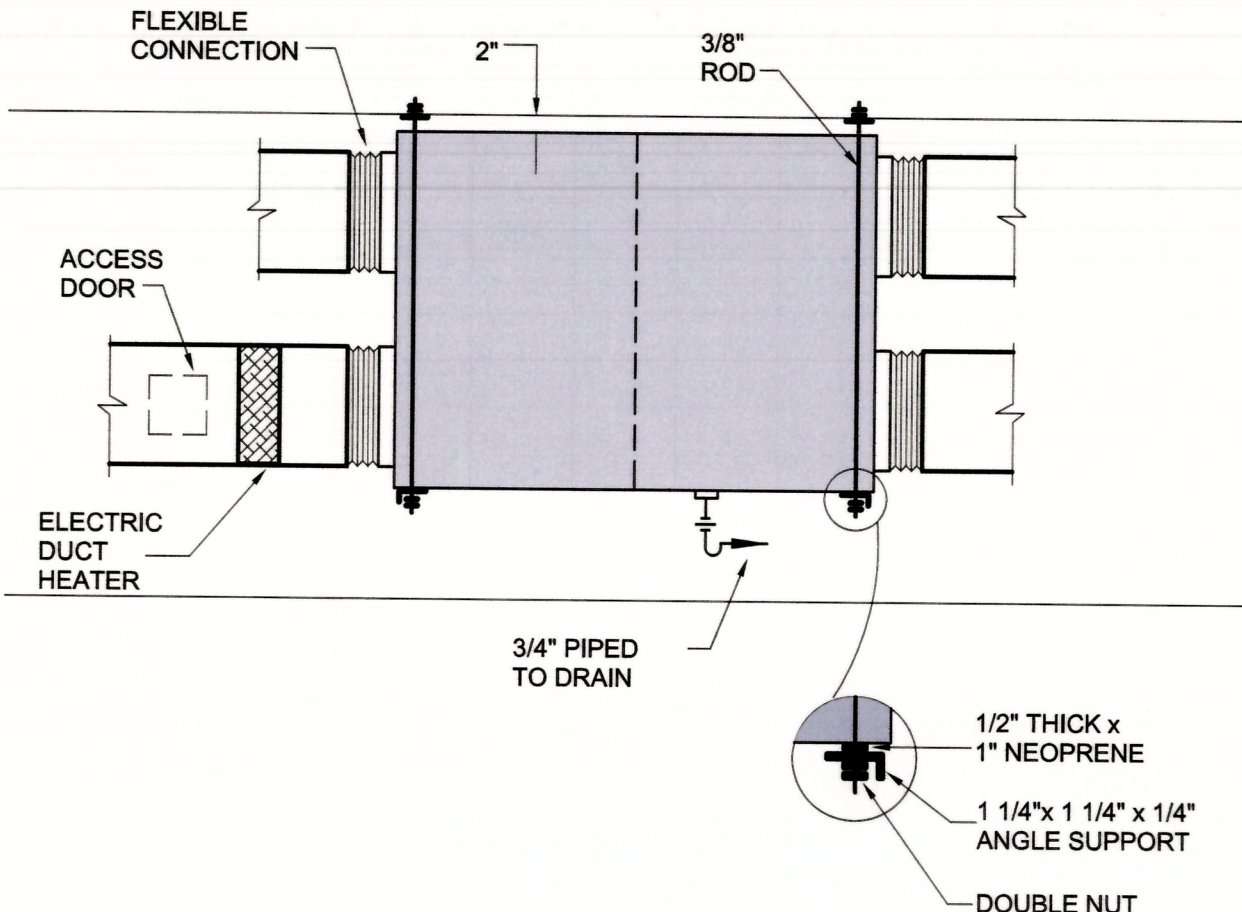


2" W.G.		TABLE 1-5 RECTANGULAR DUCT REINFORCEMENT									
DUCT DIMENSION	STATIC POS or NEG	REINFORCEMENT	MINIMUM RIGIDITY CLASS ON MINIMUM GAGE DUCT REINFORCEMENT SPACING								
			REINFORCEMENT SPACING								
			10"	8"	6"	4"	3"	2 1/2"	2"		
10" DN		26 ga									
11, 12"		24 ga									
13, 14"		22 ga									
15, 16"		20 ga									
17, 18"		20 ga									
19, 20"		18 ga									
21, 22"		16 ga									
23, 24"		16 ga									
25, 26"											
27, 28"											
29, 30"											
31 - 36"											
37 - 42"											
43 - 48"											
49 - 54"											
55 - 60"											
61 - 72"											
73 - 84"											
85 - 96"											
97" UP											

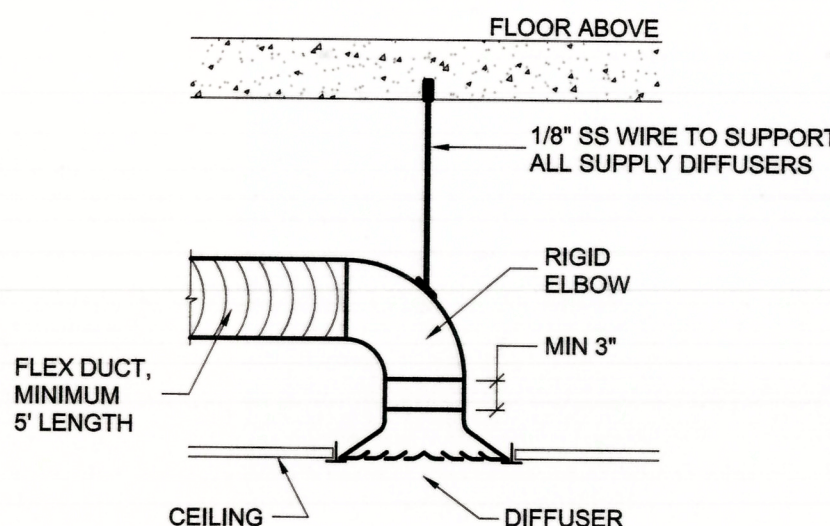
TABLE 1-18 FLAT DRIVE ACCEPTED AS CLASS A REINFORCEMENT									
DUCT WALL	26 ga		24 ga		22 ga		20 ga or more		
	W	S	W	S	W	S	W	S	S
1/2" wg	20"	18"	N.R.	20"	N.R.	20"	N.R.	20"	N.R.
1" wg	20"	14"	10"	N.R.	14"	N.R.	10"	20"	N.R.
2" wg	20"	12"	18"	8"	14"	10"	18"	N.R.	
3" wg			18"	5"	12"	8"	14"	18"	8"
4" wg			16"	5"	12"	8"	12"	N.R.	
6" wg			12"	5"	12"	5"	12"	10"	N.R.

TABLE 3-2 ROUND DUCT GAUGE SELECTION GALVANIZED STEEL							
DUCT DIAMETER IN INCHES	MAXIMUM 2" w.g. STATIC POSITIVE		MAXIMUM 10" w.g. STATIC POSITIVE		MAXIMUM 2" w.g. STATIC NEGATIVE		
	Spiral Seam Gauge	Longitudinal Seam Gauge	Spiral Seam Gauge	Longitudinal Seam Gauge	Spiral Seam Gauge	Longitudinal Seam Gauge	
3 thru 8	28	24	26	24	26	24	
9 thru 14	26	24	24	24	24	24	
15 thru 26	24	N/A	24	22	24	N/A	
27 thru 36	22	N/A	22	20	22	N/A	
37 thru 50	20	N/A	20	20	20	N/A	
51 thru 60	20	N/A	18	18	18	N/A	
61 thru 84	18	N/A	18	16	16	N/A	

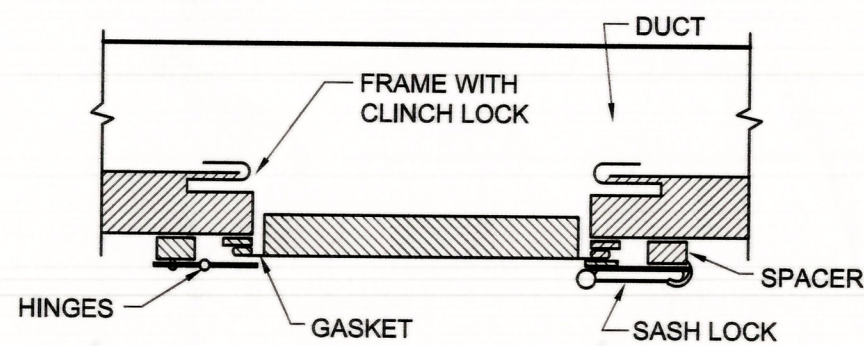
TABLE 3-1 MITERED ELBOWS			
DUCT VELOCITY	R/D RATIO CENTERLINE RADIUS TO DUCT DIAMETER	NUMBER OF MITERED PIECES	
		90 deg	45 deg
Up to 1000 fpm	0.5	3	2
1001 to 1500 fpm	1.0	4	3
Above 1500 fpm	1.5	5	4



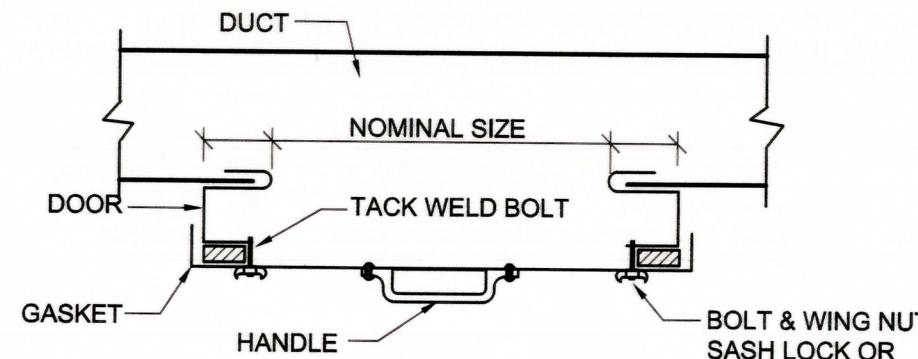
DETAIL NO.1/722 HEAT RECOVERY UNIT
N.T.S.



DETAIL NO.2/722 SUPPLY DIFFUSER
N.T.S.

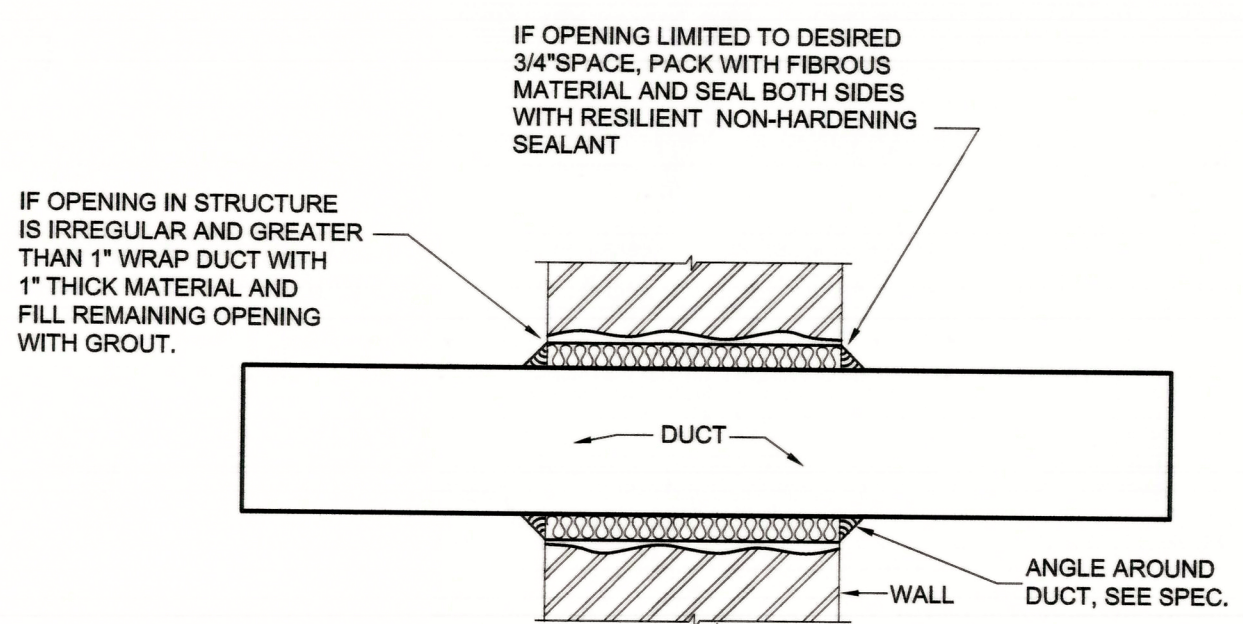


ACCESS DOOR IN INSULATED DUCT



ACCESS DOOR IN UNINSULATED DUCT

DETAIL NO.3/722 ACCESS DOORS IN DUCTWORK
N.T.S.



DETAIL NO.4/722 TYPICAL WALL & FLOOR PENETRATION DETAIL N.T.S.

SCHEDULE No.1/722 SCHEDULE OF HEAT RECOVERY UNITS									
HRV No.	MANUFACTURER	TYPE	SIZE	AIR FLOW (CFM)	PRESSURE DROP "WG SUPPLY EXHAUST	EFFECT. SENSIBLE	ENTHALPIC TRANSFER		REMARKS
							WINTER	SUMMER	
							EDB	LDB	
HRV-1	RENEWAIRE	EV300	300	300	0.75	70%	65	46	CW DISC.SW. (NON-FUSED 24 VAC XFMR, DOUBLE WALL CONSTRUCTION HANGING BRACKETS)
HRV-2	RENEWAIRE	EV450 IN	450	400	0.80	75%	70	58	CW DISC.SW. (NON-FUSED 24 VAC XFMR, DOUBLE WALL CONSTRUCTION HANGING BRACKETS)
HRV-3	RENEWAIRE	HEXINH	IX	590	0.80	74%	70	58	CW DISC.SW. (NON-FUSED 24 VAC XFMR, DOUBLE WALL CONSTRUCTION HANGING BRACKETS)
HRV-4	RENEWAIRE	EV450 IN	450	350	0.95	76%	70	60	CW DISC.SW. (NON-FUSED 24 VAC XFMR, DOUBLE WALL CONSTRUCTION HANGING BRACKETS)

SCHEDULE No.2/722 SCHEDULE OF DOMESTIC HOT WATER TANK									
DHW #	SERVICE	LOCATION	MANUFACT.	MODEL	DIMENSION (in")	KW	DOMESTIC CONN (in")	TANK CAPACITY	ELECTRICS
DHW-1	DOM HOT WATER	BOILER RM	VAUGHN	ME-48W 454208	22 3/4"x 58 1/4"	4.5	3/4"	40 gal	208/1/60

SCHEDULE No.3/722 SCHEDULE OF EXPANSION TANKS									
EXPANSION TANK No.	MANUFACT.	MODEL No.	TOTAL VOLUME (gal)	SIZE DIA" x OL"	SYSTEM CONN. (in)	MIN. PRESS. P.S.I.	SYSTEM	REMARKS	
ET-1	EXPANOFLEX	AL-30V	105	12" 30"	3/4"	15	HEATING WATER		
ET-2	EXPANOFLEX	BFA-20V	75	12" 20"	3/4"	40	DOM. HOT WATER		

SCHEDULE No.4/722 SCHEDULE OF BOILERS									
BOILER No.	SERVICE	LOCATION	MANUFACT.	MODEL	NET IBR (MBH)	OUTPUT CSA/DOE (MBH)	FUEL INPUT	INPUT MBH	WORKING PRESSURE PSI
B-1	HEATING	BOILER ROOM	VISSMAN	VBZ-33	101	116	0.96	135	15

SCHEDULE No.5/722 SCHEDULE OF PUMPS									
PUMP No.	SERVICE	LOCATION	MANUFACT.	MODEL	SIZE	TYPE	FLOW US GPM	HEAD FT.	HORSE POWER
P1	INFLOOR	BOILER ROOM	GRUNDFOS	MAGNA	32-100F	IN-LINE	15	20'	1/4
P2	WALL FIN.	BOILER ROOM	GRUNDFOS	ALPHA	15-55F	IN-LINE	2	10'	FRACT

SCHEDULE No.6/722 SCHEDULE OF ELECTRIC DUCT HEATERS									
DUCT HEATER No.	MANUFACTURER	HRV UNIT	AIR FLOW (CFM)	HEATING CAPACITY (KW)	ELECTRICS	SCR CONTROL	REMARKS		
DH-1	THERMOLEC	HRV-1	300	7 KW	208/3/60	YES	DUCT HEATER C/W DISCONNECT SWITCH, MANUAL & AUTO RESETS, DIFFERENTIAL PRESSURE SWITCH, SCR & ROOM TEMPERATURE CONTROLLER		
DH-2	THERMOLEC	HRV-1	400	10 KW	208/3/60	YES	DUCT HEATER C/W DISCONNECT SWITCH, MANUAL & AUTO RESETS, DIFFERENTIAL PRESSURE SWITCH, SCR & ROOM TEMPERATURE CONTROLLER		
DH-3	THERMOLEC	HRV-1	590	15 KW	208/3/60	YES	DUCT HEATER C/W DISCONNECT SWITCH, MANUAL & AUTO RESETS, DIFFERENTIAL PRESSURE SWITCH, SCR & ROOM TEMPERATURE CONTROLLER		
DH-4	THERMOLEC	HRV-1	350	9 KW	208/3/60	YES	DUCT HEATER C/W DISCONNECT SWITCH, MANUAL & AUTO RESETS, DIFFERENTIAL PRESSURE SWITCH, SCR & ROOM TEMPERATURE CONTROLLER		

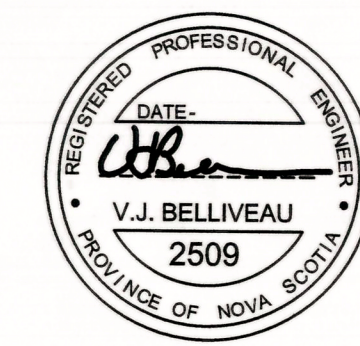


Fortress of Louisbourg
National Historic Site of Canada

Forteresse de Louisbourg
Site Historique National du Canada

revisions date

revisions	date
-	-



APPROVED AS REFLECTING STRUCTURAL DESIGN TEAM DECISIONS

RESTORATION ARCHITECT

PROJECT MANAGER

HEAD OF HISTORICAL RESOURCES

MANAGER, ASSET MANAGEMENT

APPROVED

FIELD UNIT SUPERINTENDENT

A	A detail no.	détail n°
B	B location dwg.	sur dessin n°
C	C drawing no.	dessin n°

date MAR. 2015 scale/échelle 1/4" = 1'-0"

designed by/compu par V.J. BELLIVEAU

drawn by/tracé par M. MORELL

project title titre du projet

REPURPOSING OF SANTIER-VALLEE MAGASIN HOUSES

drawing title titre du dessin

MECHANICAL

DETAILS & SCHEDULES

reference no. n° de référence

dwg. no. dessin n°