GAS FURNACE SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	FAN DATA					COOLING				ALTITUDE (FEET)	HEATING MBH		ELECTRICAL DATA						REMARKS
			CFM		HP	ESP	BLOWER SPEED	OUTDOOR AMBIENT TEMPERATURE °F	CAPACITY		SEER		INPUT	OUTPUT	VOLT	PHASE	CYCLES	AMPS	MAX. FUSE	
			SUPPLY AIR	OUTSIDE AIR					TOTAL MBH	SENSIBLE MBH										
FR-1	TRANE	TDH2D120A9V5VA	2000	300	1	.25	VAR.	95	60	48	16	700	120	114	115	1	60	15.2	20	SEE NOTES
FR-2	TRANE	TUH2C100A9V4VA	1600	250	3/4	.25	VAR.	95	48	38.4	16	700	100	95	115	1	60	13.5	20	SEE NOTES
FR-3	TRANE	TUH2C100A9V4VA	1600	250	3/4	.25	VAR.	95	48	38.4	16	700	100	95	115	1	60	13.5	20	SEE NOTES
FR-4	TRANE	TUH2B080A9V3VA	1200	200	1/2	.25	VAR.	95	36	28.8	16	700	80	76	115	1	60	11.1	15	SEE NOTES
FR-5	TRANE	TUH2C100A9V4VA	1600	250	3/4	.25	VAR.	95	48	38.4	16	700	100	95	115	1	60	13.5	20	SEE NOTES

GAS FURNACE SCHEDULE NOTES:

1. PROVIDE MATCHED COOLING COILS FOR FURNACES.
2. PROVIDE ELECTRONIC AIR FILTER BY TRANE, HONEYWELL OR APPROVED EQUAL, WITH 2" PLEATED PRE-FILTER FOR EACH FURNACE.
3. PROVIDE CONDENSATE PIPING TO DRAIN.
4. PROVIDE LP CONVERSION KIT.
5. ACCEPTABLE MANUFACTURERS: TRANE, LENNOX, YORK, CARRIER, OR APPROVED EQUAL.

CONDENSING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	COOLING			ELECTRICAL DATA					REFRIGERANT	REMARKS
			TEMPERATURE °F	CAPACITY	SEER	VOLT	PHASE	CYCLES	AMPS	MAX. FUSE		
			OUTDOOR AMBIENT	TOTAL MBH								
CU-1	TRANE	4TTX6060B1	95	60	16	230	1	60	35	60	R-410A	SEE NOTES
CU-2	TRANE	4TTX6048B1	95	48	16	230	1	60	29	50	R-410A	SEE NOTES
CU-3	TRANE	4TTX6048B1	95	48	16	230	1	60	29	50	R-410A	SEE NOTES
CU-4	TRANE	RTTX6036B1	95	36	16	230	1	60	24	40	R-410A	SEE NOTES
CU-5	TRANE	4TTX6048B1	95	48	16	230	1	60	29	50	R-410A	SEE NOTES

CONDENSING UNIT SCHEDULE NOTES:

1. PROVIDE MATCHED COIL FOR SYSTEM.
2. ACCEPTABLE MANUFACTURERS: TRANE, CARRIER, YORK, LENNOX, OR APPROVED EQUAL.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER & MODEL NUMBER	MOUNTING LOCATION	FAN TYPE	CFM	EXT. STATIC	MOTOR DATA				REMARKS
						HP	VOLTS	PHASE	RPM	
EF-1	GREENHECK SP-B110	CEILING	C,D	100	.2	80W	115	1	950	1,2,4
EF-2	GREENHECK SP-B110	CEILING	C,D	100	.2	80W	115	1	950	1,2,4
EF-3	GREENHECK SP-B80	CEILING	C,D	75	.2	54W	115	1	900	1,2,4
EF-4	GREENHECK SP-B110	CEILING	C,D	100	.2	80W	115	1	950	1,3,4

EXHAUST FAN SCHEDULE NOTES:

1. PROVIDE SELF-ACTING BACKDRAFT DAMPER, BIRDSCREEN AND UNIT MOUNTED DISCONNECT SWITCH.
2. INTERLOCK w/ BATHROOM LIGHT.
3. CONTROLLED BY LIGHT SWITCH
4. ACCEPTABLE MANUFACTURERS: COOK, GREENHECK, JENN, TWIN CITY FAN OR APPROVED EQUAL.

EXHAUST FAN SCHEDULE ABBREVATIONS:

C – CENTRIFUGAL
P – PROPELLER
W – WALL MOUNTED
IL – IN-LINE
B – BELT DRIVE
D – DIRECT DRIVE
EF – EXHAUST FAN
RV – ROOF VENTILATOR
R – ROOF MOUNTED
IN – INCLINE MOUNTED
CEF – CEILING EXHAUST FAN

DIFFUSER, REGISTER & GRILLE SCHEDULE

MARK	MANUFACTURER & MODEL NUMBER	MAX. N.C.	FINISH			DAMPER		FRAME		REMARKS
			WHITE	PRIME	SPEC.	OBD	NONE	LAY-IN	SURF.	
D-1	PRICE 520	25	X			X			X	SEE NOTES
D-2	PRICE SCD	25	X			X		X		SEE NOTES
G-1	PRICE 530	25	X				X		X	SEE NOTES
G-2	PRICE 530	25	X				X		X	SEE NOTES
G-3	PRICE 80 EGGCRATE	25	X				X	X		SEE NOTES

DIFFUSER, REGISTER GRILLE SCHEDULE NOTES:

1. CONTRACTOR SHALL COORDINATE w/ GENERAL CONTRACTOR ON FINAL CEILING PLAN & FRAME TYPE.
2. DIFFUSERS & GRILLES TO BE PAINTED, SEE FINISH SCHEDULE.
3. ACCEPTABLE MANUFACTURERS: KRUEGER, TITUS, PRICE & NAILOR.

LOUVER SCHEDULE

MARK	MANUFACTURER & MODEL NUMBER	SIZE (wxh)	REMARKS
LV-1A	GREENHECK ESK-402	22x40	SEE NOTES
LV-1B	GREENHECK ESK-402	22x40	SEE NOTES
LV-2	GREENHECK ESK-402	16x24	SEE NOTES
LV-3	GREENHECK ESK-402	12x18	SEE NOTES

LOUVER SCHEDULE NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL MANUFACTURERS.

DAMPER SCHEDULE

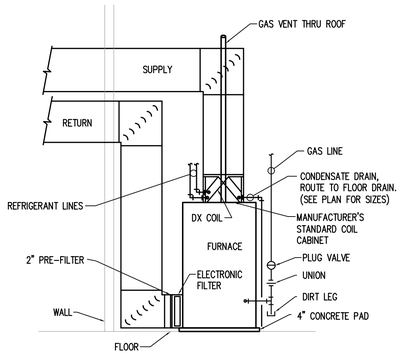
MARK	TYPE	SIZE			NORMAL POSITION	AIR FLOW		UNIT SERVED	AIR TYPE	REMARKS
		WIDTH	DEPTH	HEIGHT		MAX CFM	MIN CFM			
D-1	MD	10ø	–	–	NC	300	0	FR-1	OA	SEE NOTES
D-2	MD	12	–	12	NC	700	0	FR-2,3,4	OA	SEE NOTES
D-3	MD	8ø	–	–	NC	250	0	FR-5	OA	SEE NOTES

ZONE DAMPER SCHEDULE NOTES:

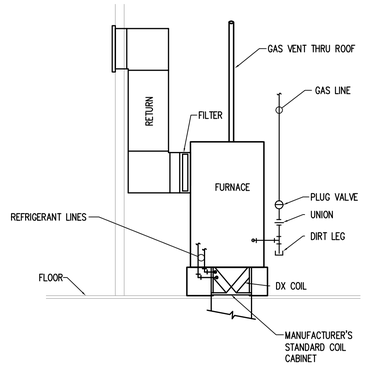
1. SPRING RETURN WHEN POWER IS OFF.
2. JOHNSON CONTROLS DAMPER MOTOR: M9206-AGA OR EQUIVALENT.
3. INSTALLATION AS PER MANUFACTURER
4. ACCEPTABLE MANUFACTURERS: SEE SPECIFICATIONS.

ABBREVIATIONS
B – BAROMETRIC
E – ELECTRIC
EA – EXHAUST AIR
EL – ELECTRONIC
M – MODULATING
N.C. – NORMALLY CLOSED
N.O. – NORMALLY OPEN
OA – OUTSIDE AIR
P – PNEUMATIC
RA – RETURN AIR
RLFA – RELIEF AIR
TP – TWO POSITION

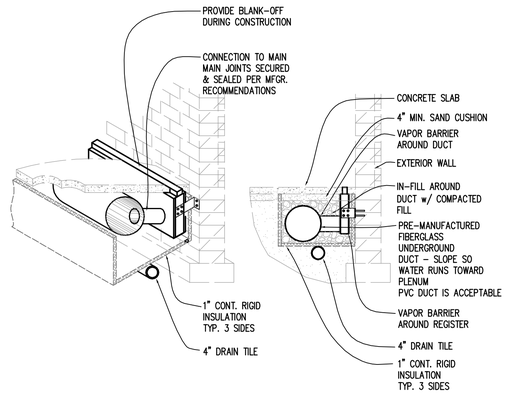
DAMPER TYPES
BD – BY-PASS DAMPER
FD – FIRE DAMPER
FSD – FIRE/SMOKE DAMPER
MD – MOTORIZED DAMPER
ZD – ZONE DAMPER



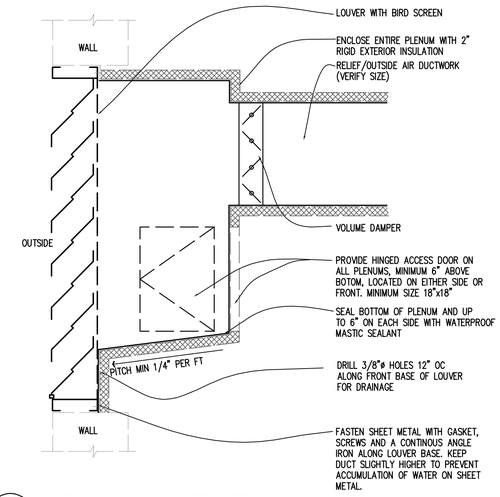
1 M5.1 UPFLOW FURNACE DETAIL



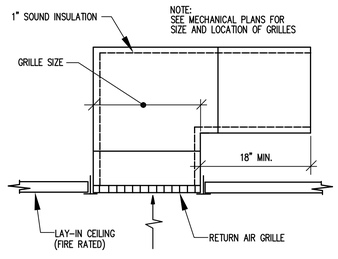
2 M5.1 DOWNFLOW FURNACE DETAIL



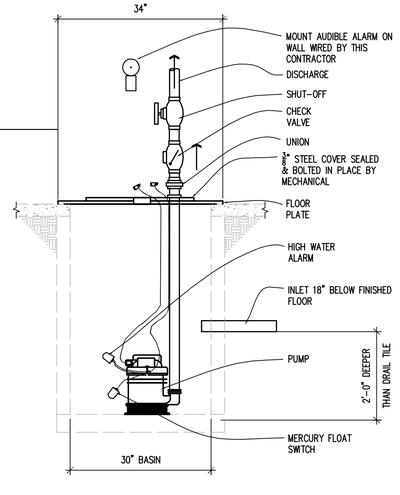
3 M5.1 UNDERFLOOR DUCT DETAIL



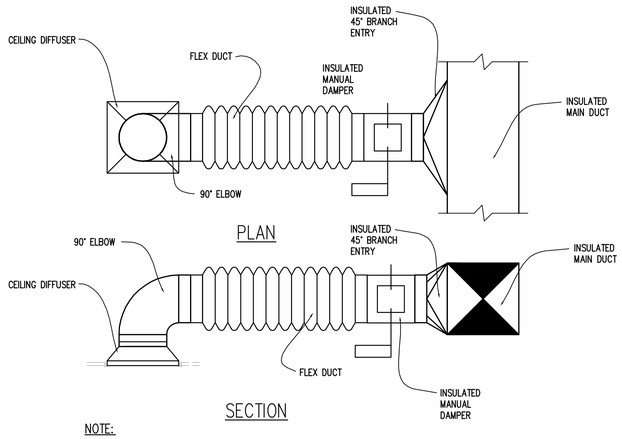
4 M5.1 OUTDOOR AIR LOUVER DETAIL



5 M5.1 RETURN AIR GRILLE DETAIL



7 M5.1 DRAIN TILE SUMP DETAIL



NOTE:
1. SEAL & CLAMP ALL DUCT CONNECTIONS AIRTIGHT.

6 M5.1 FLEX DUCT TO DIFFUSER DETAIL

NEGEN ARCHITECTS
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PEACE LUTHERAN CHURCH
1000 Red River Avenue North
Cold Spring, MN 56320

REVISION	DATE

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Engineer under the laws of the state of Minnesota.

PERRY R. NISTLER, P.E.

3-31-10 Date

22468 License No.

HVAC DETAILS AND SCHEDULES

COMM. NO.:	1070(
SCALE:	AS SHOWN
DATE:	MARCH 31, 201(
DRAWN BY:	KLJ

M5.1