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MAR 15 2017



CAMBRIDGE HISTORICAL COMMISSION

831 Massachusetts Avenue, 2nd Fl., Cambridge, Massachusetts 02139
Telephone: 617 349 4683 Fax: 617 349 3116 TTY: 617 349 6112
E-mail: histcomm@cambridgema.gov URL: http://www.cambridgema.gov/Historic

CAMBRIDGE HISTORICAL COMMISSION

APPLICATION FOR CERTIFICATE

- 1. The undersigned hereby applies to the Cambridge Historical Commission for a Certificate of (check one box): [X] Appropriateness, [] Nonapplicability, or [] Hardship, in accordance with Chapter 40C of the Massachusetts General Laws and/or Chapter 2.78 of the Municipal Code.
2. Address of property: 16 Garden Street, Cambridge, Massachusetts
3. Describe the proposed alteration(s), construction or demolition in the space provided below: (An additional page can be attached, if necessary).

HVAC equipment will be added to the building in order to cool the kitchen and update other systems in the building.

The existing condensing unit at the side of the building in the parking lot will be replaced with a new condenser. An existing gooseneck duct will be removed. A new makeup air unit will be installed adjacent to the new condenser.

At the roof, a new chiller is to be installed, and an existing condenser is to be relocated. The relocated condenser will not be visible from any public way, including the Common. The chiller will not be visible from Garden Street. The top of the chiller will be slightly visible from the area of the monument on the Common - about 760' away - but not from closer viewpoints. A portion of the top of the unit will be visible from two locations on Phillips Place behind the Hotel.

Drawings and photos are enclosed.

Deleted 3/31/17

I certify that the information contained herein is true and accurate to the best of my knowledge and belief. The undersigned also attests that he/she has read the statements printed on the reverse.

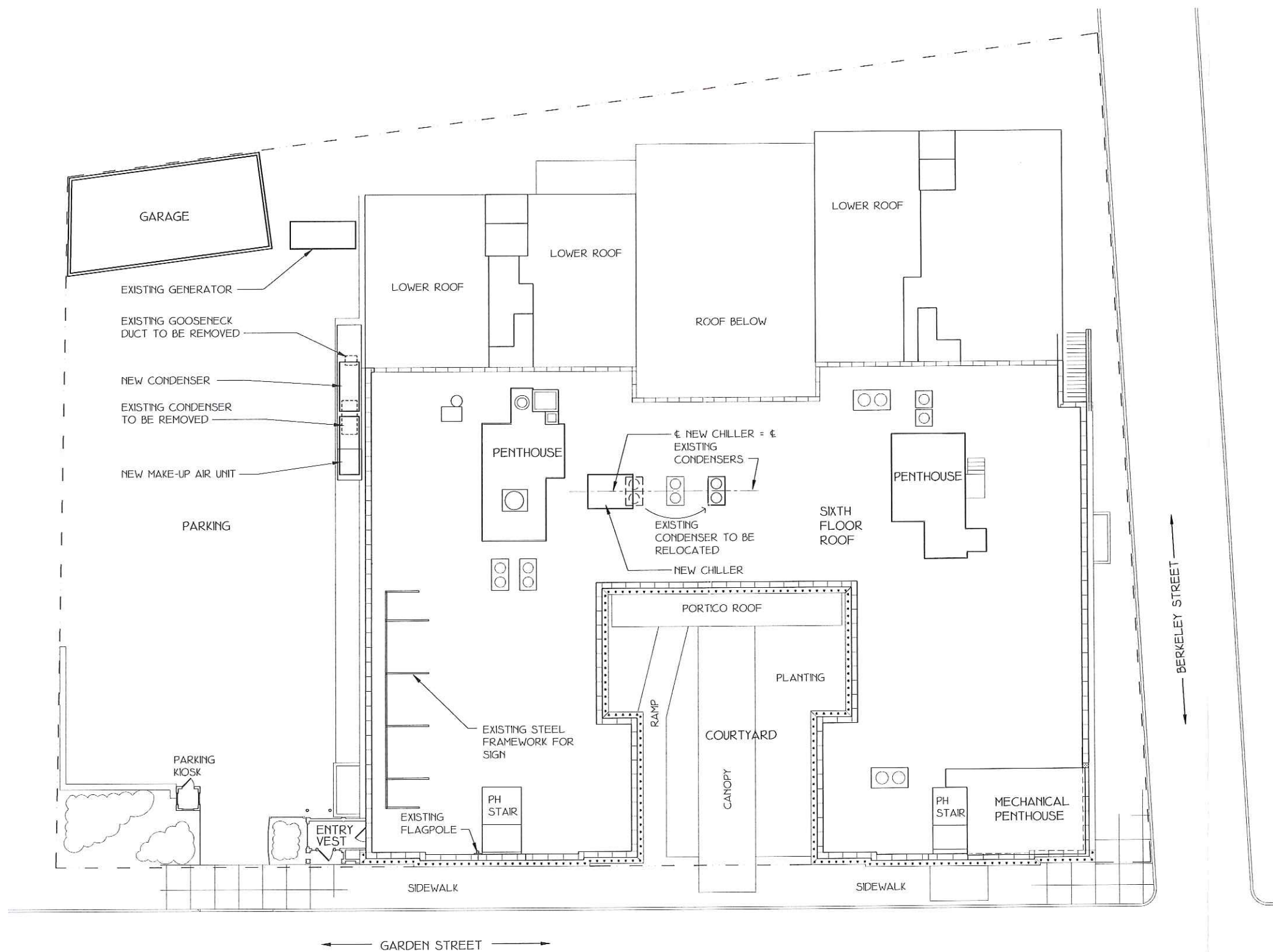
Name of Property Owner of Record: Michael Guleserian
Mailing Address: 16 Garden Street, Cambridge, MA 02138
Telephone/Fax: 617-547-4800 E-mail: michael.guleserian@shertoncommander.co
Signature of Property Owner of Record: [Signature]
Name of proponent, if not record owner:
Mailing Address:
Telephone/Fax: E-mail:

(for office use only):
Date Application Received: 3/15/17 Case Number: 3764 Hearing Date: 4/6/17
Type of Certificate Issued: Date Issued:

**HARDAWAY
SZIABOWSKI
ARCHITECTS**

47 River Street, Suite 200
Wellesley Massachusetts
02481

781 235 5339
FAX 781 235 5329



Project Name:
**MECHANICAL
EQUIPMENT**
SHERATON COMMANDER HOTEL
16 GARDEN ST, CAMBRIDGE, MA

No.	Date	Description

Project No.: 16.39
Date: 03/14/17
Scale: 3/32" = 1'-0"
Drawn by: MWB
Checked by: RTH

Drawing Title:
SITE / ROOF PLAN

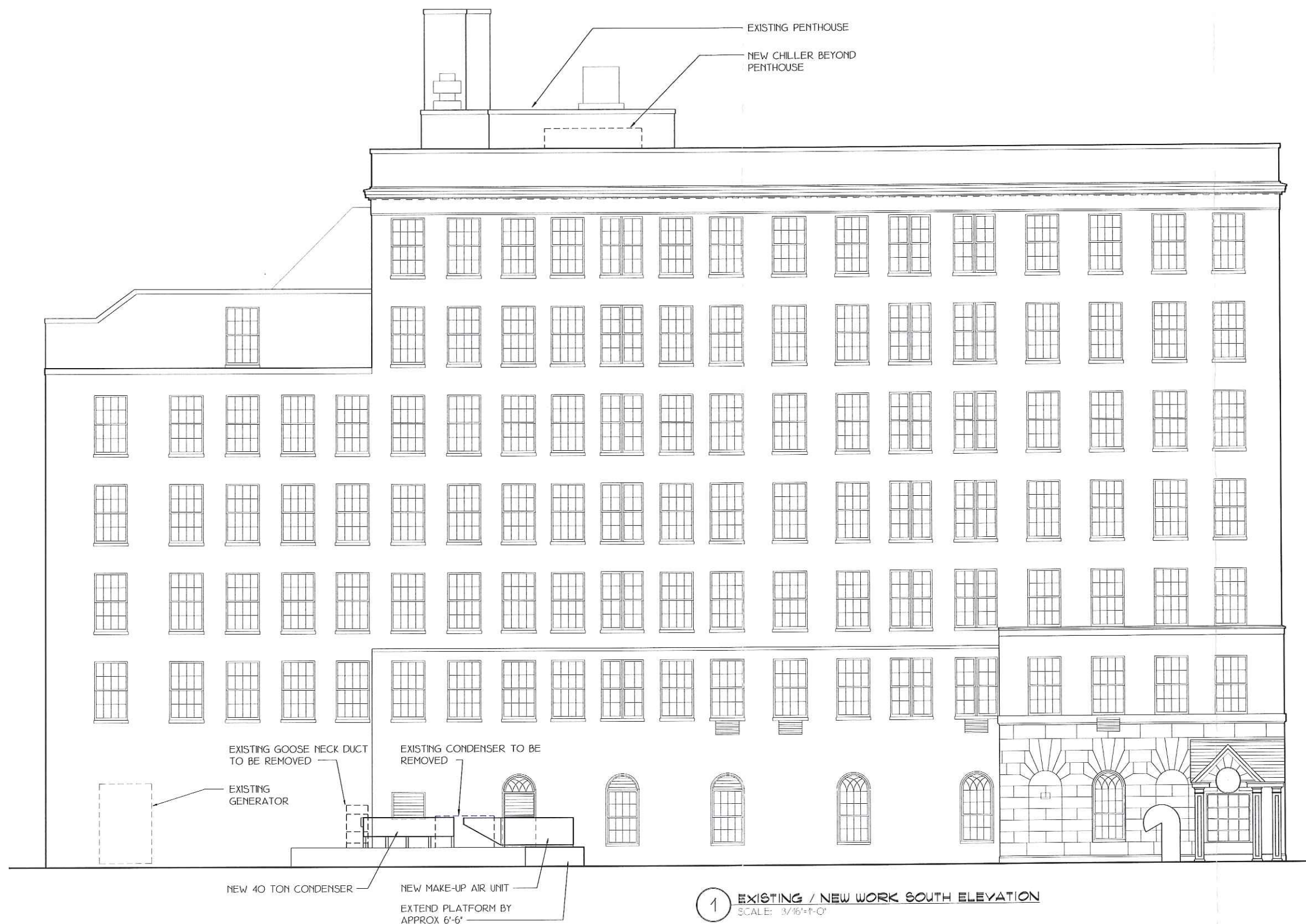
Drawing No.:
A-1



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Project Name:
**MECHANICAL
EQUIPMENT**
SHERATON COMMANDER HOTEL
16 GARDEN ST, CAMBRIDGE, MA

No.	Date	Description

Project No.: 16.39
Date: 03/14/17
Scale: AS NOTED
Drawn by: MWB
Checked by: RTH

Drawing Title:
SOUTH ELEVATION

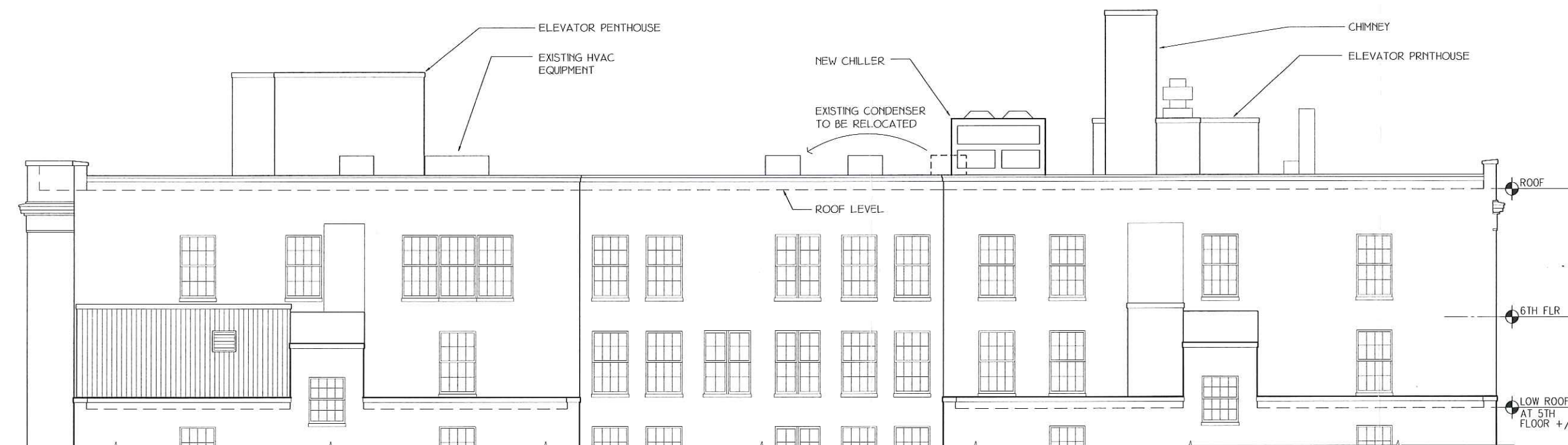
Drawing No.:

A-2

**HARDAWAY
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1 EXISTING PARTIAL WEST (REAR) ELEVATION
SCALE: 3/16"=1'-0"

Project Name:
**MECHANICAL
EQUIPMENT**
SHERATON COMMANDER HOTEL
16 GARDEN ST, CAMBRIDGE, MA

No.	Date	Description

Project No.: 16.39
Date: 03/14/17
Scale: AS NOTED
Drawn by: MWB
Checked by: RTH

Drawing Title:
WEST ELEVATION

Drawing No.:
A-3

Explanation of Photos
Application for Certificate of Appropriateness
Sheraton Commander Hotel
14 March 2017

Photo 1
View of parking lot from sidewalk.

Photo 2
Condenser and gooseneck duct to be removed.

Photo 3
Pole with top of bucket at height of top corner of new chiller. Photos were taken from ground with pole and bucket at each corner of chiller. 3 locations were found from which chiller would be visible from ground, each shown in Photos 4, 5, and 6 respectively.

Photo 4
From monument on Common. Although not clearly visible in photo, a few inches of bucket was barely visible below second M in "Commander" on sign. Bucket was not visible from locations closer to building.

Photo 5
Shows worst case from Phillips Place – near left corner of chiller.

Photo 6
Shows worst case from corner of Berkeley St. and Phillips Place – near left corner of chiller.

Richard T. Hardaway
Architect













Burks, Sarah

From: hardaway@hsarchitecture.com
Sent: Friday, March 31, 2017 7:52 AM
To: Burks, Sarah
Subject: RE: Attn Richard Hardaway: RE: 16 Garden Street, Sheraton Commander
Attachments: Existing Sound data.pdf; New Sound Data.pdf

Hi Sara,

Please inform the commission that the Hotel is withdrawing its request for approval of a chiller on the roof. This equipment will not be installed at this time. They are, however, still requesting approval of the proposed condenser and make-up air unit in the parking lot to replace the existing equipment at this location.

I have attached cuts with the noise levels from the existing condenser and the proposed condenser. The proposed unit, with a db rating at 5' from the unit of 64.8, will be considerably quieter than the existing unit, whose rating at the same distance is 86.3. The sound levels at the south and west property lines, both about 55' from the unit, will be about 44 db. The existing unit's sound level at the property lines is about 65 db.

The make-up air unit's addition to the total sound level will be negligible. I hope to have numerical data on this later this morning and will forward it as soon as received.

Thank you.

Dick Hardaway

PS Please use the email address on this email, not zsiabowski@hsarchitecture.com. Thank you.

From: zsiabowski@hsarchitecture.com [mailto:zsiabowski@hsarchitecture.com]
Sent: Thursday, March 30, 2017 2:19 PM
To: hardaway@hsarchitecture.com
Subject: FW: Attn Richard Hardaway: RE: 16 Garden Street, Sheraton Commander
Importance: High

Joseph J. Sziabowski, AIA Principal

HARDAWAY | SZIABOWSKI Architects
47 River Street, Suite 200 | Wellesley, MA 02481 | 781.235.5339 | www.hsarchitecture.com

From: Burks, Sarah [mailto:sburks@cambridgema.gov]
Sent: Thursday, March 30, 2017 1:44 PM
To: zsiabowski@hsarchitecture.com
Subject: Attn Richard Hardaway: RE: 16 Garden Street, Sheraton Commander
Importance: High

Richard,

I am writing with regard to your application to the Historical Commission for new condenser, make up air unit, and chiller. As you know, noise of mechanical equipment often comes up during our hearings. Though our jurisdiction is fairly limited in this regard--deferring to the zoning and license staff for compliance with the city's noise ordinance requirements—it is important that you come prepared to answer these questions with specifics.

Could you please send me specifications for the mechanical units that you have selected? Have you consulted any acoustical engineers in the planning of this project? If so, do you have any reports that you could forward or a letter summarizing recommendations made? Will you be using any materials to baffle or otherwise mitigate any noise issues. If so, please send more information.

My mailing to the commission will be going out tomorrow afternoon. Anything that you could email to me by tomorrow morning could be included in that packet.

Thank you.

Sincerely,
Sarah Burks

Sarah L. Burks, Preservation Planner
Cambridge Historical Commission
831 Massachusetts Ave., 2nd Fl.
Cambridge, MA 02139
ph 617-349-4687; fax 617-349-3116; TTY 617-349-6112
<http://www.cambridgema.gov/Historic>

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CONDENSER	09DE		09DK			
	016	020	024	028	034	044
RATING (Tons)*	18.4	21.9	25.9	33.3	48.0	56.2
NET WEIGHT (lb)†	465	762	762	944	1438	1589
FAN						
Quantity	2	2	2	2	3	3
Prop. Diam (in.)	24	30	30	30	30	30
Rpm	1075	1140	1140	1140	1140	1140
Total Airflow (cfm)	9600	10,600	13,500	15,700	21,100	23,700
Motor Hp (per fan)	1/2	3/4	3/4	1	1	1
COILS						
Arrangement	Vertical			Horizontal		
Rows...Fins/in.	3...15.6	3...17	3...17	2...19	2...17	3...17
Total Face Area (sq ft)	29.2	23.5	23.5	39.2	58.4	58.4

CONDENSER	09DK				
	054	064	074	084	094
RATING (Tons)*	65.8	78.6	95.4	103.5	116.3
NET WEIGHT (lb)†	1645	1771	2106	2310	2714
FAN					
Quantity	4	4	6	6	6
Prop. Diam (in.)	30	30	30	30	30
Rpm	1140	1140	1140	1140	1140
Total Airflow (cfm)	35,000	35,000	52,000	51,000	57,000
Motor Hp (per fan)	1	1	1	1	1
COILS					
Arrangement			Vertical/Horizontal		
Rows...Fins/in.	2...17	3...17	2...17	3...17	3...17
Total Face Area (sq ft)	80.5	80.5	116.7	116.7	128.3

*Nominal heat rejection based on optimum refrigerant charge of R-22 with 15 F subcooling at 30 F temperature difference.

†Without refrigerant. Weights include copper tubes/aluminum fins.

ESTIMATED RADIATED SOUND POWER LEVEL, dB

UNIT	OCTAVE BAND CENTER FREQUENCY, Hz								
	63	125	250	500	1000	2000	4000	8000	dBa
09DE016	NA	89	86	84	82	76	71	64	86.3
09DK020	92	89	89	88	87	82	78	71	90.1
09DK024	94	91	91	90	88	83	81	74	92.5
09DK028	91	91	90	88	86	82	79	74	90.8
09DK034	92	92	90	88	87	83	80	75	91.5
09DK044	93	93	91	89	88	83	81	76	92.3
09DK054	101	90	94	92	90	88	85	78	95.5
09DK064	101	90	94	92	90	88	85	78	95.5
09DK074	102	96	98	97	93	91	87	80	98.8
09DK084	102	96	98	97	93	91	87	80	98.8
09DK094	102	96	98	97	93	91	87	80	98.8

NOTE: Estimated sound power levels, dB re 1 Picowatt.

ESTIMATED RADIATED SOUND POWER LEVEL, dB — 09DK054-094 CONDENSERS WITH ACCESSORY SOUND POWER REDUCTION KIT

UNIT	OCTAVE BAND CENTER FREQUENCY, Hz									
	63	125	250	500	1000	2000	4000	8000	dBa	
09DK054	96	89	90	89	87	84	80	73	91.7	
09DK064	96	89	90	89	87	84	80	73	91.7	
09DK074	101	96	94	94	90	87	82	73	95.6	
09DK084	101	96	94	94	90	87	82	73	95.6	
09DK094	101	96	94	94	90	87	82	73	95.6	

NOTE: Estimated sound power levels, dB re 1 Picowatt.

NEW CONDENSER

SOUND RATINGS FOR CONDENSERS AND FLUID COOLERS

DATA AIRE MODEL	# of FANS	dba for Standard Unit @ 5' Away	dba for Low Decibel Unit @ 5' Away
DARC 03, 05	1	73.7	62.5
DARC 06, 07, 09	1	71.5	59.7
DARC 11, 15, 17	2	72.0	62.9
DARC 21, 24, 28	3	73.5	63.5
DARC 30, 37, 40	4	74.4	64.8
DARC 44, 50	5	76.6	66.3
DARC 57	6	76.5	66.5
DARC 61, 75, 80	8	77.4	67.8
DARC 88, 100	10	79.6	69.3

Note Unit may also have prefix DAFC or DRCU