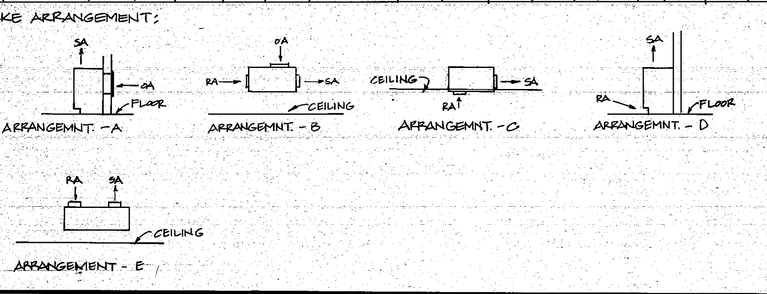
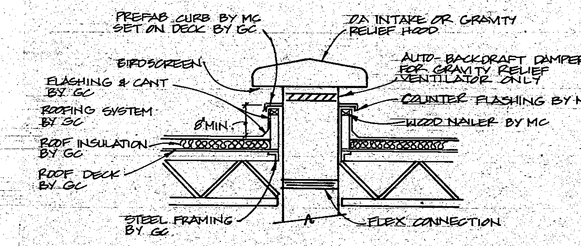
UNIT VENT & FAN COIL UNIT SCHEDULE

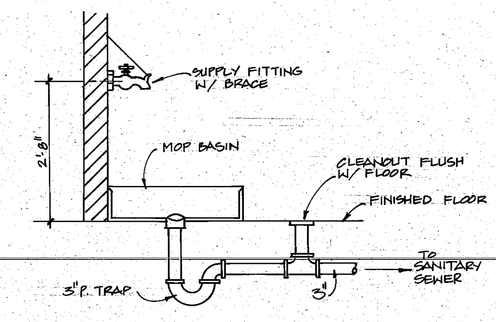
MARK	CFM	MIN. OA %	COOLING CAPACITY TOTAL MBH	COOLING CAPACITY SENS. MBH	COOLING CAPACITY GPM	COOLING CAPACITY EWT	COOLING CAPACITY P.D	HEATING CAPACITY TOTAL	HEATING CAPACITY EAT	HEATING CAPACITY GPM	HEATING CAPacity EWT	HEATING CAPACITY P.D	ESP	RPM	FAN MOTOR HP	FAN MOTOR V	FAN MOTOR PH	FAN MOTOR HZ	IN-TAKE	REMARKS
UV 1	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 2	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 3	1000	8%	28	23	5.6	45	1.5	30	68.2	3	180	1.7	—	—	1/4	120	1	60	A	
UV 4	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 5	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 6	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 7	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 8	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 9	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 10	1250	8%	47	31	7.4	45	5.0	40	68.2	5	180	3.2	—	—	1/4	120	1	60	A	
UV 11	1250	8%	47	31	7.4	45	5.0	40	68.2	5	180	3.2	—	—	1/4	120	1	60	A	
UV 12	1250	8%	47	31	7.4	45	5.0	40	68.2	5	180	3.2	—	—	1/4	120	1	60	A	
UV 13	1250	8%	47	31	7.4	45	5.0	40	68.2	5	180	3.2	—	—	1/4	120	1	60	A	
UV 14	1250	8%	47	31	7.4	45	5.0	40	68.2	5	180	3.2	—	—	1/4	120	1	60	A	
UV 15	1250	8%	47	31	7.4	45	5.0	40	68.2	5	180	3.2	—	—	1/4	120	1	60	A	
UV 16	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 17	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 18	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 19	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 20	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 21	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 22	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 23	1500	8%	47	38	9.4	45	5.0	50	68.2	5	180	5.19	—	—	1/4	120	1	60	A	
UV 24	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 25	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 26	1000	8%	28	23	5.6	45	1.5	30	68.2	3	180	1.7	—	—	1/4	120	1	60	A	
UV 27	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 28	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 29	750	8%	19.8	16	4.0	45	0.68	30	68.2	3	180	3.2	—	—	1/6	120	1	60	A	
UV 30	1000	8%	28	23	5.6	45	1.5	30	68.2	3	180	1.7	—	—	1/4	120	1	60	A	
UV 31	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 32	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 33	750	8%	19.8	16	4.0	45	0.68	30	68.2	3	180	3.2	—	—	1/6	120	1	60	A	
UV 34	750	8%	19.8	16	4.0	45	0.68	30	68.2	3	180	3.2	—	—	1/6	120	1	60	A	
UV 35	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 36	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 37	1250	8%	37	31	7.4	45	2.9	40	68.2	4	180	3.2	—	—	1/4	120	1	60	A	
UV 38	750	8%	19.8	16	4.0	45	0.68	30	68.2	3	180	3.2	—	—	1/6	120	1	60	A	
FCU 1	1200	7%	34.3	31.1	6.87	45	7.6	32.2	68.2	3.2	180	5.4	—	—		120	1	60	B	
FCU 2	550	7%	16.3	14.3	3.28	45	6.9	—	—	—	—	—	—	—		120	1	60	E	
FCU 3	800	0%	23.0	17.4	4.6	45	10.0	32.0	70.0	3.2	180	10.0	—	—		120	1	60	C	
FCU 4	300	0%	16.5	15.6	3.3	45	6.0	37.8	70.0	3.9	180	14.8	—	—		120	1	60	D	

UNIT INTAKE ARRANGEMENT:

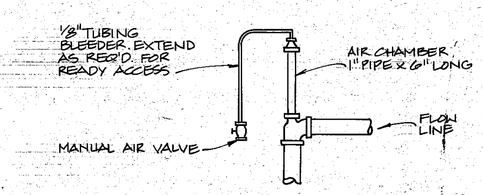




TYPICAL ROOF OA INTAKE OR GRAVITY RELIEF VENTILATOR DETAIL
N.T.S.



TYPICAL MOP BASIN DETAIL
N.T.S.



TYPICAL PIPING AIR VENT
N.T.S.

GRILLE & DIFFUSER SCHEDULE

TYPE	DESCRIPTION
A	SUPPLY AIR DIFFUSER - TITUS MODEL 'TDCA' OR EQUAL. FINISH: WHITE ENAMEL. WITH VOLUME CONTROL DAMPER.
B	RETURN AIR GRILLE - TITUS MODEL '355RL' OR EQUAL. FINISH: WHITE ENAMEL. WITH VOLUME CONTROL DAMPER.
C	SUPPLY AIR DIFFUSER - TITUS MODEL 'TDCA-AA' OR EQUAL. ALL ALUMINUM CONSTRUCTION. WITH VOLUME CONTROL DAMPER.
D	RETURN AIR GRILLE - TITUS MODEL '355-RL' OR EQUAL. ALL ALUMINUM CONSTRUCTION. WITH VOLUME CONTROL DAMPER.
E	SUPPLY AIR DIFFUSER - TITUS MODEL 'DL' OR EQUAL. HIGH CAPACITY, LONG THROW. EXTRUDED ALUMINUM. FINISH: WHITE. WITH VOLUME CONTROL DAMPER.
F	RETURN AIR GRILLE - TITUS HEAVY DUTY MODEL 'S3RL' OR EQUAL. ALL STEEL CONSTRUCTION WITH VOLUME CONTROL DAMPER. FINISH: WHITE.
G	SUPPLY AIR GRILLE - TITUS MODEL '300RL' OR EQUAL. ALL STEEL CONSTRUCTION W/ VOLUME CONTROL DAMPER. FINISH: WHITE.
H	SUPPLY AIR DIFFUSER - TITUS MODEL 'TDCA' OR EQUAL. FINISH: WHITE ENAMEL. WITH VOLUME CONTROL DAMPER. ROUND NECK.

NOTE: CAPACITIES ARE BASED ON 180°F AVE. WATER TEMP., 20°F TEMP. DROP
MOUNTING HGT. INDICATES DISTANCE FROM FINISHED FL. TO TOP OF FIN ENCLOSURE

FIN RADIATION SCHEDULE

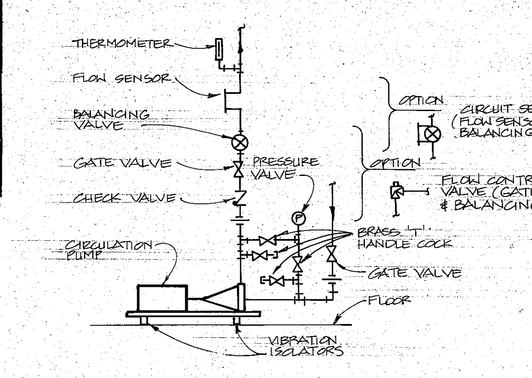
MARK	ACTIVE LENGTH	PIPE SIZE	FINS SIZE	FINS FIN/FT	MBH	ROWS	ENCLOSURE	REMARKS
FR 1	14'-0"	1 1/4"	3 1/4" x 5" SQ.	32	21.0	1	16'-0" 18 GA. SLOPED-TOP ENCL. MTG. HT. = 4" A.F.F. TO BOTTOM OF FIN	STERLING STYLE 'S', LOW PROFILE OR EQUAL.
FR 2	18'-0"	1 1/4"	3 1/4" x 5" SQ.	32	27.0	1	20'-0" 18 GA. SLOPED-TOP ENCL. MTG. HT. = 4" A.F.F. TO BOTTOM OF FIN	STERLING STYLE 'S', LOW PROFILE OR EQUAL.
FR 3	12'-0"	1 1/4"	3 1/4" x 5" SQ.	32	16.0	1	13'-0" 18 GA. SLOPED-TOP ENCL. MTG. HT. = 4" A.F.F. TO BOTTOM OF FIN	STERLING STYLE 'S', LOW PROFILE OR EQUAL.
FR 4	7'-0"	1 1/4"	3 1/4" x 5" SQ.	32	4.5	1	9'-0" 18 GA. SLOPED-TOP ENCL. MTG. HT. = 4" A.F.F. TO BOTTOM OF FIN	STERLING STYLE 'S', LOW PROFILE OR EQUAL.
FR 5	2'-0"	1 1/4"	3 1/4" x 5" SQ.	32	3.0	1	4'-0" 18 GA. SLOPED-TOP ENCL., MTG. HT. = 4" A.F.F. TO BOTTOM OF FIN	STERLING STYLE 'S', LOW PROFILE OR EQUAL

CABINET HEATER & UNIT HEATER SCHEDULE

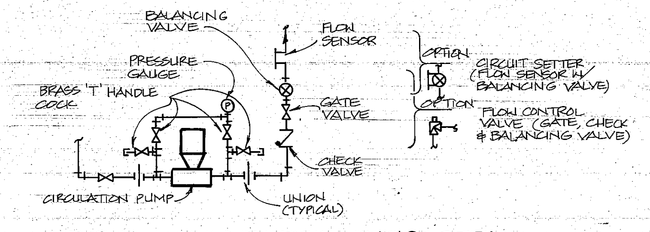
MARK	CFM	MBH	EAT	LAT	COIL GPM	COIL EWT	COIL PD	MOTOR HP	MOTOR V	MOTOR P	MOTOR HZ	MOTOR RPM	REMARKS
CH 1	400	25	60	118	2.5	180	4.5	1/12	120	1	60	—	
CH 2	800	50	60	118	5.0	180	2.0	1/12	120	1	60	—	
CH 3	800	50	60	118	5.0	180	2.0	1/12	120	1	60	—	
CH 4	800	50	80	118	5.0	180	2.0	1/12	120	1	60	—	
CH 5	800	50	60	118	5.0	180	2.0	1/12	120	1	60	—	
CH 6	800	50	60	118	5.0	180	2.0	1/12	120	1	60	—	
CH 7	400	25	60	118	2.5	180	4.5	1/12	120	1	60	—	
CH 8	800	50	60	118	5.0	180	2.0	1/12	120	1	60	—	
CH 9	400	25	60	118	2.5	180	4.5	1/12	120	1	60	—	
CH 10	800	50	60	118	5.0	180	2.0	1/12	120	1	60	—	
CH 11	400	25	60	118	2.5	180	4.5	1/12	120	1	60	—	
CH 12	800	50	60	118	5.0	180	2.0	1/12	120	1	60	—	
UH 1	800	50	60	118	5.0	180	2.0	1/12	120	1	60	—	
UH 2	600	15	60	83	1.5	180	2.0	1/20	120	1	60	—	
UH 3	600	15	60	83	1.5	180	2.0	1/20	120	1	60	—	
UH 4	600	15	60	83	1.5	180	2.0	1/20	120	1	60	—	
UH 5	600	15	60	83	1.5	180	2.0	1/20	120	1	60	—	
UH 6	600	15	60	83	1.5	180	2.0	1/20	120	1	60	—	

EXHAUST FAN SCHEDULE

MARK	TYPE	CFM	S.P. H_2O	R.P.M.	MOTOR HP	MOTOR V	MOTOR P	MOTOR HZ	DRIVE	REMARKS
EF 1	CEILING	100	.125	1200	60W	120	1	60	DIRECT	
EF 2	CEILING	100	.125	1200	60W	120	1	60	DIRECT	
EF 3	IN-LINE	1020	.125	1200	1/6	120	1	60	BELT	
EF 4	IN-LINE	1000	.125	1200	1/6	120	1	60	BELT	W/ VARIABLE SPEED CONTROLLER
EF 5	WALL MTD.	350	—	1550	1/25	120	1	60	DIRECT	W/ BACKDRAFT DAMPER & GRILLE BY FAN SUPPLIER



TYPICAL BASE MOUNTED CIRCULATION PUMP DETAIL
N.T.S.



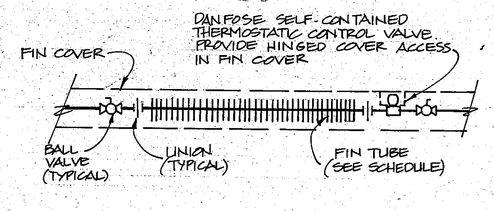
TYPICAL IN-LINE CIRC. PUMP DETAIL
N.T.S.

CIRCULATION PUMP SCHEDULE

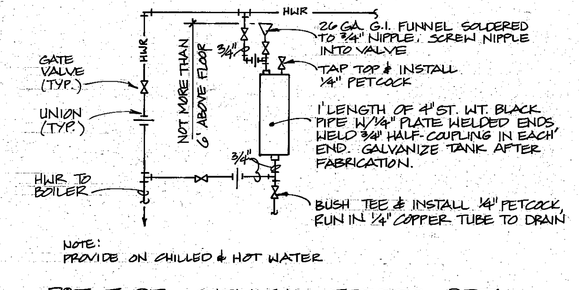
MARK	DESCRIPTION	TYPE	GPM	DISCHARGE HEAD FT/H_2O	MOTOR H.P.	MOTOR V	MOTOR P	MOTOR HZ	REMARKS
CP 1	PRIMARY-HTG. PUMP (IN BOILER RM)	BASE MTD.	390	30	5	208	3	60	B&G SERIES 1510 3AB
CP 2	PRIMARY-HTG. PUMP (IN BOILER RM)	BASE MTD.	390	30	5	208	3	60	B & G SERIES 1510 3AB
CP 3	PRIMARY-CLG. PUMP (IN BOILER RM)	BASE MTD.	274	40	5	208	3	60	B & G SERIES 1510 3AB
CP 4	SECONDARY-HTG. FOR HEAT WING (IN BOILER ROOM)	IN-LINE	67	35	1 1/2	208	3	60	B & G SERIES 60 2"A
CP 5	SECONDARY-HTG. FOR MULTI-PURP. & NEW ADD. (IN BOILER RM.)	IN-LINE	103.8	44	3	208	3	60	B & G SERIES 80 2"8x2"6x7
CP 6	SECONDARY-HTG. FOR LWR. LVL. SOUTH (IN TUNNEL)	IN-LINE	45	30	1	208	3	60	B & G SERIES 60 1 1/2"A
CP 7	SECONDARY-HTG. FOR LWR. LVL. EAST WING & U.LVL. LIBRARY (IN TUNNEL)	IN-LINE	105.2	58	3	208	3	60	B & G SERIES 80 2x2x7 1/2B
CP 8	SECONDARY-HTG. FOR U.LVL. 2ND STEAM AREA (IN TUNNEL)	IN-LINE	69.6	30	1 1/2	208	3	60	B & G SERIES 60 2"A
CP 9	SECONDARY-CLG. FOR LWR. LVL. WEST & NEW ADD. (IN BOILER RM)	IN-LINE	78.6	50	3	208	3	60	B & G SERIES 60 2 1/2 F
CP 10	SECONDARY-CLG. FOR MULTI-PURP. (IN BOILER RM.)	IN-LINE	43.2	36	1	208	3	60	B & G SERIES 60 1 1/2"A
CP 11	SECONDARY-CLG. FOR U.LVL. 2ND STEAM SECT. & LWR.LVL. SOUTH (IN TUNNEL)	IN-LINE	92.1	30	1 1/2	208	3	60	B & G SERIES 60 2"A
CP 12	SECONDARY-CLG. FOR LWR. LVL. EAST & UPPER LVL. LIBRARY (IN TUNNEL)	IN-LINE	156	35	3	208	3	60	B & G SERIES 80 3x3x7B

AIR HANDLING UNIT & COIL SCHEDULE

MARK	CFM	% MIN. OA CFM	COIL DISCH. AIR F.P.M.	STATIC PRESS. EXT.	STATIC PRESS. TOTAL	FAN RPM	MOTOR HP	MOTOR V	MOTOR P	MOTOR HZ	DUAL TEMP. CONTROL COOLING EDB	COOLING EWB	COOLING LDB	COOLING LWB	COOLING TOTAL COOLING MBH	COOLING SENS. COOLING MBH	COOLING GPM	COOLING EWT	COOLING H_2O P.D.	HEATING MBH	HEATING EAT	HEATING LAT	HEATING EWT	HEATING GPM	HEATING H_2O P.D.	REMARKS
AH 1	3900	8%	598	.40	1.66	1123	2	208	3	60	—	—	—	—	—	—	—	—	—	119.7	69	100.5	180	12	.45	
AH 2	3900	8%	598	.40	1.66	1123	2	208	3	60	—	—	—	—	—	—	—	—	—	119.7	69	100.5	180	12	.45	
AH 3	2100	8%	399	.40	.83	987	1 1/2	208	3	60	77.2	63.8	56.0	54.9	55.5	48	11.1	45	1.23	88.4	69	108.7	180	8.8	.27	
AH 4	2100	8%	399	.40	.83	987	1 1/2	208	3	60	77.2	63.8	56.0	54.9	55.5	48	11.1	45	1.23	88.4	69	108.7	180	8.8	.27	
AH 5	6800	8%	553	.40	1.52	817	5	208	3	60	77.2	64.3	54.8	53.6	216	174.3	43.2	45	11.2	250	69	102.9	180	25	.89	

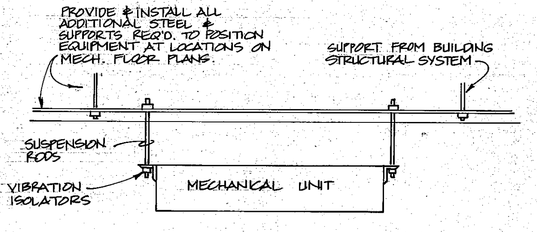


TYPICAL FIN TUBE RADIATION DETAIL
N.T.S.



NOTE:
PROVIDE ON CHILLED & HOT WATER

POT TYPE CHEMICAL FEEDER DETAIL
N.T.S.



TYPICAL SUSPENDED MECHANICAL EQUIPMENT SUPPORT DETAIL
N.T.S.

M/E DESIGN SERVICES
MECHANICAL/ELECTRICAL CONSULTING ENGINEERS
112 1/2 Lincolnway East
Mishawaka, Indiana 46544
(219) 256-1914

MECHANICAL LEGEND

CI	CAST IRON
CO	CLEAN OUT
CW	COLD WATER
DS	DOWN SPOUT
EA	EXHAUST AIR
EC	ELECTRICAL CONTRACTOR / TRADE
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
FD	FLOOR DRAIN
GC	GENERAL CONTRACTOR / TRADE
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
LAV	LAVATORY
MB	MOP BASIN
MC	MECHANICAL CONTRACTOR / TRADE
MH	MOUNTING HEIGHT
OD	OVERFLOW DRAIN
OA	OUTSIDE AIR
RA	RETURN AIR
RD	ROOF DRAIN
SA	SUPPLY AIR
TW	TEPID WATER
TWR	TEPID WATER RETURN
UR	URINAL
VCP	VITRIFIED CLAY PIPE
WC	WATER CLOSET
——	COLD WATER
—HW—	HOT WATER (DOMESTIC)
—TW—	TEPID WATER
—TWR—	TEPID WATER RETURN
—HWS—	HOT WATER SUPPLY
—HWR—	HOT WATER RETURN
—CWS—	CHILLED WATER SUPPLY
—CWR—	CHILLED WATER RETURN
	STEAM
	CONDENSATE
	SANITARY VENT
	SANITARY SEWER
—D—	EQUIPMENT DRAIN LINES
	SHUT-OFF VALVE
	CHECK VALVE
	BALANCING VALVE
	BILLCOCK
	SHOWER HEAD
	FLOOR DRAIN
T	THERMOSTAT
	DUCT DAMPER - (FD) FIRE, (V) VOLUME, (BD) BACKDRAFT
	POINT OF CONNECTION OF NEW AND EXISTING
	AIR INLET OR OUTLET LEGEND
	A-] DIFFUSER OR
	B-] REGISTER SIZE
	C- AIR PATTERN
	D- CFM
	E- TYPE (SEE GRILLE & DIFFUSER SCHEDULE)
	MANUAL CONTROL DAMPER
	MODULATING OR SOLENOID CONTROL VALVE (AS APPLICABLE)
	PRESSURE REDUCING VALVE
	THERMOMETER

REVISIONS	BY

THOMAS R. COOK REGISTERED No. 2236 STATE OF INDIANA PROFESSIONAL ENGINEER

MECH. SCHEDULES & DETAILS

1994 BUILDING ADDITIONS & RENOVATION PROJECTS
DUNE LAND SCHOOL CORPORATION
CHESTERTON, INDIANA
geometa & kinel architects, inc.

DATE	3-17-94
SCALE	AS SHOWN
DRAWN	KSK
JOB	9315
SHEET	M-6
OF 55 SHEETS	

94-04-08

44

STOCKCRAFTING FORM NO. 101-96