



Date Signed 03/15/07

CERTIFICATE OF COMPLIANCE (Part 1 of 3)		MECH-1-C
PROJECT NAME	SKYLINE BLDG 2 - SWING SPACES	DATE 03/15/07
PROJECT ADDRESS	3104 CSM DRIVE, SAN MATEO	
PRINCIPAL DESIGNER-MECHANICAL	MARCO A. ALVES	TELEPHONE 415.403.3097
DOCUMENTATION AUTHOR	MARCO A. ALVES	TELEPHONE 415.403.3097
GENERAL INFORMATION		
DATE OF PLANS	03/15/07	BUILDING CONDITIONED FLOOR AREA 2,300 SF
BUILDING TYPE	<input checked="" type="checkbox"/> NONRESIDENTIAL	<input type="checkbox"/> HIGH RISE RESIDENTIAL
PHASE OF CONSTRUCTION	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> ADDITION
PROOF OF ENVELOPE COMPLIANCE	<input checked="" type="checkbox"/> PREVIOUS ENVELOPE PERMIT	<input type="checkbox"/> ENVELOPE COMPLIANCE ATTACHED

This Certificate of Compliance lists the building features and performance specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building mechanical requirements.

The documentation preparer hereby certifies that the documentation is accurate and complete.

DOCUMENTATION AUTHOR: MARCO A. ALVES, SIGNATURE: *Marco Alves*, DATE: 03/15/07

The Principal Mechanical Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the mechanical requirements contained in the applicable parts of Sections 100, 101, 102, 110 through 115, 120 through 125, 142, 144 and 145.

- The Plans & specifications meet the requirements of Part 6 (Sections 10-103a).
- The installation certificates meet the requirements of Part 6 (10-103a.3).
- The operation & maintenance information meets the requirements of Part 6 (10-103a).

Please check one: (These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)

I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer or mechanical engineer, or I am a licensed architect.

I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.

I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described pursuant to Business and Professions Code sections 5537, 5538, and 6737.1

PRINCIPAL MECHANICAL DESIGNER - NAME: MARCO A. ALVES, SIGNATURE: *Marco Alves*, DATE: 03/15/07, LIC. # M33075

INSTRUCTIONS TO APPLICANT MECHANICAL COMPLIANCE & WORKSHEETS (check box if worksheet is included)	
<input checked="" type="checkbox"/> MECH-1-C	Certificate of Compliance, Part 1 of 3, 2 of 3, 3 of 3 are required on plans for all submittals.
<input checked="" type="checkbox"/> MECH-2-C	Certificate of Compliance, Part 1 of 3, 2 of 3, 3 of 3 are required for all submittals, but may be on plans.
<input checked="" type="checkbox"/> MECH-3-C	Certificate of Compliance are required for all submittals with mechanical ventilation, but may be on plans.
<input type="checkbox"/> MECH-4-C	Certificate of Compliance are required for all prescriptive submittals, but may be on plans.

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MECHANICAL VENTILATION AND REHEAT												MECH-3-C	
PROJECT NAME: SKYLINE BLDG 2 - SWING SPACES						DATE: 03/15/07							
MECHANICAL VENTILATION (§121(b)(2))						REHEAT LIMITATION (§144(d))							
AREA BASIS						OCCUPANCY BASIS							
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Zone/System	Condition Area (ft²)	CFM per ft²	Min CFM by Area B x C	Num of People	CFM per Person	Min CFM by Occupant E x F	REQ'D VA Max of D or G	Design Ventilation Air cfm	30% of Design Zone Supply cfm	Req'd. H/L/K or 300 cfm	Max of Columns H/L/K or 300 cfm	Design minimum Air setpoint	Transfer Air
HV-5C	1,300	0.15	195	22	15	330	330	3200	N/A	N/A	N/A	N/A	N/A
HV-5C	1,000	0.15	150	22	15	330	330	3200	N/A	N/A	N/A	N/A	N/A
(EXISTING HEATING AND VENTILATION UNIT)													
Total 44 660 6400 Column I Total Design Ventilation Air N/A													

- C Minimum ventilation rate per Section §121, Table 121-A.
- E Based on fixed seat or the greater of the expected number of occupants and 50% of the CBC occupant load for egress purposes for spaces without fixed seating.
- H Required Ventilation Air (REQ'D VA) is the larger of the ventilation rates calculated on an AREA BASIS or OCCUPANCY BASIS (Column D or G).
- I Must be greater than or equal to H, or use Transfer Air (column N) to make up the difference.
- J Design fan supply cfm (Fan CFM) x 30%; or
- K Condition area (ft²) x 0.4 cfm/ft² ; or
- L Maximum of Columns H, J, K, or 300cfm
- M This must be less than or equal to Column L and greater than or equal to the sum of Columns H plus N.
- N Transfer Air must be provided where the Required Ventilation Air (Column H) is greater than the Design Minimum Air (Column M). Where required, transfer air must be greater than or equal to the difference between the Required Ventilation Air (Column H) and the Design Minimum Air (Column M), Column H minus M.

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TITLE 24 NOTE:

ALL EQUIPMENT IN THIS PROJECT IS EXISTING TO REMAIN, NO NEW EQUIPMENT IS BEING INSTALLED. THE SCOPE OF NEW MECHANICAL WORK INCLUDES DEMOLITION AND INSTALLATION OF NEW DUCTWORK, AND PLUMBING (WASTE) PIPE.

MECHANICAL MANDATORY MEASURES (Part 1 of 2)		MECH-MM
PROJECT NAME: SKYLINE BLDG 2 - SWING SPACES		DATE: 03/15/07
DESCRIPTION	Designer	Enforcement
EQUIPMENT AND SYSTEM EFFICIENCIES		
<input type="checkbox"/> §111	Any appliance for which there is a California standard established in the Appliance Efficiency Regulations will comply with the applicable standard.	
<input type="checkbox"/> §115(a)	Fan type central furnaces shall not have a pilot light.	
<input checked="" type="checkbox"/> §123	Piping, except that conveying fluids at temperatures between 60°F and 105°F, or within HVAC equipment, shall be insulated in accordance with Standards Section 123.	
<input checked="" type="checkbox"/> §124	Air handling duct systems shall be installed and insulated in compliance with Sections 601, 603 and 604 of the Uniform Mechanical Code.	
CONTROLS		
<input type="checkbox"/> §122(a)	Each space conditioning system shall be installed with one of the following:	
<input type="checkbox"/> §122(a)1A	Each space conditioning system serving building types such as offices, manufacturing facilities (and all others not explicitly exempt from the requirements of section 112(c)) shall be installed with an automatic time switch with an accessible manual override that allows operation of the system during off-hours for up to 4 hours. The time switch shall be capable of programming different schedules for weekdays and weekends and have program backup capabilities that prevent the loss of the device's program and time setting for at least 10 hours if power is interrupted; or	
<input type="checkbox"/> §122(a)1B	An occupancy sensor to control the operating period of the system; or	
<input type="checkbox"/> §122(a)1C	A 4-hour timer that can be manually operated to control the operating period of the system.	
<input type="checkbox"/> §122(a)2	Each space conditioning system shall be installed with controls that temporarily restart and temporarily operated the system as required to maintain a setback heating and/or a setback cooling thermostat setpoint.	
<input type="checkbox"/> §122(a)3	Each space conditioning system serving multiple zones with a combined conditioned floor area more than 25,000 square feet shall be provided with isolation zones. Each zone shall exceed 25,000 square feet; shall be provided with isolation devices, such as valves or dampers that allow the supply of heating or cooling to be setback or shut off independently of other isolation areas; and shall be controlled by a time control device as described above.	
<input checked="" type="checkbox"/> §122(a)4b	Each space conditioning system shall be controlled by an individual thermostat that responds to temperature within the zone. Where used to control heating, the control shall be adjustable down to 55°F or lower. For cooling, the control shall be adjustable down to 85°F or higher. Where used for both heating and cooling, the control shall be capable of providing a deadband of at least 5°F within which the supply of heating and cooling is shut off or reduced to a minimum.	
<input checked="" type="checkbox"/> §122(c)	Thermostats shall have numeric setpoints in degrees Fahrenheit (°F) and adjustable setpoint stops accessible only to authorized personnel.	
<input type="checkbox"/> §122(b)	Heat pumps shall be installed with controls to prevent electric resistance supplementary heater operation when the heating load can be met by the heat pump alone.	

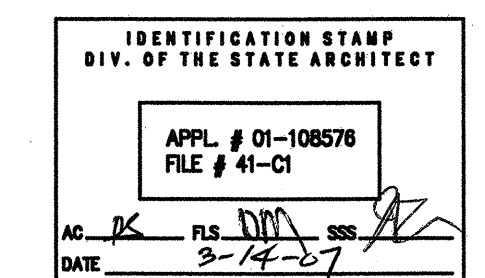
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MECHANICAL MANDATORY MEASURES (Part 2 of 2)		MECH-MM
PROJECT NAME: SKYLINE BLDG 2 - SWING SPACES		DATE: 03/15/07
DESCRIPTION	Designer	Enforcement
VENTILATION		
<input type="checkbox"/> §121(e)	Controls shall be provided to allow outside air dampers or devices to be operated at the ventilation rate as specified on these plans.	
<input type="checkbox"/> §122(f)	Gravity or automatic dampers interlocked and closed on fan shutdown shall be provided on outside air intakes and discharges of all space conditioning and exhaust systems.	
<input type="checkbox"/> §122(f)	All gravity ventilating systems shall be provided with automatic or readily accessible manually operated dampers in all openings to the outside, except for combustion air openings.	
<input checked="" type="checkbox"/> §121(f)1	Air Balancing: The system shall be balanced in accordance with the National Environmental Balancing Bureau (NEBB) Procedural Standards (1983), or Associated Air Balance Council (AABC) National Standards (1989); or	
<input checked="" type="checkbox"/> §121(f)2	Outside Air Certification: The system shall provide the minimum outside air as shown on the mechanical drawings, and shall be measured and certified by the installing licensed C-20 mechanical contractor and certified by (1) the design mechanical engineer, (2) the installing licensed C-20 mechanical contractor, or (3) the person with overall responsibility for the design of the ventilation system, or	
<input type="checkbox"/> §121(f)3	Outside Air Measurement: The system shall be equipped with a calibrated local or remote device capable of measuring the quantity of outside air on a continuous basis and displaying that quantity on a readily accessible display device; or	
<input type="checkbox"/> §121(f)4	Another method approved by the commission.	
SERVICE WATER HEATING SYSTEMS		
<input type="checkbox"/> §113(b)2	If an circulating hot water system is installed, it shall have a control capable of automatically turning off the circulating pump(s) when hot water is not required.	
<input type="checkbox"/> §113(b)3B	Lavatories in restrooms of public facilities shall be equipped with controls to limit the outlet temperature to 110°F.	
<input type="checkbox"/> §113(b)3C	Lavatories in restrooms of public facilities shall be equipped with one of the following: Outlet devices that limit the flow of hot water to a maximum of 0.5 gallons per minute. Foot actuated control valves, and outlet devices that limit the flow of hot water to a maximum of 0.75 gallons per minute. Self-closing valves, and outlet devices that limits the flow of hot water to a maximum of 2.5 gallons per minute, and 0.25 gallons/cycle (circulating system). Self-closing valves, and outlet devices that limits the flow of hot water to a maximum of 2.5 gallons per minute, and 0.50 gallons/cycle (non-circulating system). Self-closing valves, and outlet devices that limits the flow of hot water to a maximum of 2.5 gallons per minute, and 0.75 gallons/cycle (foot switches and proximity sensor controls).	

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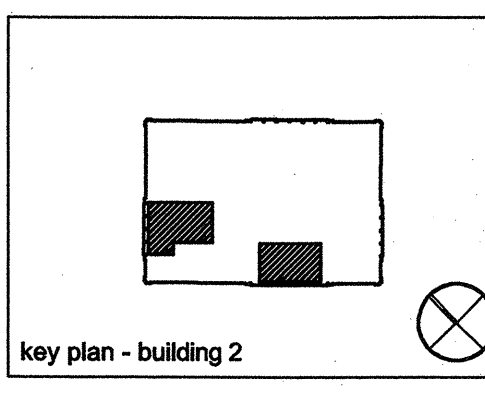
DIFFUSER, GRILLE AND REGISTER SCHEDULE												
MARK	MFR	MODEL	SIZE	NECK	FINISH	SERVICE	MATERIAL	MAX. NC	REMARKS			
A	TITUS	R-OMNI	24" ROUND	SEE FLOOR PLANS	PER ARCH. PLANS	SUPPLY	STEEL	25	1 2 3			
B	TITUS	272RL	SEE FLOOR PLANS	-	PER ARCH. PLANS	SUPPLY	STEEL	25	1 4			
C	TITUS	23RL	SEE FLOOR PLANS	-	PER ARCH. PLANS	RETURN	STEEL	25	1 5			

- NOTES:**
- 1 BORDER AND FINISH/COLOR SHALL BE APPROVED BY ARCHITECT PROVIDE ALL HARDWARE AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION.
 - 2 WHERE DUCT CONNECTING TO THE DIFFUSER IS SMALLER THAN THE SPECIFIED DIFFUSER NECK SIZE, PROVIDE AND INSTALL CONICAL INCREASER.
 - 3 PROVIDE DIFFUSER WITH MODEL AG-65 COMBINATION DAMPER AND EQUALIZER GRILLE.
 - 4 PROVIDE IN DUCT EXTRACTORS FOR AIRFLOW BALANCING.
 - 5 PROVIDE OPPOSED BLADE DAMPERS FOR AIRFLOW BALANCING.



02.02.07 DSA SUBMITTAL
DSA BACKCHECK

rev. date issue



STEINBERG ARCHITECTS
project no: 06044 date: 03/15/07
drawn by: MA checked by: JC
scale: NONE

MECHANICAL SCHEDULES AND TITLE 24 DOCUMENTATION