City of Portland, Maine	- Building or Use	Permit Applicatio	n Per	rmit No: I	PERMIT	ISSUED	
389 Congress Street, 04101	Tel: (207) 874-8703	, Fax: (207) 874-87	16	06-1019	 	163 B	003001
Location of Construction:	Owner Name:	N DIG	Owne	r Address:	11070	Phone:	- [
801 WASHINGTON AVE	V S H REALT	Y INC	111	DEDHAMST #	/10/9		
Business Name:	Contractor Name		Contr	actor Address:	CITY OF I	PORICAND	
	Accurate Air,	Inc.	140	Bouchard St Ma	nenester	207669	5157
Lessee/Buyer's Name	Phone:		Permi HV	it Type: AC			Zone:
Past Use:	Proposed Use:		Perm	it Fee: Co	st of Work:	CEO District:	
Commercial/ Cumberland Farn	arms-install Trane ng unit on roof wl rade of roof	FIRE	\$150.00 CDEPT: A	\$12,300.00 pproved enied	D 4 PECTION, Group/	Type:	
			Sig _{na} PEDE Actio Signa	ture STRIAN ACTIVI on. Approved ture:	Sigr TES DISTRIC	nature T (P.A.D.) 1 w/Conditions	Denied
Permit Taken By:	Date Applied For:			Zoning A	pproval		
ldobson	07/12/2006						
 This permit application do Applicant(s) from meeting Federal Rules. 	bes not preclude the g applicable State and	Special Zone or Reviews		Zoning Appeal		Historic Preservation	
2. Building permits do not in septic or electrical work.	clude plumbing,	Wetland		Miscellaneous		Does Not Require Revi	
3. Building permits are void within six (6) months of th	arted Flood Zone Ice. Ing Subdivision		Conditional	Use	Requires Review		
False information may invalidate a building permit and stop all work.			Interpretation		Approved		
				Approved		Approved w/Conditions	
		Maj 🗍 Minor 🗍 Mł	м 🗌	Denied		Denied	
		Date:		Date:		Date:	

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE		
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE	DATE	PHONE			

FILL IN AND	
APPLICATIO HEATING OR PO	
To the INSPECTOR OF BUILDINGS, PORTLAND, ME. The undersigned hereby applies for a permit to ins accordance with the Laws of Maine, the Building Code of	tall the following heating, cooking or power equipment in the City of Portland, and the following specifications:
Location/CBL_SOL Washington Are Name and address of owner of appliance 777 Drilham sit Canton M	Use of Building Rised Space Date 7/12/06 Larms The
Installer's name and address <u>Accurate</u>	- Inc/ Combiland Davins/ Franklary Telephone 603-624-4008
Location of appliance: Basement Floor Attic Koof	Type of Chimney: Masonry Lined Factory built
Type of Fuel: Gas Oil Solid	Metal Factory Built U.L. Listing #
Appliance Name: Traur U.L. Approved Ves D No	Direct Yont Type <u>Suctor</u> instrikting of the
Will appliance be installed in accordance with the manufacture's installation instructions? Yes D No	Type of Fuel Tank
IF <u>NO</u> Explain:	Size of Tark
The Type of License of Installer:	Number of Tarks
Gas # NH 2114 (turnt Air Other Sharing to pull primit of time of install	Distance from Tank to Center of Flame A feet. Cost of Work: \$12,300 Permit Fee: \$ 500000
Approved Fire:	Approved with Conditions See attached letter or requirement
Bldg. (In the state of Installer (F	Inspector's Signature Date Approved
White - Inspection Yellow File	Pink - Applicant's Gold - Assessor's Copy

			Dommit No.	Data Applied For	CPL		
City of Portland, Maine -	Building or Use Permi		Date Applied For:	CDL:			
389 Congress Street, 04101	Tel: (207) 874-8703, Fax: (06-1019	07/12/2006	163 B003001			
Location of Construction:	Owner Name:		Owner Address:		Phone:		
801 WASHINGTON AVE	V S H REALTY INC		777 DEDHAM ST	# V 1079			
Business Name:	Contractor Name:	(Contractor Address:		Phone		
	Accurate Air, Inc.		140 Bouchard St N	Ianchester	(207) 669-5159		
Lessee/Buyer's Name	Phone:	Permit Type:					
			HVAC				
structural upgrade of roof	U	roof		C	10		
Dept: Building State Note:	us: Approved with Condition	ns Reviewer:	Mike Nugent	Approval D	Date: 07/12/2006 Ok to Issue: ✓		
1) All elements of the engineer	's design must be carried out a	and inspected.					
2) A Gas installer licensed in the	he State of Maine must perform	m the piping wor	k etc. AAI has agre	eed to this.			



TO: FRANK

FROM: JOSH BEALE

FAX: 742-3776

PHONE: 800-932-2056

DATE: 7-10-06

PAGES: 6

RE: PORTLAND

CC: 603-396-2682

NOTES: IF THERE IS ANY QUESTIONS PLEASE FEEL FREE TO CALL ME ON MY CELL PHONE 603-396-2682. I DO NOT NEED A COPY OF THIS I RAVE THE ORIGINAL AND THIS IS FOR YOUR RECORDS, THANK YOU.

IF TOTAL NUMBER OF PAGES ARE NOT RECEIVED OR NOT LEGIBLE. PLEASE CONTACTUS AT (603) 624-4008 FOR RETRANSMISSION.

PAGE 02/06 PAGE 01/05



Pease International Tradeport • 29 New Hampshire Avenue, Suite 4 • Portsmouth, NH 03801 Tel 603 431 2520 • Fax 603 431 8067 • www.kimbailchasc.com

Mr. Joshua L Beale VP of Service/Mechanical Division Accurate Air, Inc. 140 Bouchard Street Manchester, NW 03103 July '7, 2006 HTA'KC Project No: 552901 21

VIA FAX AND MAIL

Re: Cumberland Farms Retail Store - 801 Washington Avenue Portland, ME Structural Roof Mounted MechanicalEquipment Support Review

Dear Mr. Beale:

HTA\Kimball Chase is pleased to submit this brief letter report regarding our observations and review of the existing open web steel bar joist and steel deck roof construction with respect to the proposed roof mounted mechanical units.

INTRODUCTION

Our services have been acquired for observation and review of the existing steel bar joist roof framing and to provide conclusions and/or recommendations for the support of new roof mounted mechanical equipment.

The **purpose** of this report is to document our observations and conclusions. Our analysis and observations are limited to the existing steel bar joists at the center of the building proposed for support of the new equipment Evaluations of the roof deck, girders, columns, exterior load bearing walls, and existing foundations were not conducted by our office. Furthermore, existing roof mounted equipment and roof deck penetrations considered as original construction or not relating to the current renovation project were not reviewed unless specifically noted below.

OBSERVATIONS

As requested by your office. on the morning of June 20, 2006, personnel from our office visited the above referenced project to observe and take photographs of the existing condition of the roof framing in the area of the new equipment. We met onsite with a representative of Curr berland Farms and yourself and discussed the general condition of the existing roof framing and mechanical equipment being replaced. It is understood that the renovations provided for new roof top HVAC units of smaller size and lighter wight to replace existing roof top HVAC units.

The roof construction is 1 ¹/₂" type B steal deck, and 24" deep open web steel bar joists spanning from the front of the stare to the rear. Joists are supported at the front of the store by a combination of load bearing crnu wals and conventional steel girders and tube columns. Three joists at the center of the building and currently supporting the existing mechanical equipment have a 36 inch center to center spacing. The remainders of the roof joists have a typical spacing of 6 feet. The joists are supported along the rear of the building exclusively with exterior load bearing walls. The existing roof was assumed to be single ply adhered membrane on rigid insulation on steel de 1k with miscellaneous inferior dead load for an assembly dead load of 20 psf for the purpose of the joist review.

07/07/2006 14:58 6034318067

ACCURATE AIR INC HTAKIMBALLCHASE PAGE 03/06 PAGE 02/05

Mr. Joshua L. Beale Accurate Air, Inc. Fie: Cumberland Farms Retail Store = 801 Washington Avenue Portland, ME Structural Roof Mounted Machanical Equipment Support Review July 7, 2006 HTA\KC ProjectNo , ;552901.21 Page 2 of 2

ANALYSIS RESULTS

The existing steel roof joists at the center of the building have been reviewed for current show loading requirements detailed in the International Building Code (IBC 2006) and referenced to ASCIENSEL f-05. While it is understood the original construction would not have been designed to these standards, they provide an updated measurement of actual case studies for all to reference. The roof show loading used is 42 pounds per square foot (PSF) respective to the 60 PSF ground show load recommended for this area.

The joists reviewed as assumed are capable of typical current uniform snow loading plus the proposed new mechanical units as shown on the attached sketch SSK-1. Therefore is our recommendation that this layout be used for the proposed mechanical equipment support in addition to some minimal steel reinforcing for concentrated loads and unit frame support,

RECOMMENDATIONS

- 1. The three bar joists proposed for the support of the new mechanical equipment should be reinforced, where required at the new concentrated load locations as outlined on the attached sketch SSK-2. Reinforcement is recommended at the locations where the concentrated load exceeds 150 lbs and *is* a horizontal distance greater than or equal to 4 inches away from *the joist* top chard panel point below.
- 2 The new mechanical equipment should be supported via a structural curb canable of spanning from joist to joist, recommended by the unit manufacturer or a steel angle frame as shown on the attached sketch SSK-3. The existing steel deck should be fastened to the new frames at all deck openings/penetrations. Minimum deck fastening requirements should be provided for a uniform uplift pressure of at least 30 psf per the recommendations of the Steel Deck Institute.

This concludes the review of the support of the proposed roof mounted mechanical units. Hase do not hesitate to contact us if you have any questions concerning the content of this letter or this project.

Very truly yours,

HTA\Kimball Chase Division

Senior Structural Engineer

Cc: FILE





07/10/2006 10:25 16036695270 07/07/2006 14:59 6034318067



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Weights

Table W-1 - Maximum Unit And Corner Weights (Lbs) And Center Of Gravity Dimensions (In.)

	Unit	Maximum We	ights (Lbs) ^a		Corner We	Canter of G	ravity (in.)		
Tons	Model No.	Shipping	Net	A	Ê	C	D	Langth	Width
2	YSC036A	534	480	151	124	96	109	32	19
3	YHC036A	551	497	158	128	101	170	32	19
	YSC048A	559	505	159	130	108	109	33	19
	YHC048A	593	539	166	133	114	125	32	20
=)	YSC060A	576	522	169	134	105	114	32	18
°/	YHC060A	628	574	179	140	119	136	32	20
	YSC072A3*H	822	735	249	793	132	161	39	21
	YHC072A3*H	859	772	249	196	141	184	39	22
	YSC090A3-H	907	820	273	208	146	193	38	22
71/2	YSC092A3*H	909	822	277	222	147	175	40	21
	YHC092A3*H	1010	923	306	243	165	210	39	22
	YSC102A3*H	986	899	297	243	165	194	40	21
ΦY7	YHC102A3*H	1044	967	310	252	175	220	40	22
10	V\$C120A3*H	1074	967	325	265	183	213	40	21
	YHC120A3#H	1147	1060	342	277	197	245	40	22

NOTE:

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Corner weights are given for intermation only.
 Weights are approximate



CENTER OF GRAVITY

Table W-2 - Factory-installed Options Net Whights // half?

	Net Weight				
Accessory	3-5 Ton's	6-10 Tons			
Economizer	20	36			
Barometric Raliaf	7	10			
Powered Exhaust		80			
Motorized Outside Air Damper	20	· 30			
Manusi Outside Air Damper	-16	26			
Roof Curb	70	116			
Oversized Motor	5,	· 8			
Belt Drive Motor	31	-			
Smake Detector, Rerum	7	7			
Smoke Detector, Supply	5	5			
Coil Guards	12	20			
Hinged Doors	10	12			
Powered Convenience Outlet	38	38			
Through the Base Electrical	8	13			
Through the Base Gas	5	5			
Unit Mounted Circuit Breaker	5	6			
Jnit Mounted Disconnect	6	5			
Novar Control	8	а			

2 Netweignt should be added to unnweight when ordering

factory-installed accessories

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Electrical Data

			Standard	Indeer Fan Motor	Oversize	ndoor Fan Motor	Belt Drive Indoor Fan Motor		
	Unit	Unit Operating	Minimum Circuit	Maximum Fuse Size Or N	Minimum Circuit	Maximum Fuse Size Or Maximum	Minimum Circuit	Maximum Puse Size or Maximum	
Tons	Model No.	Voitage Range	Ampacity	Circuit	Ampacity	Circuit Breaker'	Ampacity	Circuit Breaker'	
	101000044		20.0		26.3	40	-	_	
3	YHCO36A3	187-253	15.7	25	79.1	25	18.	25	
	YHC036A4	414-596	6.3	15	0.5	15	4.7	16	
	VHC036AW	517-693	70	15	76	. 15	78 78	15	
	VHC049A1	197.353	7.0	15	31.5	50		-	
			21.2	30	23.3	35	22,6	35	
4	YHC04BA4	414-506	11.0	15	12.6	15	71.6	15	
	YHC048AW	517-633	8.3	15	91	15	9 .5	15	
	YHC050A1	167-253	33.5	60	41.2	60		-	
		187-253	30.0	45	31.7	AS	28.05	45	
5	YHC080A4	414-506	13.9	20	14.2	20	13.5	-20	
1	YHCO60AVY	517-633	10.6	i5	11.2	15	10.2	15	
	YHÇ072A3	187 253	3 <u>4.6</u>	50	36,1	50	_		
е	YHC072A4	414-508	17.5	26	18.1	26		-	
	YHC072AW	517-633	13.5	20	14,3	20			
	YHC092A3	187-253	38.1	50		50	·	-	
71/2	YHC092A4	414-506	19.4	25	20.9	25			
-	YHC092AW	517-633	14.8	<u>'5</u>	16.0	20			
	YHC102A3	187-253	42.3	50	45.4	60		_	
8%	YHC102A4	414-506	21.4	25	22,9	30	-		
	YHC102AW	517-633	16.6	20	174	. 20		-	
	YHC120A3	187-253	48.6	60	52.6	49C)	-		
30	YHC120A4	414-506	25.3	30	27.3	35		-	
	YHC120AW	517-633	199	25	21.6	25		- ,	

NOTES: 1. HACR breaker por NEC.

			Stander	d Evapora	ator Faci N	lotor		Oversized Evaporator Fan Motor						
-	Unit	No	Valta	Dhasa	ыв	Arr	IDS . BA	No	1	Dhaaa	UD.	-An	npş	
-ona		110.	200 220	Flidse	.33	2.30	3.00	110.	208-230	- rnase	<u> </u>	4.70	9.80	
3	Y#C038A3	1	208-230	1	.33	2.30	3.90	1	208-230	1	.50	470	9.80	,
5	Y#C036A4 Y#C036AW	1 1	460 575	1	.33 .33	1.10 1.10	2.00 1.80	1	488	7 1	.50 .50	2.30 1.70	5. 20 3.80	•
	Y#C048A1	1	208230	1	.60	3.60	6.60	٦	208-230	1	.80	5.70	13.60	
	Y#C048A3	1.	208-230	1	.60	3,60	6.60	7	208-230	1	.eo	5,70	13.60	
4	Y#C048A4	1	460	1	.60	1.70	2.90	1	480	1	.80	3-30	7.20	•
_	Y#C04BAW	7	575	1	.60	1.60	2.40	1	575	1	.80	2.30	5.80	
1	Y#C06	Ĩ	208-230	1	.90	6.20	74.30	1	208-230	1	1.00 .	7.90	16.40	
•		1	208-230	1	.90	6.20	14,30	1	208-230	Ι	1.00	7.90	16.40	•
1	Y#C060A4	1	460	1	.90	2.90	6.60	1	460	1	1.00	3.20	5.20	
	Y#C060AW	1_	676	1	,90	2.10	4.90	1	575	1	100	2.70	5.00	

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TRANE



(5 - 6 Tons) **High Efficiency**

General Data

Table GD-6 — General Data

	5-Ton Convertible Units						8-Ton Convertible Units				
		YHC060A1		YH	C060A3, A4,	AW	YHC072A3, A4, AW				
Cooling Performance							,				
Gross Cooling Capacity		82,100			62,400		72,000				
SEER / EER ²		11.8 /			12z			-/11,4 ⁿ			
Nominal CFM / ARI Rated CFM		2,000/2,000			2,000/2,000			2,400/2,100			
ARI Net Cooling Capacity		68,000			59,500			68,000			
System Power (KVV)		5.73			5.61'			596 ⁿ			
Heating Performance*	T.		1.11				1	Medium	High		
Heating Models	LOW	Medium	High	Low	Mealum	High	LOW		450 400		
Heating Input (Btu)	60,000	80,000	130,000	60,000	80,000	130,000	80,000	120,000	160,000		
Heating Output (Btu)	48,000	64,000	103,000	48,000	64,000	104,000	64,800	97,200	121,600		
	81	81	80	81	61	80	al	81	81		
Stardy Stata Efficiency (%)	al	81	80	al	01	80	81	87	81		
No, Burners	2	2	3	2	2	3	2	9	3		
No. Stages	1	1	1	1	1	1	7	1	2		
Gas Connection Pipe Size (in.)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	3/4		
Compressor No.//vpe	1/Clicasturff@ Scroll			1/Climetruff Secold							
Outtion Lound Nating (dB)	<u> </u>				82	- Children		80			
Outdoor Coll June		Lanced			Lanced		•	Lanced			
		0 3125			0 3126			03125			
		10.06			10.96			12:00			
Carre Alea (Built)		3/17		3/17			3/17				
Induce Coll Teta	-	Langed		Lancad			Lanced				
Tube Circ Be V		0.9126			0.3125			0.3125			
		774			771		9,69				
Face Areb (aq iu)		67 - AMR			5/1R		3/16				
					Char Oldes		Short Onfine				
			9	1/34 NPT							
Drain Connection No./Size (In.)		1/94 INF)		1/94 NET			Prepoller				
Outdoor Fan - lype		Fropelier		Propeller			Propener (be				
		1/22		1/22			1/20				
Drive lype/No. Speeds		UNPECT/1		Directi				DINGCUT			
		3,170	3,170		3,170						
		(/0.33		1/0.33			1075				
Motor RPM		1,075	-,	1,075			1,078				
Direct Drive Indoor Fan - iype	ł	-C Centrilugi	91	1	-C Centrinug	54		N/A			
No. Uzad/Diamatar (m.)		1/11 X 11			1711 X 11			IN/A			
Drive lype/No. Speeds		Direct/2			Ulfect/2			ENZAS			
No. Motors		1			1			NVA			
Motor HP (Standard/Oversized)		0.90/1.00			0.90/1.00			N/A	•		
Motor RPM (Standard/Oversized)		985/1,080*			985/1,080*			N/A			
Motor Frame Size (Standard/Oversized)		48/48			48/49			N/A	·		
Beit Drive Indoor Fan -Type	F	C Centrifuga	ai	F	-C Centrifug	31		FC Centrituge	3 .		
No. Used/Diameter (in.)	1/11 x 11			1/11 x 11		-	1/12 X 12				
Drive Type/No. Speeds	BeloVariable Sheave 14		Belt/	Belt/Variable Sheave 12			BeltVerleble Sheeve				
No. Motors	1		1			1					
Motor HP (Standard/Oversized)	1.00/		1.00/			1.00/2.00					
Motor RFM (Standard/Oversized)	1,750/		1,750/								
Motor Frame Size (Standard/Oversized)		55/		56/			56/56				
rutors - IVpe		ПЛГОМАМВУ			Inrowewey			Incovaway			
rumisnea/ (No.) Size Recommended		ד85 איי פליע מכיני	10		105 100 - 100 - 10	10		105 (M) 10	.		
(INU.) SIZE RECOMMENDED		4/4U X 20 X		(4	4) 40 X 20 X 1		(4) 18 X 25 X 2				
Kernegrant Lingrow II of At 15-771		50			11		77.5				

NOTES: 1.7. Sea Notes on Page 16. 5. YHC060A Oversized Motor Fan Diameter is 1 × 11. 6. Motor APM shown is low append. High speed Motor RPM is 1,100/1,135. 10. Filter size snown is low append. High speed Motor RPM is 1,100/1,135. 10. Filter size snown is low append. High speed Motor RPM is 1,100/1,135. 11. YHC072A when applied in a horizontal configuration has an 11.0 EER and 7.73System Power (KW), 12. Belt Drive Motor is not available for YHC060A1.

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