Report By:

National TAB
1126 SWIFT STREET
KANSAS CITY, MO 64116

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 09/08/2025

Completed By: National TAB

PROJECT

Charles Schwab (Cupertino, CA)

19499 STEVENS CREEK BLVD

Cupertino, CA 95014

Client

Buffalo Mechanical

501 South Parallel Ave

Ripon, CA 95366

National TAB

Project: Charles Schwab (Cupertino, CA)

Table Of Contents

CERTIFICATION

PROJECT: Charles Schwab (Cupertino, CA)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB *Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems.* Any variances from design quantities, which exceed NEBB tolerances, are noted in the Test-Adjust-Balance Report Project Summary.

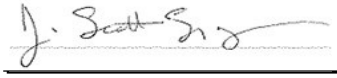
The air distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM:	National TAB-Southeast
REGISTRATION NO:	3755
CERTIFIED BY:	J. Scott Springer 23312
DATE:	9/9/2025

The hydronic distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM:	National TAB-Southeast
REGISTRATION NO:	3755
CERTIFIED BY:	J. Scott Springer 23312
DATE:	

Submitted and Certified by:

NEBB TAB FIRM:	National TAB-Southeast
TAB PROFESSIONAL:	J. Scott Springer
SIGNATURE:	
REGISTRATION NO:	3755 (NTAB) / 23312
CERTIFICATION EXP:	12/31/2025

National TAB

Testing, Adjusting, and Balancing Equipment

Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	Shortridge ADM-880C S/N M05066	10/15/2024	10/15/2025
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Shortridge ADM-880C S/N M05066	10/15/2024	10/15/2025
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 3 % +/- 7 cfm	Shortridge Flow Hood	10/15/2024	10/15/2025
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	10/15/2024	10/15/2025
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	10/15/2024	10/15/2025
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	10/15/2024	10/15/2025
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 090315046	10/15/2024	10/15/2025
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Dwyer TAC-L - S/N S1100123	10/15/2024	10/15/2025
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026
DALT	DUCT LEAKAGE	-10"- +10" wc	±1% of reading +/- 0.004" wc	Kanomax DALT 6900 S/N: 080439	3/7/2025	3/7/2026

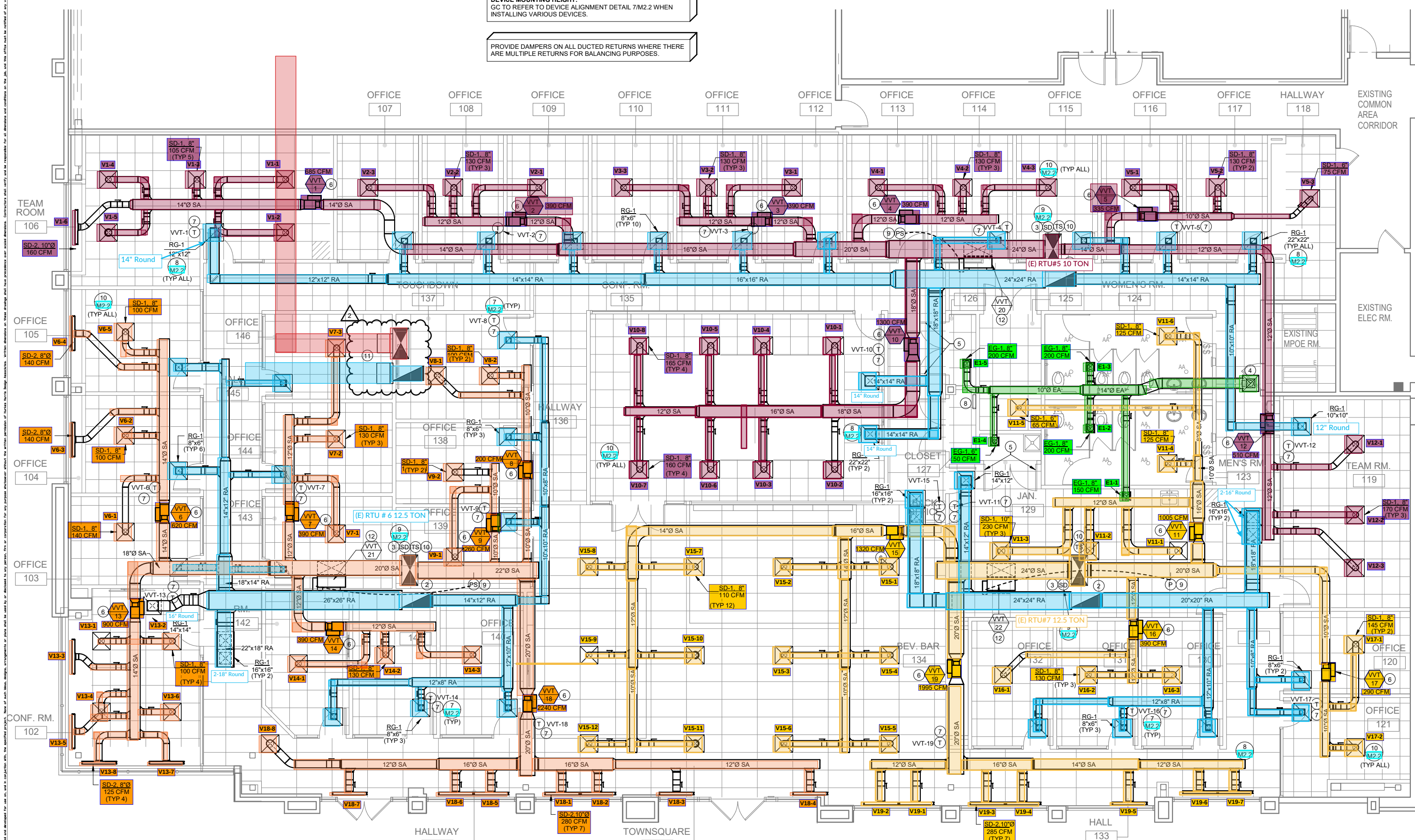
Abbreviation List

A = Area (ft^2)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A_k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T_{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T_{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T_{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO2 = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C_v = Flow Constant	K_v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T_{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% $_{ra}$ = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio

GC TO INSTALL RETURN GRILLE SOUND BOOTS ON ALL RETURNS PER SOUND BOOT DETAIL 8/M2.2.

DEVICE MOUNTING HEIGHT:
GC TO REFER TO DEVICE ALIGNMENT DETAIL 7/M2.2 WHEN INSTALLING VARIOUS DEVICES.

PROVIDE DAMPERS ON ALL DUCTED RETURNS WHERE THERE ARE MULTIPLE RETURNS FOR BALANCING PURPOSES.



1 FLOOR PLAN
SCALE: 3/16" = 1'-0"

HVAC GENERAL NOTES:

GENERAL NOTES:

A. EXISTING CONDITIONS ARE BASED ON RECORD DRAWINGS PROVIDED BY THE OWNER. CONTRACTOR SHALL ADJUST TO ACTUAL FIELD CONDITIONS AT NO ADDITIONAL EXPENSE TO THE PROJECT.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY EXTRAS DUE TO THE CONTRACTOR'S FAILURE TO VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR RESOLUTION.

C. ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS.

D. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE GOVERNMENT AND LOCAL CODES.

E. MECHANICAL CONTRACTOR SHALL FIELD COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL POWER REQUIREMENTS.

F. ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF ALL EQUIPMENT MAY BE PROPERLY COORDINATED.

G. ALL EQUIPMENT FURNISHED SHALL FIT THE SPACE AVAILABLE WITH CONNECTIONS IN THE REQUIRED LOCATIONS AND WITH ADEQUATE SPACE FOR OPERATING AND SERVICING. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATE THE INTENT OF THE INSTALLATION WHILE THE SPECIFICATIONS AND EQUIPMENT LIST DENOTE THE TYPE AND QUALITY OF MATERIAL AND WORKMANSHIP TO BE USED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER AND/OR MORE COSTLY STANDARD WILL APPLY. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER WHOSE DECISION SHALL BE FINAL. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY IN THIS REGARD ON BEHALF OF THE CONTRACTOR AFTER AWARD OF THE CONTRACT.

H. COORDINATE DUCT ROUTING AND HEIGHTS WITH GENERAL CONTRACTOR. VERIFY ALL CLEARANCES BEFORE STARTING WORK.

I. THE CONTRACTOR SHALL INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT AS REQUIRED TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE CEILING HEIGHTS AND HEADROOM AND MAKE ALL EQUIPMENT REQUIRING MAINTENANCE OR REPAIR ACCESSIBLE.

J. ALL DUCT CONNECTIONS TO HVAC EQUIPMENT MUST BE MADE WITH FLEXIBLE CONNECTORS.

K. DO NOT ATTACH ANYTHING TO DECK ABOVE. ATTACH TO STRUCTURE (i.e. BEAMS, JOISTS) ONLY. DUCT HANGERS SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE. ALL CONNECTIONS TO JOISTS SHALL BE MADE AT THE TOP CORD.

L. ALL DUCT DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER OR WRAPPED WITH 1-1/2" THICK FIRE RETARDANT FIBERGLASS WITH A REINFORCED ALUMINUM FOIL JACKET AND SHALL BE APPROVED FOR USE BY SMACNA AND NAIMA. RETURN AIR TRANSFER DUCTS AND RETURN DUCTWORK WITHIN 10 FEET OF THE UNIT FAN SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER.

M. AT THE START OF CONSTRUCTION, THE MECHANICAL CONTRACTOR SHALL INSPECT AND RUN TEST ALL EXISTING HVAC UNITS DESIGNATED FOR REUSE. CONTRACTOR SHALL INFORM THE ENGINEER OF ANY NECESSARY REPAIRS FOR APPROVAL IN A TIMELY MANNER, AS TO NOT DELAY THE PROJECT OPENING DATE.

N. PROVIDE REMOTE VOLUME DAMPER CONTROL MANUFACTURED BY YOUNG REGULATOR OR UNITED ENERTECH FOR DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS. LOCATE CONTROLLER ABOVE ACCESSIBLE CEILING LOCATION.

O. THIS PROJECT UTILIZES A PLENUM RETURN AIR CEILING DESIGN. ALL EQUIPMENT AND MATERIALS INSTALLED IN THE PLENUM RETURN CEILINGS MUST MEET THE FLAME SPREAD AND SMOKE DEVELOPED RATINGS OF 25/50 AND BE APPROVED FOR USE IN PLENUM RETURN CEILINGS.

P. TENANT'S CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL UTILITY RUNS AND/OR OTHER IMPROVEMENTS LOCATED ON THE PREMISES PRIOR TO BIDDING. TENANT'S CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COSTS RELATING TO THE RELOCATION OF, DAMAGE TO, REPAIR OF ANY EXISTING UTILITY RUNS AND/OR IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK IN OR AROUND THE PREMISES.

Q. ALL ROOFING WORK SHALL BE PERFORMED BY LANDLORD'S APPROVED ROOFING CONTRACTOR AT TENANT'S EXPENSE, IF REQUIRED IN LEASE OR TENANT CRITERIA MANUAL.

R. ROOF MOUNTED EQUIPMENT SHALL BE LABELED WITH THE TENANT NAME AND SPACE NUMBER WITH 3" HIGH WEATHER PROOF LETTERS.

S. MECHANICAL CONTRACTOR SHALL PROVIDE TENANT WITH A WRITTEN ONE (1) YEAR MANUFACTURER'S WARRANTY ON ALL HVAC EQUIPMENT PROVIDED AND / OR INSTALLED. THE WARRANTY SHALL INCLUDE ALL LABOR, MATERIALS AND THREE (3) ROUTINE SERVICES INCLUDING FILTER CHANGES DURING A ONE (1) YEAR PERIOD.

T. AT THE COMPLETION OF CONSTRUCTION AN NEBB, AABC OR TABB CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND LANDLORD. THE BALANCING MUST BE COMPLETED BY AN INDEPENDENT, THIRD PARTY CONTRACTOR WITH NO TIES TO THE INSTALLING CONTRACTORS.

U. GC IS TO PROTECT IN PLACE ALL EXISTING MECHANICAL EQUIPMENT SLATED FOR REUSE DURING ALL PHASES OF WORK. GC IS TO REPLACE ALL HVAC FILTERS AT THE BEGINNING AND END OF THE PROJECT.

V. FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT AND PROVIDE ALL LABOR REQUIRED AND NECESSARY TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND/OR SPECIFIED IN ALL SECTIONS OF DIVISION 23 AND ALL OTHER WORK AND MISCELLANEOUS ITEMS, NOT SPECIFICALLY MENTIONED, BUT REASONABLY INFERRED FOR A COMPLETE INSTALLATION, INCLUDING ALL ACCESSORIES REQUIRED FOR TESTING THE SYSTEM. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS
THAT ALL SYSTEMS BE COMPLETE AND READY FOR OPERATION.

W. CONTRACTOR IS RESPONSIBLE FOR COMPLETION OF ALL TITLE 24 MECHANICAL INSTALLATION CERTIFICATE DOCUMENTS AS REQUIRED BY THE AHJ.

X. CONTRACTOR IS RESPONSIBLE FOR COMPLETION OF ALL TITLE 24 MECHANICAL ACCEPTANCE TESTING DOCUMENTS AS REQUIRED BY THE AHJ.

Y. PROVIDE DUCT LINING ON FIRST 10'-0" OF SUPPLY AND RETURN OF EACH RTU.

BUILDING COORDINATION:

AA THE CONTRACTOR SHALL OBTAIN A COPY OF THE LANDLORD'S TENANT CRITERIA MANUAL. TENANT CRITERIA MANUAL IS AN INTEGRAL PART OF THIS CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH LANDLORD REQUIREMENTS AT NO ADDITIONAL COST TO THE TENANT.

AB. PARTS OF THE BASE BUILDING SYSTEMS THAT FALL INTO LEASE LINE SHALL REMAIN UNDISTURBED UNLESS NOTED OTHERWISE.

AC. PROVIDE ALL NECESSARY WIRING, RELAYS, DETECTORS, COMPONENTS, ETC.,

(#) HVAC KEYNOTES:

HVAC NOTES:

1. EXISTING 10 TON ROOFTOP UNIT TO REMAIN. FIELD VERIFY EXACT LOCATION.
2. EXISTING 12.5 TON ROOFTOP UNIT TO REMAIN. FIELD VERIFY EXACT LOCATION.
3. VERIFY EXISTING CONDITIONS. IF NOT PRESENT, DUCT SMOKE DETECTOR ON SUPPLY SIDE DUCT AND SHUTDOWN RELAY SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. ALL WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR.
4. PROVIDE NEW EXHAUST FAN AS NOTED ON M1.4 PLAN AND SCHEDULED ON SHEET M2.1. THE CONTRACTOR SHALL FIELD VERIFY THAT THE LOCATION SHOWN IS A MINIMUM OF 15'-0" FROM ANY OUTDOOR AIR INTAKE. EXHAUST FAN RUN SIGNAL TO BE TIED TO THE SUPPLY FAN OF RTU-5.
5. CONTRACTOR SHALL UNDERCUT IT CLOSET DOORS 1".
6. PROVIDE NEW VVT BOX AS NOTED ON PLANS AND SCHEDULED ON SHEET M2.1
7. PROVIDE NEW CARRIER 3V SPACE TEMPERATURE SENSOR WITH TIMED PUSH BUTTON OVERRIDE, SET POINT ADJUSTMENT AND DIGITAL READOUT DISPLAY.
8. PROVIDE NEW CARRIER 3V SYSTEM PILOT, VVT BYPASS CONTROLLER, UNIVERSAL CONTROLLER, AND COMPLETE ARRAY OF INPUT AND OUTPUT DEVICES. THE SYSTEM SHALL PROVIDE FULL CONTROL OF HVAC HEATING AND COOLING EQUIPMENT IN A MULTIPLE ZONE APPLICATION.
9. PROVIDE PRESSURE SENSOR INTEGRATED WITH BYPASS DAMPER.
10. SUPPLY DUCT TEMPERATURE SENSOR INTEGRATED INTO 3V SYSTEM PILOT VVT CONTROLS.
11. EXISTING RTU LOCATED IN OUR SPACE IS SHOWN FOR REFERENCE AND WILL NOT BE USED. CAP SEAL AND INSULATE DUCT DROPS FROM RTU. UNIT TO BE ELECTRICLY LOCKED OFF. (2)
12. INSTALL BYPASS DAMPER FROM SUPPLY DUCT TO RETURN DUCT CONTROLLED BY SUPPLY DUCT PRESSURE.

SEISMIC NOTE:
SEISMIC DESIGN, IF ANY, SHALL BE HANDLED AS A DEFERRED SUBMITTAL BY THE INSTALLING CONTRACTOR.

FINAL DUCT ROUTING AND COORDINATION SHOULD BE PREFORMED BY THE INSTALLING CONTRACTOR PRIOR TO FABRICATION OF ANY DUCTWORK TO ENSURE ADEQUATE CLEARANCES AND CLASH AVOIDANCE WITH OTHER TRADES.

HOURS OF OPERATION/ THERMOSTAT PROGRAMMING:
OCCUPIED:
TIME: MONDAY THROUGH FRIDAY, 7:30 AM TO 5:30 PM.
OCCUPANCY OVERRIDE FOR 2 HOUR PERIOD.
TEMPERATURE SETPOINT: 72 DEGREES F WITH A 5 DEGREE DEADBAND AS REQUIRED BY ENERGY CODE, OR MINIMUM OF +/- 2 DEGREES.

UNOCCUPIED:
TEMPERATURE SETPOINT 85 DEGREES F COOLING, 55 DEGREES F HEATING.

IT EQUIPMENT ROOM: SETPOINT OF 75 DEGREES F

DESIGNER OF RECORD:
HURKES HARRIS
INTERIOR DESIGN-SPACE PLANNING
3838 CAMINO DEL RIO N, STE 252
SAN DIEGO, CA 92108
PHONE: 619-702-0380
FAX: 619-702-0383
www.hhdainc.com

REGISTERED PROFESSIONAL ENGINEER
GRADY G TURNER
NO. 39840
MECHANICAL
STATE OF CALIFORNIA
04/10/25

MEP ENGINEER:
208.288.2181 Project: 24HHD01

CLIENT:
charles SCHWAB

CHARLES SCHWAB
CUPERTINO
19499 STEVENS CREEK BLVD., SUITE 100
CUPERTINO, CA 95014

(3) 03/05/2025 BULLETIN #1
(2) 02/20/2025 CITY COMMENT REVIEW

ISSUES:

CS 20% REVIEW ISSUE:	09/04/2024
CONSULTANT ISSUE:	09/10/2024
CS 90% REVIEW:	10/11/2024
LANDLORD REVIEW:	12/03/2024
GC BID:	12/03/2024
PERMIT SUBMITTAL:	12/03/2024
FOR CONSTRUCTION:	04/11/2025

FILE NUMBER:	252.027
DATE:	11/26/2024
SCALE:	AS NOTED
DRAWN BY:	

HVAC FLOOR PLAN

M1.1

National TAB

Project: Charles Schwab (Cupertino, CA)

System/Unit: AHU/RTU

Asset: RTU-5 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	ICP
Serial Num	-	P161995581
Model Num	NA	RGH120LDHW7LABA
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19
Num PreFilter 1	-	4
PreFilter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	145TZ
Horsepower	-	NL
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	460
Rated Amperage	-	6.4
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	VP65
Motor Bore Size	7/8"
Motor Sheave SetPt	4 TURNS OPEN
Fan Sheave Size	AFD84
Fan Sheave Bore	1"
Belt CL Distance	17.5"
Num of Belts	1
Belt Size	AX54

Test Data		
	Design	**Actual**
SF CFM	4000	3839
SF RPM	-	1223
RA CFM	3070	2921
OA CFM	930	918
RL Voltage	460	487/487/487
RL Amperage	6.4	4.76/4.76/4.76
OA Damper Position	-	31%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.71"
Fan Suction SP	-	-0.99"
Fan Discharge SP	-	0.77"
Total ESP	-	1.48"
Fan Total SP	-	1.76"

Completed By: Zack Eismin on 09/08/2025

Unit Data - PHOTO LOG

09/03/2025

National TAB

Project:Charles Schwab (Cupertino, CA)

AHU/RTU

VAV - Single Duct

RTU-5/

Asset								
Asset Name	**MFG**	**Model Num**	**Type**	**Inlet Size**	**Design Max CFM**	**Max CFM**	**Design Min CFM**	**Min CFM**
VVT-1	CARRIER	35EV	VVT	7"	685	661	130	131
VVT-2	CARRIER	35EV	VVT	7"	390	371	100	99
VVT-3	CARRIER	35EV	VVT	7"	390	381	100	97
VVT-4	CARRIER	35EV	VVT	7"	390	399	100	103
VVT-5	CARRIER	35EV	VVT	7"	335	307	75	77
VVT-10	CARRIER	35EV	VVT	12"	1300	1209	300	311
VVT-12	CARRIER	35EV	VVT	8"	510	511	175	181

Diffuser Supply (GRD)

VVT-1/TEAM ROOM 106

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V1-1	TEAM ROOM 106	SD-1	8	105	89	99	94.3
V1-2	TEAM ROOM 106	SD-1	8	105	88	107	101.9
V1-3	TEAM ROOM 106	SD-1	8	105	93	104	99.0
V1-4	TEAM ROOM 106	SD-1	8	105	91	97	92.4
V1-5	TEAM ROOM 106	SD-1	8	105	85	99	94.3
V1-6	TEAM ROOM 106	SD-2	10	160	144	155	96.9
Total				685	590	661	96.5%

VVT-2/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V2-1	109	SD-1	8	130	101	125	96.2
V2-2	108	SD-1	8	130	107	125	96.2
V2-3	107	SD-1	8	130	103	121	93.1
Total				390	311	371	95.13%

VVT-3/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V3-1	112	SD-1	8	130	101	122	93.8
V3-2	111	SD-1	8	130	110	131	100.8
V3-3	110	SD-1	8	130	107	128	98.5
Total				390	318	381	97.69%

VVT-4/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V4-1	115	SD-1	8	130	101	135	103.8
V4-2	114	SD-1	8	130	97	127	97.7
V4-3	113	SD-1	8	130	91	137	105.4
Total				390	289	399	102.31%

VVT-5/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V5-1	116	SD-1	8	130	111	118	90.8
V5-2	117	SD-1	8	130	117	120	92.3
V5-3	118	SD-1	6	75	66	69	92.0
Total				335	294	307	91.64%

VVT-10/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V10-1	135	SD-1	8	165	133	149	90.3
V10-2	135	SD-1	8	160	127	151	94.4
V10-3	135	SD-1	8	165	130	149	90.3
V10-4	135	SD-1	8	160	125	152	95.0
V10-5	135	SD-1	8	165	121	155	93.9
V10-6	135	SD-1	8	160	123	152	95.0
V10-7	135	SD-1	8	165	125	154	93.3
V10-8	135	SD-1	8	160	135	147	91.9
Total				1300	1019	1209	93%

VVT-12/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V12-1	119	SD-1	8	170	144	172	101.2
V12-2	119	SD-1	8	170	141	171	100.6
V12-3	119	SD-1	8	170	137	168	98.8
Total				510	422	511	100.2%

Completed By: Zack Eismin on 09/08/2025

National TAB

Project: Charles Schwab (Cupertino, CA)

System/Unit: AHU/RTU

Asset: RTU-6 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	ICP
Serial Num	-	P161905433
Model Num	NA	RGH150LECW7LABA
Configuration	-	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X25.5
Num PreFilter 1	-	6
PreFilter Size 1	-	18X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	NL
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	460
Rated Amperage	-	5.3
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	VP50
Motor Bore Size	7/8"
Motor Sheave SetPt	3 TURNS OPEN
Fan Sheave Size	AK104
Fan Sheave Bore	1-3/16"
Belt CL Distance	20.5"
Num of Belts	1
Belt Size	A61

Test Data		
	Design	**Actual**
SF CFM	5000	4862
SF RPM	-	716
RA CFM	4400	4263
OA CFM	600	599
RL Voltage	460	487/487/487
RL Amperage	5.3	4.1/4.1/4.1
OA Damper Position	-	13%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.63"
Fan Suction SP	-	-0.91"
Fan Discharge SP	-	0.69"
Total ESP	-	1.32"
Fan Total SP	-	1.60"

Completed By: Zack Eismin on 09/08/2025

Unit Data - PHOTO LOG

09/03/2025

National TAB

Project:Charles Schwab (Cupertino, CA)

AHU/RTU

VAV - Single Duct

RTU-6/

Asset								
Asset Name	**MFG**	**Model Num**	**Type**	**Inlet Size**	**Design Max CFM**	**Max CFM**	**Design Min CFM**	**Min CFM**
VVT-6	CARRIER	35EV	VVT	8"	620	601	100	101
VVT-7	CARRIER	35EV	VVT	7"	390	387	100	103
VVT-8	CARRIER	35EV	VVT	5"	200	217	50	52
VVT-9	CARRIER	35EV	VVT	6"	260	283	65	67
VVT-13	CARRIER	35EV	VVT	10"	900	888	225	227
VVT-14	CARRIER	35EV	VVT	7"	390	379	100	99
VVT-18	CARRIER	35EV	VVT	14"	2240	2107	600	597

Diffuser Supply (GRD)

VVT-6/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V6-1	OFFICE 103	SD-1	8	140	111	131	93.6
V6-2	OFFICE 104	SD-1	8	100	91	102	102.0
V6-3	OFFICE 104	SD-2	8	140	109	134	95.7
V6-4	OFFICE 105	SD-2	8	140	107	137	97.9
V6-5	OFFICE 105	SD-1	8	100	95	97	97.0
Total				620	513	601	96.94%

VVT-7/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V7-1	OFFICE 143	SD-1	8	130	111	124	95.4
V7-2	OFFICE 144	SD-1	8	130	107	133	102.3
V7-3	OFFICE 146	SD-1	8	130	102	130	100.0
Total				390	320	387	99.23%

VVT-8/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V8-1	TOUCHDOWN 137	SD-1	8	100	81	108	108.0
V8-2	TOUCHDOWN 137	SD-1	8	100	85	109	109.0
Total				200	166	217	108.5%

VVT-9/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V9-1	OFFICE 139	SD-1	8	130	109	141	108.5
V9-2	OFFICE 138	SD-1	8	130	103	142	109.2
Total				260	212	283	108.85%

VVT-13/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V13-1	CONF RM 102	SD-1	8	100	84	101	101.0
V13-2	CONF RM 102	SD-1	8	100	87	98	98.0
V13-3	CONF RM 102	SD-2	8	125	103	122	97.6
V13-4	CONF RM 102	SD-1	8	100	81	94	94.0
V13-5	CONF RM 102	SD-2	8	125	107	130	104.0
V13-6	CONF RM 102	SD-1	8	100	82	99	99.0
V13-7	CONF RM 102	SD-2	8	125	100	123	98.4
V13-8	CONF RM 102	SD-2	8	125	98	121	96.8
Total				900	742	888	98.67%

VVT-14/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V14-1	RM 142	SD-1	8	130	111	126	96.9
V14-2	141	SD-1	8	130	108	125	96.2
V14-3	OFFICE 140	SD-1	8	130	102	128	98.5
Total				390	321	379	97.18%

VVT-18/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V18-1	TOWNSQUARE 100	SD-2	10	280	222	255	91.1
V18-2	TOWNSQUARE 100	SD-2	10	280	227	261	93.2
V18-3	TOWNSQUARE 100	SD-2	10	280	221	269	96.1
V18-4	TOWNSQUARE 100	SD-2	10	280	217	261	93.2
V18-5	HALLWAY 101	SD-2	10	280	231	271	96.8
V18-6	HALLWAY 101	SD-2	10	280	229	269	96.1
V18-7	HALLWAY 101	SD-2	10	280	230	263	93.9
V18-8	HALLWAY 101	SD-2	10	280	225	258	92.1
Total				2240	1802	2107	94.06%

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National TAB

Project: Charles Schwab (Cupertino, CA)

System/Unit: AHU/RTU

Asset: RTU-7 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	ICP
Serial Num	-	P161905434
Model Num	NA	RGH150LEGW7LABA
Configuration	-	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X25.5
Num PreFilter 1	-	6
PreFilter Size 1	-	18AX24X2

Test Data		
	Design	**Actual**
SF CFM	5000	4808
SF RPM	-	789
RA CFM	4400	4197
OA CFM	600	611
RL Voltage	460	487/487/487
RL Amperage	6.3	5.2/5.2/5.2
OA Damper Position	-	13%
Brake Horse Power	-	4.26

Motor Data		
	Design	**Actual**
Motor MFG	-	CENTURY
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1755
Phase	-	3
Rated Voltage	-	460
Rated Amperage	-	6.3
Service Factor	-	1.15

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.66"
Fan Suction SP	-	-0.92"
Fan Discharge SP	-	0.72"
Total ESP	-	1.38"
Fan Total SP	-	1.64"

Drive Data	
	Actual
Motor Sheave Size	VP65
Motor Bore Size	1-1/8"
Motor Sheave SetPt	3 TURNS CLOSED
Fan Sheave Size	BK120
Fan Sheave Bore	1-3/16"
Belt CL Distance	21.5"
Num of Belts	1
Belt Size	BX67

Completed By: Zack Eismin on 09/08/2025

Unit Data - PHOTO LOG

09/03/2025

National TAB

Project:Charles Schwab (Cupertino, CA)

AHU/RTU

VAV - Single Duct

RTU-7/

Asset								
Asset Name	**MFG**	**Model Num**	**Type**	**Inlet Size**	**Design Max CFM**	**Max CFM**	**Design Min CFM**	**Min CFM**
VVT-11	CARRIER	35EV	VVT	12"	1005	1001	300	301
VVT-15	CARRIER	35EV	VVT	12"	1320	1207	350	347
VVT-16	CARRIER	35EV	VVT	7"	390	369	100	103
VVT-17	CARRIER	35EV	VVT	7"	290	281	100	102
VVT-19	CARRIER	35EV	VVT	14"	1995	1941	600	631

Diffuser Supply (GRD)

VVT-11/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V11-1	NA	SD-1	10	230	201	232	100.9
V11-2	NA	SD-1	10	230	205	227	98.7
V11-3	NA	SD-1	10	230	209	229	99.6
V11-4	MENS 123	SD-1	8	125	102	127	101.6
V11-5	125	SD-1	6	65	51	63	96.9
V11-6	WOMEN 124	SD-1	8	125	109	123	98.4
Total				1005	877	1001	99.6%

VVT-15/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V15-1	BEV BAR 134	SD-1	8	110	83	99	90.0
V15-2	BEV BAR 134	SD-1	8	110	81	100	90.9
V15-3	BEV BAR 134	SD-1	8	110	77	99	90.0
V15-4	BEV BAR 134	SD-1	8	110	82	102	92.7
V15-5	BEV BAR 134	SD-1	8	110	73	107	97.3
V15-6	BEV BAR 134	SD-1	8	110	72	100	90.9
V15-7	BEV BAR 134	SD-1	8	110	80	101	91.8
V15-8	BEV BAR 134	SD-1	8	110	73	101	91.8
V15-9	BEV BAR 134	SD-1	8	110	75	100	90.9
V15-10	BEV BAR 134	SD-1	8	110	77	101	91.8
V15-11	BEV BAR 134	SD-1	8	110	79	103	93.6
V15-12	BEV BAR 134	SD-1	8	110	76	103	93.6
Total				1320	928	1216	92.12%

VVT-16/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V16-1	OFFICE 132	SD-1	8	130	101	125	96.2
V16-2	OFFICE 131	SD-1	8	130	107	123	94.6
V16-3	OFFICE 130	SD-1	8	130	106	121	93.1
Total				390	314	369	94.62%

VVT-17/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V17-1	OFFICE 120	SD-1	8	145	111	141	97.2
V17-2	OFFICE 121	SD-1	8	145	117	140	96.6
Total				290	228	281	96.9%

VVT-19/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
V19-1	HALL 133	SD-2	10	285	231	271	95.1
V19-2	HALL 133	SD-2	10	285	227	275	96.5
V19-3	HALL 133	SD-2	10	285	225	288	101.1
V19-4	HALL 133	SD-2	10	285	221	269	94.4
V19-5	HALL 133	SD-2	10	285	225	276	96.8
V19-6	HALL 133	SD-2	10	285	234	281	98.6
V19-7	HALL 133	SD-2	10	285	224	281	98.6
Total				1995	1587	1941	97.29%

Completed By: Zack Eismin on 09/08/2025

National TAB

Project: Charles Schwab (Cupertino, CA)

System/Unit: FAN - Exhaust

Asset: EF-1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	FLO AIRE
Model Num	NA	DR30H
Serial Num	-	7384697
Type	-	CRE

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	-	0.333
Motor Rpm	-	2000
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	4.3
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	800	809
Fan RPM	-	1540
RL Voltage	115	NA
RL Amperage	4.3	NA
Suction ESP	-	-0.59"

Completed By: Zack Eismin on 09/08/2025

National TAB

Project:Charles Schwab (Cupertino, CA)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-1/

Asset								
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**FINAL CFM**	**% to design**
E1-1	NL	EG-1	8	150	1	121	145	96.7
E1-2	MENS 123	EG-1	8	200	1	135	197	98.5
E1-3	WOMEN 124	EG-1	8	200	1	259	211	105.5
E1-4	JAN 129	EG-1	8	50	1	101	53	106.0
E1-5	126	EG-1	8	200	1	291	203	101.5
Total				800		907	809	101.12%