Room Changes Per Hour (100% Capacity)	Room Changes Per Hour (75% Capacity)	Room Changes Per Hour (50% Capacity)	Room Changes Per Hour (25% Capacity)	Room Changes Per Hour (All Off)
Case	11.84	8.88	5.92	3.42	1.71
South Plant	15.59	11.70	7.8	4.73	2.42

Department	Room Changes Per Hour (0.5" S.P.*)	Room Changes Per Hour (1" S.P.*)
Case	11.84	8.19
South Plant	15.59	10.60

*S.P.= Static Pressure

Conditioned Spaces

Department	Department Volume (ft^3)	Total A/C Tonnage	High	Low
Winding	427,077.37	70	6.62	5.44
Cafeteria	20,860.85	16.5	17.84	14.33
Insulation	60,115.65	65	10.36	7.66