## GENERAL NOTES - HVAC

- INSTALL ALL MECHANICAL WORK TO AVOID ARCHITECTURAL FRAMING,
  STRUCTURAL MEMBERS, AND OTHER OBSTRUCTIONS. COORDINATE EQUIPMENT
  LOCATION WITH ALL APPLICABLE CONTRACT DRAWINGS PRIOR TO INSTALLATION.
- INSTALL ALL DUCTWORK TO BEST SUIT FIELD CONDITIONS AND COORDINATE WITH THE INSTALLATION WORK OF OTHER TRADES.

  DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION OF MECHANICAL WORK.
- 3. INSTALL ALL DUCTS CONCEALED IN THE FURRED CEILING UNLESS OTHERWISE INDICATED.
- PROVIDE ACCESS PANELS AT ALL CONCEALED VOLUME DAMPERS AND CONTROLS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL LOUVERS AND DOOR GRILLES, MECHANICAL CONTRACTOR TO FURNISH ACCESS PANELS AND DOORS AND COORDINATE WITH OTHER TRADES.
- 5. ALL CEILING DIFFUSERS, REGISTERS AND OUTLETS SHALL BE COORDINATED WITH THE ARCHITECTURAL REFLECTED CEILING PLAN.
- 6. ALL DIFFUSER SIZES AND DUCT SIZES SHOWN ARE NET DIMENSIONS UNLESS OTHERWISE INDICATED.
- 7. CONTRACTOR SHALL REFER TO THE ELECTRICAL CONTRACT DOCUMENTS TO OBTAIN THE INFORMATION OF STARTERS, VOLTAGE PHASE, INTERLOCKING CONTROLS, AND MISCELLANEOUS EQUIPMENT SUCH AS RELAYS, STARTERS, ETC. SO THAT ALL ELECTRICAL APPARATUS SERVING MECHANICAL EQUIPMENT SHALL FULLY COMPLY WITH ELECTRICAL AND CONTROL REQUIREMENTS.
- 8. ALL SQUARE ELBOW TURNS IN LOW PRESSURE DUCTWORK SHALL HAVE TURNING VALVES.
- 9. ALL SUPPLY DUCTS SHALL BE TAPED WITH CANVAS AND ARABOL OR DUCT MASTIC.
- 10. ALL INTERNAL LININGS, FLEX DUCTS AND ADHESIVES SHALL BE LABELED IN ACCORDANCE WITH U.L. 181 STANDARD FOR SAFETY.
- 11. ALL DUCTWORK SHALL BE SUPPORTED AND BRACED IN ACCORDANCE WITH THE GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING AND PIPING SYSTEMS AS PUBLISHED BY SMACNA.
- 12. ALL MECHANICAL EQUIPMENT SHALL BE SECURELY FASTENED IN PLACE PER UMC SECTION 504. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR EQUIPMENT INSTALLATION.
- 13. ALL HVAC EQUIPMENT SHALL BE CERTIFIED BY ITS MANUFACTURER
  TO COMPLY WITH THE APPLICABLE ENERGY EFFICIENCY STANDARDS.
- 14 TUEDMOCTATO CHALL DE ADIE TO
- 14. THERMOSTATS SHALL BE ABLE TO:

  a. MAINTAIN SPACE TEMPRATURE SET POINT FROM 55°F TO 85°F.
  - b. SEQUENCE HEATING AND COOLING TO ASSURE THAT HEATING AND COOLING ARE NOT PROVIDED TO THE SPACE SIMULTANEOUSLY.
- 15. LOCATIONS FOR NEW DUCTWORK AND PIPING WERE ESTABLISHED FROM BEST AVAILABLE INFORMATION. ASSUME THAT THIS INFORMATION IS APPROXIMATE. CONTRACTOR SHOULD VERIFY EXACT LOCATION BEFORE STARTING WORK. SHOULD, DURING THE COURSE OF CONSTRUCTION CONDITIONS ARISE THAT INDICATE LOCATIONS OTHER THAN SHOWN, NOTIFY ARCHITECT IMMEDIATELY.
- 16. PRIOR TO SUBMISSION OF BID, VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS WITH RESPECT TO EXISTING CONDITIONS, CONNECTION POINTS, ELEVATIONS, CLEARANCES, ETC. NO EXTRA PAYMENT WILL BE ALLOWED FOR WORK RESULTING FROM LACK OF PROPER APPRAISAL OF EXISTING CONDITIONS. AS IN ALL CONSTRUCTION, SOME EXPLORATION WILL BE REQUIRED TO LOCATE EXACT CONNECTION POINTS AND OPTIMUM ROUTES FOR DUCTWORK AND PIPING. THIS IS THE CONTRACTOR'S RESPONSIBILITY.

## ENERGY EFFICIENCY STANDARDS MANDATORY MEASURES - MECHANICAL

- SET POINTS FROM 55°F TO 85°F. THERMOSTAT SHALL BE ADJUSTABLE TO PROVIDE A TEMPERATURE RANGE OF UP BEING SUPPLIED. THERMOSTAT SHALL HAVE THE CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NOT MORE THAN 70°F AND OF TERMINATING COOLING AT A TEMPERATURE NOT LESS THAN 78°F.
- THERMOSTAT SHALL BE CAPABLE OF BEING SET TO MAINTAIN SPACE TEMPERATURE ALL TRANSVERSE JOINTS SHALL BE SEALED WITH HARDCAST INC. P-301
  PEEL-N-SEAL INSTANT TAPE SEALANT FOR ROUND DUCTS, AND HARDCAST AM-401 FOR RECTANGULAR DUCTWORK.
- ALL FLEXIBLE DUCTS SHALL BE U.L.-181 LISTED AND LABELED.
- A MAINTENANCE LABEL SHALL BEOATTOCHED TWOENLY WECHENTIAL EQUIPMENT COOLING AND A MAINTENANCE MANUAL SHALL BE FURNISHED TO THE OWNER FOR EACH PIECE OF EQUIPMENT.
- ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED AND TESTED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS. DUCTWORK SHALL BE GALVANIZED SHEET
- ALL DUCTWORK SHALL BE INSULATED WITH 1-1/2" THICK, 3/4# DENSITY (R=4), EXCEPT THOSE INDICATED TO BE INTERNALLY LINED. ALL DUCTWORK SHOWN TO BE INTERNALLY LINED, SHALL BE LINED WITH 1" THICK, 1-1/2# DENSITY DUCTLINER.
- METAL AND CONSTRUCTED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.
- DUCT DIMENSIONS INDICATED ARE INSIDE CLEAR DIMENSIONS.
- ALL HVAC EQUIPMENT AND INSULATION SHALL BE CERTIFIED TO THE DUCT LINING, DUCT INSULATION AND PLENUM WALLS SHALL CONFORM TO U.L. 723.
- AIR HANDLING DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, SEALED, AND INSULATED AS PROVIDED IN CHAPTER 10 OF THE 1991 UNIFORM MECHANICAL CODE
- EACH HVAC SYSTEM SHALL BE STARTED AND STOPPED THROUGH A TIME CLOCK CALIFORNIA ENERGY COMMISSION AS MEETING THE LATEST TITLE 24 REQUIREMENTS. OR PROGRAMMABLE TIME CLOCK/THERMOSTAT.
- EACH HVAC SYSTEM SHALL BE ABLE TO OPERATE ZONE HEATING AND COOLING IN SEQUENCE IF BOTH ARE PROVIDED.
- ✓ VENTILATION SHALL BE PROVIDED PER SECTION 2-5316 AND 2-5343.

									AIR	CONE	MOITIC	NG UNIT	SCHE	DULE														
						SUPP	LY FAN D	ATA			HEATING D	)ATA					AIR COO	LED REFRIC	GERATION [	DATA			****		ELEC	TRICAL		
ARK	LOCATION	MFR	MODEL	AREA SERVED	CFM	CFM	E.S.P.				мвн	мвн	ENTER AIR T	RING	LEAV	ING	TOTAL	NOMINAL		SER FAN		COMPRESSOR	R	AMBIEN TEMP.	T DATA		OPER. WEIGH	T REMARKS
					TOTAL	O.A.	IN W.G.	RPM	HP	TYPE	INPUT	OUTPUT	DB°F	WB*F	DB°F	TEMP. WB'F	TOTAL MBH	CAPACITY TONS	QUANTITY	HP EACH	No.	LRA	RLA		VOLT/Ø	МСА МЕ	SLBS	
1 2	ROOF	CARRIER	48HJD017	GYMNASIUM	6,000	1,100	1.2	1180	5.0	GAS	270	216	80.8	64.7	55.0	53.3	180	15	3	0.8 FLA	2	2x80	2×14.1	94	460/3	44 50	2,500	FURNISH W/ ECONOMIZER, POWER EXHAUSTER (FIELD) INSTALLED), PROGRAMMABLE ELECTRONIC T'STAT, SID RETURN/SUPPLY CURB
3	ROOF	CARRIER	48HJE004	OFFICES	1,400	650	0.8	1180	1.0	GAS	50	40	80.8	64.7	55.0	53.3	36	3	1	0.4 FLA	1	39.0	5.1	94	460/3	11.7 15	700	FURNISH W/ ECONOMIZER, ROOF CURB, PROGRAMMABLE ELECTRONIC T'STAT

NOTE: PROVIDE AUTOMATIC SHUT-DOWN OF AC-1 & AC-2 UNITS UPON ACTIVATION OF DUCT SMOKE DETECTOR. REFER TO DETAIL 3/MP3.1.

## GENERAL NOTES - PLUMBING

- REFER TO THE SPECIFICATIONS AND PROJECT MANUAL FOR STANDARD DETAILS AND ALL INFORMATION NOT SHOWN ON THE DRAWINGS. SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
- 2. CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE CODES.
- 3. INSTALL BACKFLOW PROTECTION DEVICES AS REQUIRED BY LOCAL CODE.
- COORDINATE ALL WORK WITH ALL OTHER TRADES AND CONTRACTORS.
   VERIFY SIZE, DEPTH, LOCATION AND ADEQUACY OF ALL UTILITIES, INCLUDING

METER LOCATIONS AND SEWER INVERTS, BEFORE START OF WORK.

- 6. LINES BEYOND THE EXTERIOR OF BUILDING TO BE BURIED 24" MIN. TO CROWN UNLESS OTHERWISE NOTED.
- 7. SEWER AND STORM DRAIN LINES TO BE LAID WITH A SLOPE REQUIRED TO MAKE CONNECTION TO EXISTING SEWER AND STORM DRAIN LINES. COORDINATE WITH
- CIVIL DRAWINGS. MIN. SLOPE FOR NEW LINES IS 1/4" PER FOOT, WHERE POSSIBLE.

10 FEET FROM ANY FRESH AIR INTAKE.

- 8. SEWER AND STORMWATER LINES ARE SEPARATE.9. PROVIDE A CLEANOUT EVERY 50'-0" ON ALL SEWER LINES.
- 10. SET FLOOR DRAINS TO ELEVATIONS AND LOCATIONS SHOWN ON ARCHITECTURAL DRAWINGS.
- 11. PROVIDE AND INSTALL ACCESSIBLE TRAP PRIMERS WITH PIPING TO FLOOR DRAIN
- TRAPS. PROVIDE SHUTOFF VALVE UP STREAM OF TRAP PRIMER UNIT.

  12. ALL PLUMBING VENTS THROUGH ROOF SHALL TERMINATE NOT LESS THAN
- 13. ALL PIPING IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY SHOWN OTHERWISE.
- 14. REFER TO MECHANICAL PLANS FOR DRAINS, COLD WATER SUPPLY, ETC., TO/FROM EQUIPMENT. COORDINATE AND INSTALL TRAPPED CONDENSATE DRAIN PIPING TO THE AIR CONDITIONING UNITS PER LOCAL CODE REQUIREMENTS.
- 15. INSTALL GATE VALVE ON WATER LINES TO EACH GROUP OF FIXTURES. ENDS
  OF COLD WATER LINES SHALL HAVE SHOCK ABSORBERS INSTALLED IN AN
- INCONSPICUOUS LOCATION. PROVIDE ACCESS PANEL FOR SERVICING.

  16. REFER TO MECHANICAL DRAWINGS FOR REQUIRED SUPPLEMENTAL INFORMATION AND CLARIFICATION.
- 17. COORDINATE ALL PLUMBING WORK WITH ALL OTHER WORK TO AVOID CONF-LICTS. PIPING SHALL BE ROUTED TO AVOID ARCHITECTURAL OPENINGS, STRUCTURAL MEMBERS, FIXTURES AND/OR ANY OTHER OBSTRUCTIONS. DRAWINGS ARE SCHEMATIC IN NATURE AND MAY NOT SHOW THE ACTUAL ROUTING. OFFSET PIPING WHERE REQUIRED.
- 18. REFER TO MECHANICAL, ELECTRICAL, AND SITE WORK PLANS FOR COORDI-NATION OF PLUMBING UTILITIES WITH OTHER TRADES.
- 19. UNDERGROUND PIPES SHALL BE LOCATED MIN. 1'-6" AWAY FROM LOAD BEARING FOOTING, OR AS DIRECTED BY STRUCTURAL ENGINEER.
- 20. CONNECTIONS BETWEEN DISSIMILAR PIPES SUCH AS COPPER AND IRON OR STEEL SHALL BE MADE WITH DIELECTRIC ISOLATING UNIONS.
- 21. RUN NEW COLD & HOT WATER AND VENT LINES ABOVE CEILING.

  22. ALL HOT WATER SUPPLY AND RETURN PIPING SHALL BE INSULATED.
- INSULATION SHALL COMPLY WITH TITLE 24 OF THE CALIFORNIA ADMINISTRATION CODE (MINIMUM R=4).
- 23. ALL PLUMBING FIXTURES AND WATER HEATERS SHALL BE CERTIFIED TO COMPLY WITH CAC TITLE 24 STANDARDS.
- 24. PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, BACKFILLING, REPAVING, AND RESTORATION OF EXISTING SURFACES DUE TO THE PLUMBING WORK SPECIFIED.
- 25. PLUMBING CONTRACTOR IS RESPONSIBLE FOR CONDENSATE PIPING CONNECTIONS TO MECHANICAL EQUIPMENT.
- 26. LAY OUT CORE DRILLING ON THE STRUCTURAL SURFACES AND OBTAIN APPROVAL OF STRUCTURAL ENGINEER PRIOR TO ACTUAL CORE DRILLING.
- 27. SAW CUTTING, BREAKOUT AND DEBRIS DISPOSAL OF EXISTING FLOOR SLABS ARE BY PLUMBING CONTRACTOR.
- 28. PROVIDE SEISMIC RESTRAINT BRACING FOR PIPE SUPPORTS AS REQUIRED BY STATE AND LOCAL CODES.
- 29. THE LOCATION OF EXISTING UTILITIES WAS ESTABLISHED FROM BEST AVAILABLE INFORMATION. ASSUME THAT THIS INFORMATION IS APPROXIMATE. CONTRACTOR SHOULD VERIFY EXACT LOCATION BEFORE STARTING WORK. SHOULD, DURING THE COURSE OF CONSTRUCTION CONDITIONS ARISE THAT INDICATE LOCATIONS OTHER THAN SHOWN, NOTIFY ARCHITECT IMMEDIATELY.
- 30. PRIOR TO SUBMISSION OF BID, VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS IN RESPECT TO EXISTING UTILITIES, CONNECTION POINTS, ELEVATIONS, CLEARANCES, ETC. NO EXTRA PAYMENT WILL BE ALLOWED FOR WORK RESULTING FROM LACK OF PROPER APPRAISAL OF EXISTING CONDITIONS. AS IN ALL CONSTRUCTION, SOME EXPLORATION WILL BE REQUIRED TO LOCATE EXACT CONNECTION POINTS AND OPTIMUM ROUTES FOR PIPING. THIS IS CONTRACTOR'S RESPONSIBILITY.
- 31. NON-METALLIC DWV AND WATER PIPES ARE NOT PERMITTED INSIDE THE BUILDING.

			AIR OUT	LETS SCHE	DULE		
MARK	MFR	TYPE	FACE SIZE	FRAME TYPE	MATERIAL	REMARKS	
CD-1	TITUS	TMR	AS NOTED	SURFACE	STEEL	ROUND DIFFUSER	Without the control of the control o
CD-2	TITUS	PSS	24×24	LAY-IN	STEEL		
ER-1	TITUS	350ZFL	AS NOTED	SURFACE	STEEL		
RG-1	TITUS	350ZR	AS NOTED	SURFACE	STEEL	ROUND REGISTER	
RR-1	TITUS	TMR	24×24	SURFACE	STEEL	ROUND REGISTER	
RR-2	TITUS	PAR	24×24	LAY-IN	STEEL		
SR-1	TITUS	300R	AS NOTED	SURFACE	STEEL		
							######################################

NOTE: 1. ALL NECK SIZES & CFM'S ARE SHOWN ON PLANS

			EXH	AUST I	-AN SC	CHED	ULE					
MARK	LOCATION SERVED	MFR	MODEL	CFM	S.P. IN.W.G.	RPM	SONES	HP	MOTOR VOLT	PHASE	WEGHT LB'S	REMARKS
EF-1	TOILET EXHAUST	GREENHECK	GB-90-4	750	0.25	1310	9.2	1/4	120	1	50	ROOF MOUNT EXHAUST BLOWER. FURNISH W/ BDD, DISCONNECT SWITCH & ROOF CURB
									•			

NOTE: CONNECT FAN EF-1 TO TIME CLOCK. SEE DIAGRAM 2/MP2.1.

			GRA	VITY	HOO	D	
MARK	SERVICE	MFR.	MODEL	СЕМ	SP IN.W.G.	THROAT WxL IN.	REMARKS
GH-1	CUSTODIAN RM. ELECTRICAL RM.	GREENHECK	FABRA HOOD	400	0.05	12x12	FURNISH W/ CURB & BIRDSCREEN

P	LUMBING FIXTURE CONNECT	ON S	CHE	DULE	•	
SYM.	FIXTURE	CW	HW	W	٧	
WC-1	WATER CLOSET, WALL MOUNT, FLUSH VALVE	11/4"		4"	2"	
UR-1	URINAL	3/4"		2"	11/2"	
L-1	LAVATORY, WALL HUNG (CW/HW)	1/2"	1/2"	2"	1 <sup>1</sup> /2"	
EWC-1	ELECTRIC WATER COOLER	1/2"		2"	11/2"	
MS-1	MOP SINK	3/4"	3/4"	3"	2"	
FD	FLOOR DRAIN, FINISHED FLOOR	1/2"(1)	-	2"	11/2"	
WH-1	WATER HEATER	3/4" IN	3/4" OUT	3" (2)		

(1) TRAP PRIMER CONNECTION(2) OVERFLOW DRAIN TO SPILL OVER MOP SINK

	EQUIPMENT SCHEDULE
MARK	DESCRIPTION
	ELECTRIC HOT WATER HEATER
/WH\	CAPACITY: 15-GALLONS STORAGE TANK, 13 GPH RECOVERY RATE AT 80-DEGREES RISE.
1	ELECTRICAL: 3,000 WATTS ELEMENT @ 460 VOLT, 3Ø. WEIGHT: 250 LBS (WITH WATER). SIZE: 26" HIGH, 18" DIAMETER.
	"A.O. SMITH" MODEL DEL-15.

	ABBREVIATIONS	8 – H	VAC
AC	AIR CONDITIONING	LBOUNI	
AP	ACCESS PANEL	LRA	LOCKED ROTOR AMPS
BDD	BACK DRAFT DAMPER	мвн	THOUSAND BRITISH UNITS
BOR	BOTTOM OF REGISTER	MFR	MANUFACTURER
втин	BRITISH THERMAL UNITS PER HOUR	MFS	MAXIMUM FUSE SIZE
CD	CEILING DIFFUSER	MCA	MINIMUM CIRCUIT AMPACITY
C.F.D.	CEILING FIRE DAMPER	MIN.	MINIMUM
CFM	CUBIC FEET PER MINUTE	N/A	NOT APPLICABLE
CLG.	CEILING	NIC	NOT IN CONTRACT
CONN.	CONNECTION (CONNECT)	NO.	NUMBER
CONT.	CONTINUATION	NOM.	NOMINAL
DFPT	DOUGLAS FIR PRESSURE	(N)	NEW
DL	TREATED (BLOCKS)  DOOR LOUVER	O.A.	OUTSIDE AIR
DB	DRY BULB	O.A.I.	OUTSIDE AIR INTAKE
DN	DOWN	O.C.	ON CENTERS
DWG.	DRAWING	OPER.	OPERATING
EF	EXHAUST FAN	R.A.	RETURN AIR
EA·	EACH	RPM	REVOLUTIONS PER MINUTE
(E)	EXISTING	RLA	RATED LOAD AMPS
ER	EXHAUST REGISTER	RR	RETURN REGISTER
EXH.	EXHAUST	RTU	ROOF TOP UNIT
E.S.P.	EXTERNAL STATIC PRESSURE	S.A.	SUPPLY AIR
F.D.	FIRE DAMPER	S.M.	SHEET METAL
FLA	FULL LOAD AMPS	S.P.	STATIC PRESSURE
FLR.	FLOOR	SR	SUPPLY REGISTER
FLEX.	FLEXIBLE	TEMP.	TEMPERATURE
FT.	FOOT	T'STAT	THERMOSTAT
GA.	GAUGE	T.S.P.	TOTAL STATIC PRESSURE
G.C.	GENERAL CONTRACTOR	TS	TUBE STEEL
GF	GAS FURNACE	TYP.	TYPICAL
HP	HORSE POWER	V.D.	VOLUME DAMPER
HZ	HERTZ		WITH
IN.	INCH	WB	
KW	THOUSAND WATTS	W.G.	WATER GAUGE
	L ABBREVIATIONS SHOWN ABOVE MA DOCUMENTS OF THIS PROJECT	Y BE	APPLICABLE TO THE

CW HW HWR CD G	COLD WATER HOT WATER HOT WATER RETURN CONDENSATE DRAIN
HWR CD	HOT WATER RETURN
CD	
	CONDENSATE DRAIN
G	the second section of the second section of the second section of the second section s
	NATURAL GAS
SD	STORM (ROOF) DRAIN
FCO	FLOOR CLEANOUT
GCO	GRADE CLEANOUT
WCO	WALL CLEANOUT
СО	CLEANOUT
FD	FLOOR DRAIN
НВ	HOSE BIBB
WH	WALL HYDRANT
GV	GATE OR GLOBE (SHUT-OFF) VALVE
CK	CHECK VALVE
_	POINT OF CONNECTION
ABV.	ABOVE
AP	ACCESS PANEL
ASR	AUTOMATIC SPRINKLER RISER
B/F	BELOW FLOOR
	BOTTOM OF PIPE OR PIPE INSULATION
CFH	CUBIC FOOT PER HOUR (GAS)
	CEILING
	CONDENSATE
	CONNECT
	CONTINUATION
	DOWN
. ,	FLASH TANK
FV	FLUSH VALVE
L.F	LINEAR FOOT
	NEW
OD	OVERFLOW ROOF DRAIN
POC	POINT OF CONNECTION
	RAIN WATER LEADER
RD	ROOF DRAIN
(R)	RELOCATED
SA	SHOCK ABSORBER
SOV	SHUT-OFF VALVE
TD	TRENCH DRAIN
	UNDER GROUND
VR	VENT RISER
VTR	VENT THRU ROOF
WH	WATER HEATER
	OWN ABOVE MAY BE APPLICABLE TO THE
IS OF THIS	5 PROJECT
	**************************************
	WCO CO FD HB W CK - ABV. APR BOP CLG. CONT. DNG. (E) FT V LF (N) D POC RD (R) S OV TD VR WH

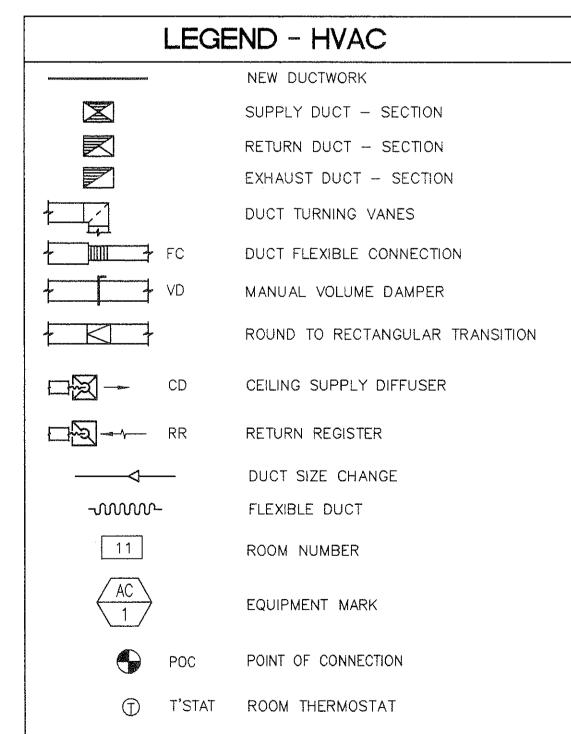
LEGEND - PLUMBING

VENT

---- V

WASTE ABOVE FLOOR OR GRADE

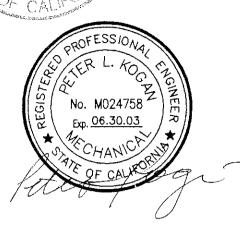
WASTE BELOW FLOOR OR GRADE



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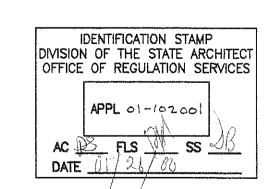
1. 50% CONSTRUCTION DOCUMENTS 5/26/99
2. DSA SUBMITTAL 9/01/99
3. DSA BACKCHECK 3/31/00

NEW GYMNASIUM AT PINE VALLEY MIDDLE SCHOOL

FOR THE

SAN RAMON VALLEY
UNIFIED SCHOOL
DISTRICT
AND
CITY OF SAN RAMON

KEY PLAN



PROJECT NO.: 98305.00 DRAWN BY: BZ

DATE: 3/31/00 CHECKED BY: PK

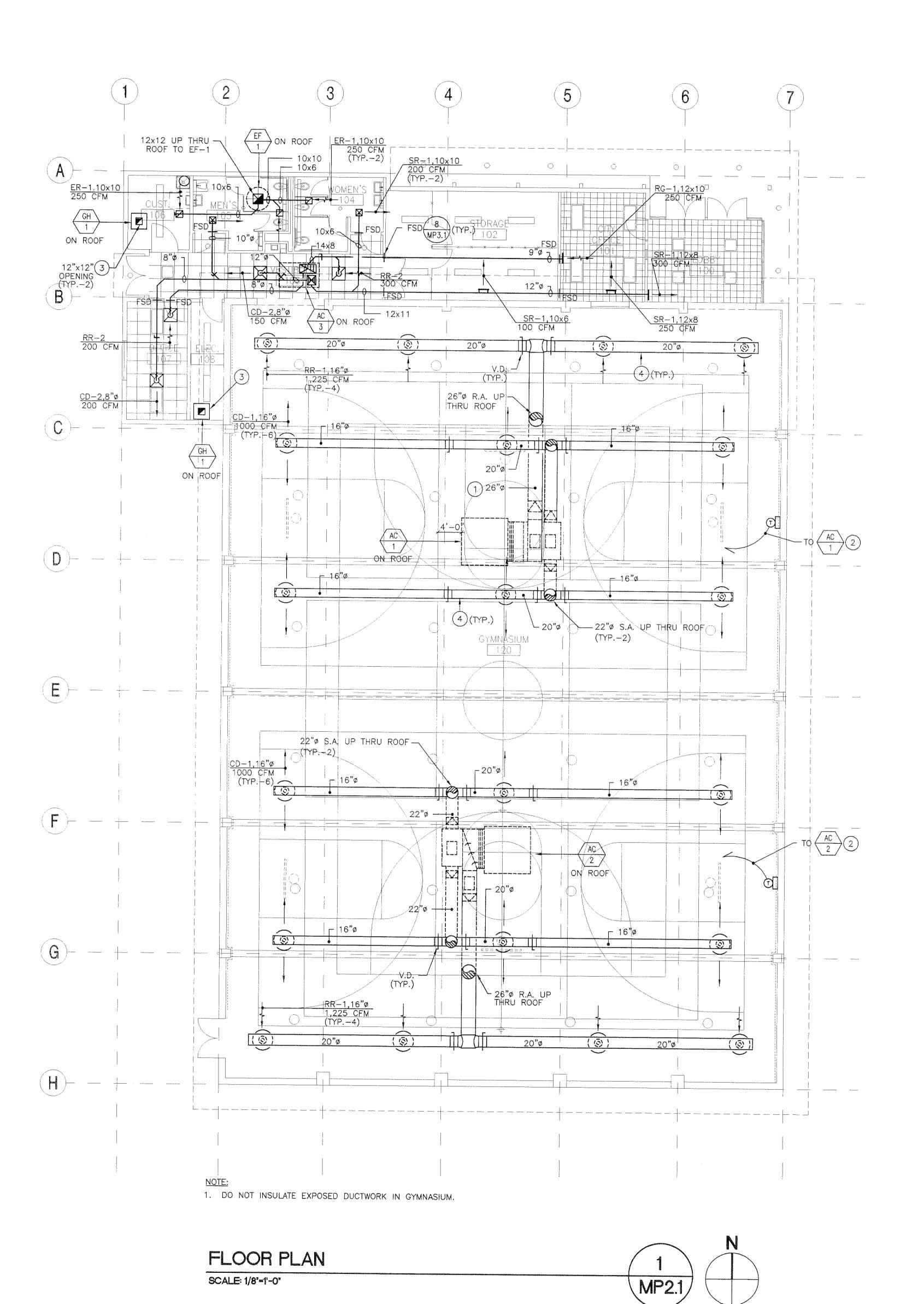
SCALE: NONE

NOTES, SCHEDULES, LEGEND, ABBREVIATIONS

DSA SUBMITTAL

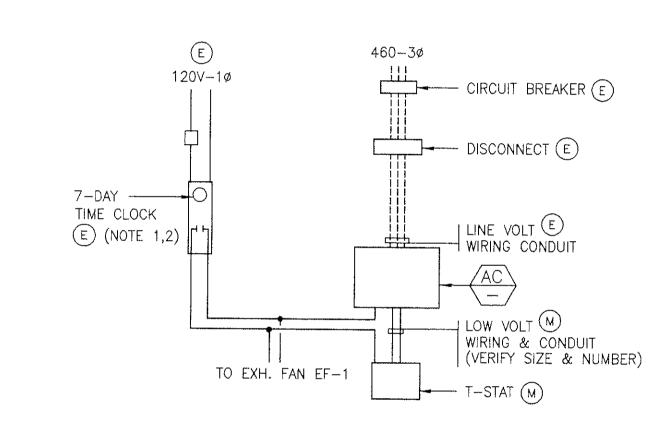
MPI.

SHEET NO:



## KEYED NOTES

- DUCTWORK ON ROOF.
- WALL-MOUNTED THERMOSTAT AT 48" AFF, UNDER LOCKABLE, HEAVY-DUTY STEEL COVER. PROVIDE MIN. 1" THICK INSULATED SUB-BASE.
- 3 12"x12" DUCT OPENING INTO CUST, ROOM AND/OR TO ELECTRICAL ROOM, WITH
- BOTTOM OF DUCT TO BE APPROXIMATELY AT THE LEVEL OF BOTTOM OF ROOF JOISTS.



M PROVIDED & INSTALLED BY MECH. CONTR.

E PROVIDED & INSTALLED BY ELECT. CONTR.

NOTES:

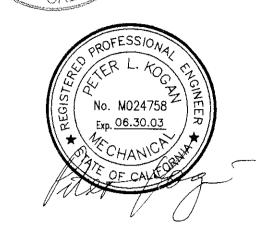
- SET TIME CLOCK TO OPERATE ALL (3) AC UNITS AND EXHAUST FAN EF-1 DURING NORMAL BUSINESS HOURS.
- 2. TIME CLOCK TO BE WIRED BY ELECTRICAL CONTRACTOR.

AC UNIT SCHEMATIC CONTROL DIAGRAM
NOT TO SCALE



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ISSUES/REVISONS

9/01/99

3/31/00

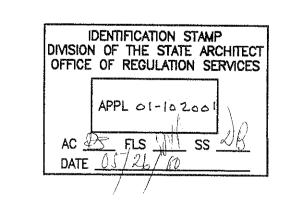
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 DSA SUBMITTAL
 DSA BACKCHECK

NEW GYMNASIUM AT PINE VALLEY MIDDLE SCHOOL

FOR THE

SAN RAMON VALLEY
UNIFIED SCHOOL
DISTRICT
AND
CITY OF SAN RAMON

KEY PLAN



PROJECT NO.: 98305.00 DRAWN BY: BZ

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SHEET TITLE:

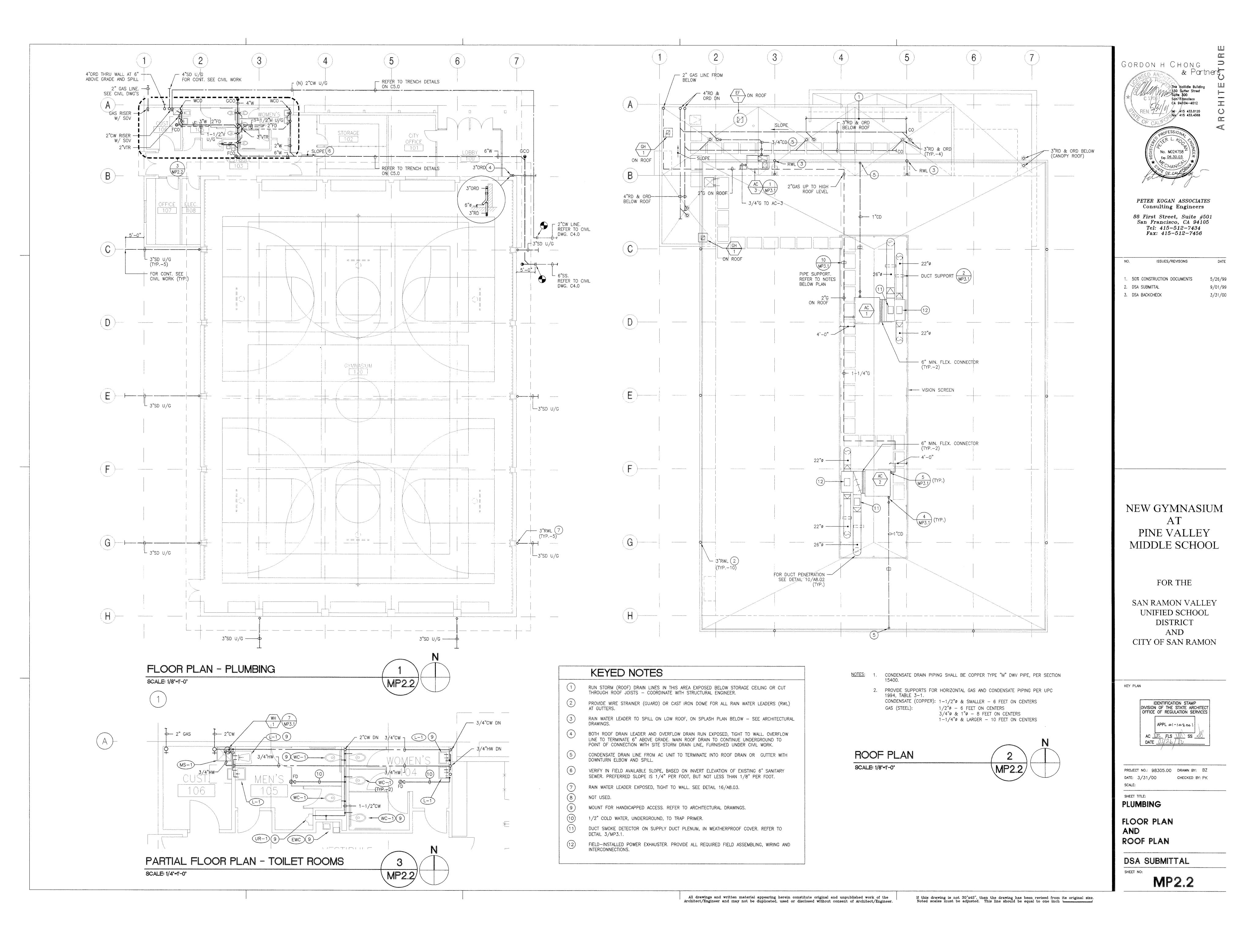
MECHANICAL

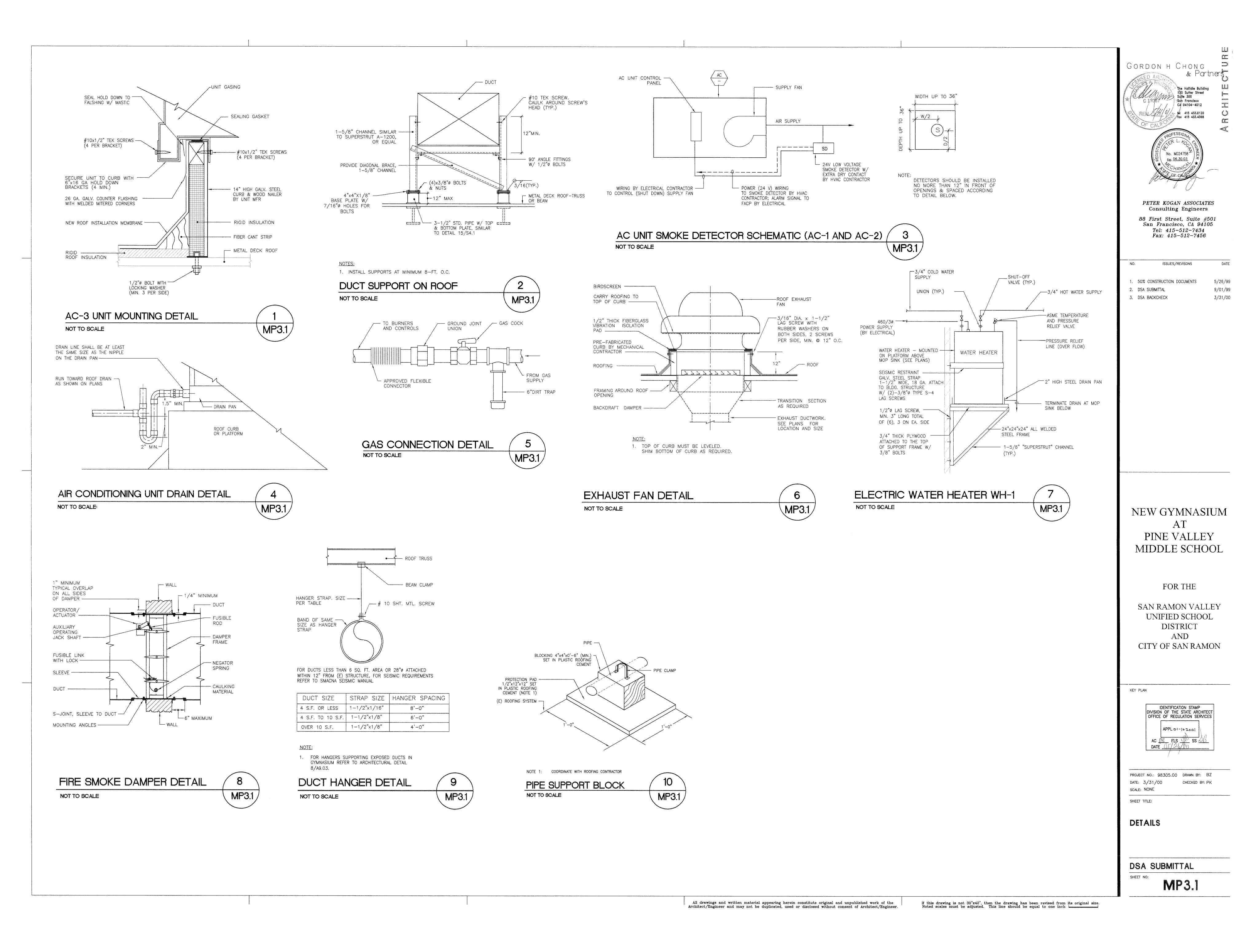
FLOOR PLAN,

DIAGRAM

DSA SUBMITTAL

MPS





CERTIFICATE OF COMPLIANCE (Part 1 of 3) MECH-1	CERTIFICATE OF COMPLIANCE Part 2 of 3 MECH-1
PROJECT NAME PINE VALLEY GYMNASIUM  PROJECT ADDRESS SAN RAMON, CA	PROJECT NAME PINE VALLEY GYMNASIUM  DATE 05/26/99
PRINCIPAL DESIGNER - MECHANICAL PETER KOGAN ASSOCIATES TEL (415) 512-7434  DOCUMENTATION AUTHOR PETER KOGAN ASSOCIATES TEL (415) 512-7434  Shecked by/Date	SYSTEM FEATURES
TETER ROOMY ASSOCIATES (413) STZ 7434 Enforcement Agency Use	MECHANICAL SYSTEMS
GENERAL INFORMATION  DATE OF PLANS  BUILDING CONDITIONED FLOOR AREA  10,645 SQ.FT.	SYSTEM NAME  AC-1, AC-2  AC-3  NOTE TO FIELD
BUILDING TYPE NONRESIDENTIAL HIGH RISE RESIDENTIAL HOTEL/MOTEL GUEST ROOM	TIME CONTROL. S S
PHASE OF CONSTRUCTION NEW CONSTRUCTION ADDITION ALTERATION  METHOD OF MECHANICAL PRESCRIPTIVE PERFORMANCE	SETBACK CONTROL  B  B  ISOLATION ZONES  N/A  N/A
COMPLIANCE PRESCRIPTIVE PERFORMANCE  PROOF OF ENVELOPE COMPLIANCE PREVIOUS ENVELOPE PERMIT ENVELOPE COMPLIANCE ATTACHED	HEAT PUMP THERMOSTAT?  N/A N/A N/A N/A
STATEMENT OF COMPLIANCE	ELECTRIC HEAT?  N N FAN CONTROL?
This Certificate of Compliance list 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.	FAN CONTROL?  O  VAV MINIMUM POSTITION CONTROL?  N
The documentation preparer hereby certifies that the documentation is accurate and complete.	SIMULTANEOUS HEAT/COOL?  N N
	HEAT AND COOL SUPPLY RESET?  VENTILATION  B  B
PETER KOGAN, P.E. SIGNATURE 05/26/99	OUTDOOR DAMPER CONTROL?  A  A
	ECONOMIZER TYPE  A  OUTDOOR AIR CFM  1,100 (PER UNIT)  650 (PER UNIT)
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	HEATING EQUIP.TYPE HIGH EFFIC.? GAS N GAS N
calculations submitted with this permit application. The proposed building has been designed to meet the mechanical requirements contained in sections 110 through 115, 120 through 124, 140 through 142, 144 and 145.	CARRIER CARRIER MAKE AND MODEL NUMBER MODEL 48HJD017 MODEL 48HJE004
Please check one:	COOLING EQUIP.TYPE HIGH EFFIC.?  DX N DX N
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 a civil engineer, mechanical engineer, or architect.	MAKE AND MODEL NUMBER  CARRIER MODEL 48HJD017  CARRIER MODEL 48HJE004
I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section 5537.2 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am a licensed contractor preparing documents for work that I have contracted to perform.	CODE TABLES: Enter code from table below into columns above.
I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code by Section of theCode to sign this document as the person responsible for its	HEAT PUMP THERMOSTAT?  TIME CONTROL  SETBACK CTRL ISOLATION ZONES FAN CONTROL  S: Prog. Switch H: Heating Enter number of I: Inlet Vanes
preparation; and for the following reason:	ELECTRIC HEAT?  VAV MINIMUM POSITION CONTROL?  Y: Yes  S: Prog.Switch O: Occupancy Sensor M: Manual Timer  H: Heating C: Cooling Isolation Zones. P: Variable Pitch V: VFD O: Other
PRINCIPAL MECHANICAL DESIGNER NAME PETER KOGAN, P.E.  SIGNATURE  O5/26/99  LIC. # MO24758	SIMULTANEOUS HEAT/COOL? N: No VENTILATION OUTDOOR DAMPER ECONOMIZER O.A. CFM
MECHANICAL MANDATORY MEASURES	HEAT AND COOL SUPPLY RESET?  B: Air Balance C: Outside Air Cart. C: Outside Air Cart. HIGH EFFICIENCY?  A: Auto W: Water CFM N: Not Required Note: This shall be no
Indicate location on plans of Note Block for Mandatory Measures MP1.1	D: Demand Control N: Natural  D: Demand Control On MECH-4.
INSTRUCTION TO APPLICANT	NOTEC TO FIELD F. D. III.
	NOTES TO FIELD—For Building Department Use Only
For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.  MECH—1: Required on plans for all submittals. Parts 2 & 3 may be incorporated in schedules on plans.  MECH—2: Required for all submittals: choose appropriate version depending on method of mechanical compliance.	
MECH-3 and MECH-4: Required for all submittals.	
Nonresidential Compliance Form January 1996	Nonresidential Compliance Form  January 1996
MECHANICAL EQUIPMENT SUMMARY MECH-3	MECHANICAL VENTILATION MFCH-4
PROJECT NAME PINE VALLEY GYMNASIUM  DATE 05/26/99	MECHANICAL VENTILATION  PROJECT NAME PINE VALLEY GYMNASIUM SYSTEM NAME BUILDING AC SYSTEMS  DATE 05/26/99
PROJECT NAME PINE VALLEY GYMNASIUM  DATE 05/26/99  COOLING EQUIPMENT	PROJECT NAME PINE VALLEY GYMNASIUM DATE 05/26/99
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO. DESIGN OUTPUT (BTU/HR)  DESIGN CFM UNITS ALLOWED PROPOSED Y N	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO. DESIGN OUTPUT (BTU/HR)  AC-1 CARRIER AC-2 MODEL 48HJD017  180,000  DATE 05/26/99  RATED EFFICIENCY ECONOMIZER UNITS ALLOWED PROPOSED Y N	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this form for each mechanical system.  MECHANICAL VENTILATION  A B C D E F G H D K
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO. (BTU/HR)  AC-1 CARRIER  DATE 05/26/99  RATED EFFICIENCY ECONOMIZER UNITS ALLOWED PROPOSED Y N	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  OCCUPANCY BASIS  SPACE  OND  OND  OND  OND  OND  OND  OND  ON
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PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO. (BTU/HR)  AC-1 CARRIER AC-2 MODEL 48HJD017  CARRIER	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND. AREA BASIS  COND. AREA GEN (SF) PER SF (BXC)  NO. WIN. OF CFM (MAX. OF D OR F)  OCCUPANCY BASIS  NO. MIN. OF CFM (MAX. OF D OR F)  OCCUPANCY BASIS  NO. MIN. OF CFM (MAX. OF D OR F)  OCCUPANCY BASIS  NO. MIN. OF CFM (MAX. OF D OR F)  OCCUPANCY BASIS  OCCUPANCY BASIS  NO. MIN. OF CFM (MAX. OF D OR F)  OCCUPANCY BASIS  OCCUP
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO.  AC-1 CARRIER AC-2 MODEL 48HJD017  CARRIER  AC-2 MODEL 48HJD017  CARRIER	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  NO.  NO.  NO.  OCCUPANCY BASIS  NO.  NO.  NO.  NO.  NO.  NO.  NO.  NO
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM NAKE AND MODEL NO.  AC-1 CARRIER AC-2 MODEL 48HJD017  CARRIER  AC-2 MODEL 48HJD017  CARRIER	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  MIN.  OFM PEOPLE (EX15)  D OR F)  CFM CFM CFM CFM CFM CFM CFM CFM CFM CF
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO.  AC-1 CARRIER AC-2 MODEL 48HJD017  RATED EFFICIENCY UNITS ALLOWED PROPOSED  Y N  ECONOMIZER Y N  AC-1 CARRIER AC-2 MODEL 48HJD017  RATED EFFICIENCY UNITS ALLOWED PROPOSED  Y N  ECONOMIZER Y N  AC-1 CARRIER AC-2 MODEL 48HJD017	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  MIN.  OFM OF CFM OF CFM OF D OR FI  D OS/26/99  DATE 05/26/99
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO.  AC-1 CARRIER  AC-2 MODEL 48HJD017  CARRIER	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  MIN.  OFM PEOPLE (EX15)  D OR F)  CFM CFM CFM CFM CFM CFM CFM CFM CFM CF
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO.  AC-1 CARRIER AC-2 MODEL 48HJD017  RATED EFFICIENCY UNITS ALLOWED PROPOSED  Y N  ECONOMIZER Y N  AC-1 CARRIER AC-2 MODEL 48HJD017  RATED EFFICIENCY UNITS ALLOWED PROPOSED  Y N  ECONOMIZER Y N  AC-1 CARRIER AC-2 MODEL 48HJD017	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  MIN.  OFM OF CFM OF CFM OF D OR FI  D OS/26/99  DATE 05/26/99
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO. (BTU/HR)  AC-1 CARRIER AC-2 MODEL 48HJD017  CARRIER	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  MIN.  OFM PEOPLE (EX15)  D OR F)  CFM CFM CFM CFM CFM CFM CFM CFM CFM CF
PROJECT NAME PINE VALLEY GYMNASIUM  COOLING EQUIPMENT  SYSTEM MAKE AND MODEL NO. (BTU/HR)  AC-1 CARRIER AC-2 MODEL 48HJD017  CARRIER	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  MIN.  OFM PEOPLE (EX15)  D OR F)  CFM CFM CFM CFM CFM CFM CFM CFM CFM CF
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Design output   Design outpu	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  NO.  NO.  NO.  OCCUPANCY BASIS  NO.  NO.  NO.  NO.  NO.  NO.  NO.  NO
DESIGN OUTPUT   CATE   CATE	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  MIN.  OFM PEOPLE (EX15)  D OR F)  CFM CFM CFM CFM CFM CFM CFM CFM CFM CF
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DATE 05/26/99   COOLING EQUIPMENT	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  NO.  NO.  NO.  OCCUPANCY BASIS  NO.  NO.  NO.  NO.  NO.  NO.  NO.  NO
COOLING EQUIPMENT	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM CFM OF NO.  OCCUPANCY BASIS  NO.  NO.  NO.  MIN.  OFM PEOPLE (EX15)  D OR F)  CFM CFM CFM CFM CFM CFM CFM CFM CFM CF
DATE 05/26/99	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND.  AREA BASIS  COND.  AREA CFM CFM OF PER SF (BxC)  D COUPANCY BASIS  NO. WIN.  NO. WIN. OF CFM OF CFM OF CFM D OR F)  CFM CFM CFM CFM CFM CFM CFM CFM CFM CF
DATE 05/26/99	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE Provide are copy of this form for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS  COND. AREA BASIS  COND. AREA BASIS  SPACE  NO. (SF) PER SF (BXC)  1 10,645 0.2 2,129 142 2,130 2,130 2,850
DATE 05/26/99	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE: Provide one copy of this form for egor mechanical system.  MECHANICAL VENTILATION  AREA BASIS  CON MAN (SF) PER SF (BKC)  1 10,645 0.2 2,129 142 2,130 2,130 2,650 — — — — — — — — — — — — — — — — — — —
DATE 05/26/99	PROJECT NAME PINE VALLEY GYMNASIUM  SYSTEM NAME BUILDING AC SYSTEMS  NOTE Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASS  COND AND OF OF ON ON OF ON
DATE 05/26/99	PROJECT NAME PINE VALLEY CYMNASIUM SYSTEM NAME BUILDING AC SYSTEMS  NOTE Provide one copy of this forn for coch mechanical system.  MECHANICAL VENTILATION  AREA BASS SPACE SPACE SPACE SPACE 10,845 0.2 2,129 142 2,130 2,130 2,130 2,850  TOTALS (FOR MECH-2) 142 2,130 2,130 2,850  C Min mum Ventilotion Rate per Section 2-5321, Table 2-63F.  Based on Expected Number of Decupants of ct Least 50% of Chapter 333 UBC of Compent Density.  Must be greater than or equal to C G, or use Transfer Air (R) is used.  Must be greater than or equal to C G, or use Transfer Air (R) is used.
COOLING EQUIPMENT	PROJECT NAME PINE VALLEY GYMNASIUM SYSTEM NAME BUILDING AC SYSTEMS  NOTE. Provide one copy of this forn for each mechanical system.  MECHANICAL VENTILATION  AREA BASIS SPACE

DUCT INSULATION		TOTAL	TATELON TO THE PARTY OF THE PAR		/26/9
DOO! INCOLATION		THE THE THE THE	DUCT TAPE	· · · · · · · · · · · · · · · · · · ·	
SYSTEM NAME	DUCT TYPE (Supply Return, etc.)	DUCT LOCATION (Roof, Plenum, etc.)	ALLOWED?	DUCT INSULATION R-VALUE	NOTE TO
NEW DUCTS	SUPPLY	PLENUM	Y N	3.8	FIELD
TOTAL STATE OF THE				0.0	
11 - 400-4					
THE PARTY OF THE P					
PIPE INSULATION					
			INSULATION REQUIRED?		
SYSTEM NAME		TYPE eturn, etc.)	YN		NOTE TO
N/A					
					1

Nonresidential Compliance Form

CH-1	MECHANICAL	SIZING AN	D FAN PC	WER	ME	CH-2
5/26/99		/ALLEY GYMNASI NG AC SYSTEM	UM	MAAAAAA AAAAA	DATE	05/26/9 AREA 10,645 SQ.FT.
	NOTE: Provide one copy of	f this form for each me	chanical system when	using the Prescipti		
NOTE TO	SIZING and EQUIPMENT S	ELECTION				
FIELD	1. DESIGN CONDITIONS:				COOLING	HEATING
	-OUTDOOR, DRY BU	JLB TEMPERATURE				
	-OUTDOOR, WET BU	JLB TEMPERATURE			94	24
	-INDOOR, DRY BUL	B TEMPERATURE			76	70
	2. SIZING				70	70
	VENTILATION LOAD	2,850	TOTAL CFM (	From MECH-4)	55.4	141.6
	-ENVELOPE LOAD				125.6	986
	-LIGHTING	2	WATTS/SF		75.6	<u> </u>
	PEOPLE	142	#OF PEOPLE	(From MECH-4)	72.4	
	-MISC. EQUIPMENT		WATTS/SF			
	-OTHER				_	_
	-OTHER		(Describe)		****	_
			(Describe)	TOTALS	329.0	240.2
	3. SELECTION					
	A. SAFETY/WARM UP	FACTOR			1.21	1.43
	B. MAXIMUM ADJUST	TED LOAD (Totals from a	above X Safety/Warmu	p Factor)	398.0	343.5
NOTE TO	C. INSTALLED EQUIP	MENT CAPACITY		ļ	396.0	444.0
FIELD	IF LINE 3—C IS GRE	EATER THAN LINE 3-B,	EXPLAIN STD. UNITS FL	JRNACES	KBtu/Hr	KBtu/Hr
	FAN POWER CONSUMPTION	V	THE PART OF THE PA	MATTER COMP PA 1.	7, 107 107 107	
	A	В	C D	E	F	G
	FAN DESCRIPTION	DESIGN BRAKE HP	EFFICIENCY MOTOR DRIVE	NUMBER P OF FANS Bx	EAK WATTS Ex746/(CxD)	CFM (Supply Fons)
	N/A	< 25HP			=(0,0,0)	(Supply 1 only)
				1		
	PROVINCE.					
						PACE AND ADDRESS OF THE PACE A
	NOTE: Include only fan syste	ems exceeding 25HP (se	ee s 144).			
	NOTE: Include only fan syste Total Fan System Power Der constant Volume system or	mand may not exceed (	0.8 Watts/CFM for	TOTALS		
	Total Fan System Power Der	mand may not exceed (	0.8 Watts/CFM for	L	TAL FAN SYSTEM POWER DEMAND WATTS/CFM	

GORDON H CHONG The Hallidie Building
130 Sutter Street
Suite 300
San Francisco
CA 94104-4012 tel 415 433.0120 fax 415 433.4368 PETER KOGAN ASSOCIATES
Consulting Engineers 88 First Street, Suite #501 San Francisco, CA 94105 Tel: 415-512-7434 Fax: 415-512-7456

2. DSA SUBMITTAL 9/01/99 3. DSA BACKCHECK 3/31/00

ISSUES/REVISONS

5/26/99

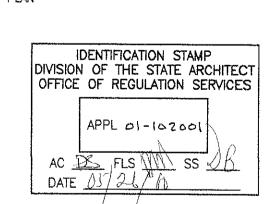
1. 50% CONSTRUCTION DOCUMENTS

NEW GYMNASIUM AT PINE VALLEY MIDDLE SCHOOL

FOR THE

SAN RAMON VALLEY UNIFIED SCHOOL DISTRICT AND CITY OF SAN RAMON

KEY PLAN



PROJECT NO.: 98305.00 DRAWN BY: BZ DATE: 3/31/00 CHECKED BY: PK SCALE: NONE

SHEET TITLE: TITLE 24 MECHANICAL

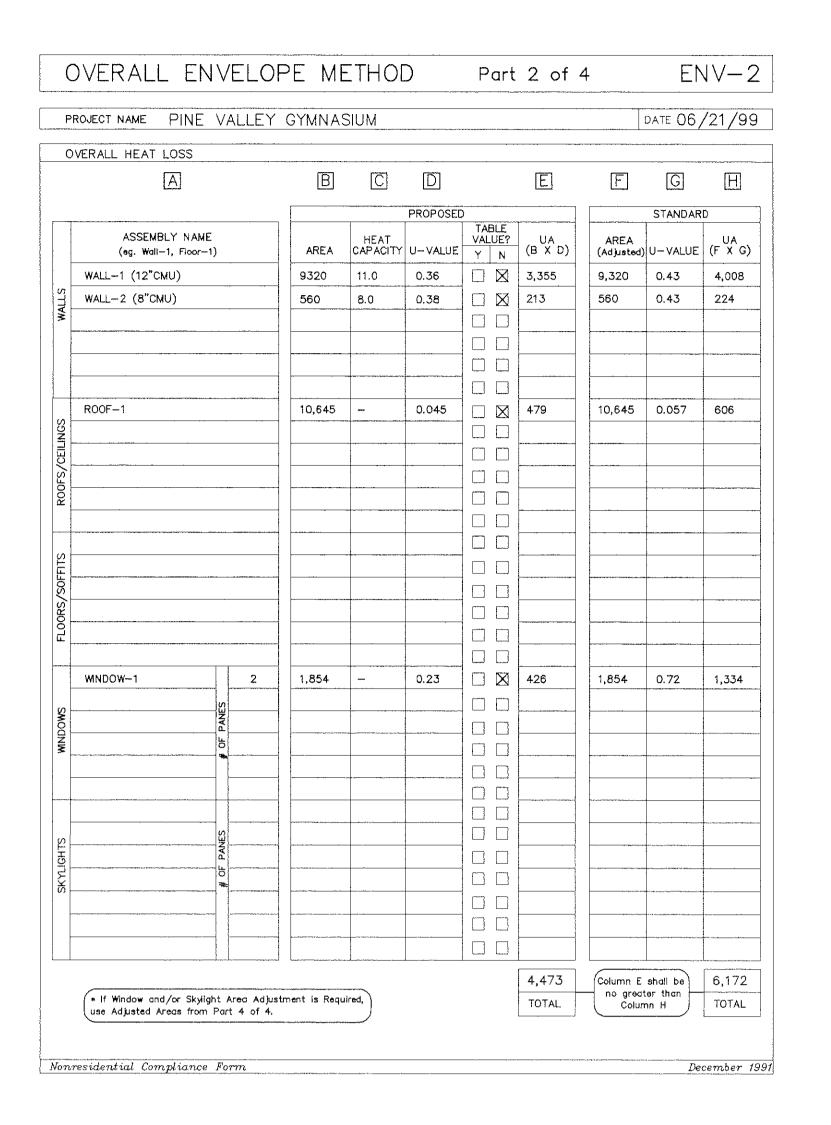
DSA SUBMITTAL

SHEET NO:

CERTIFICATE OF COMPLIANCE Part 1 of 2  ROJECT NAME PINE VALLEY GYMNASIUM	ENV-		ATE OF COMP	PLIANCE	Part 2 of 2	El	NV-1
ROJECT ADDRESS SAN RAMON, CALIFORNIA	Building Per	PROJECT NAME	PINE VALLEY G`	YMNASIUM		DATE	06/21/99
CONCIPAL DESIGNER - ENVELOPE CHARLES HIGUERAS  DESIGNER - ENVELOPE CHARLES HIGUERAS  DESIGNER - ENVELOPE CHARLES HIGUERAS  (949) 253-852  TEL. (415) 512-743	Checked by/Do	ODAQUE CHE	ACES				
ENERAL INFORMATION		ASSEMBLY NAME (eg. Woll-1, Floor-			(eg. Suspended C	N/COMMENTS: ceiling, Demising, E	tc.) NOTE TO
E OF PLANS 06/21/99  BUILDING CONDITIONED FLOOR AREA 10,645		12 WALL-1 ROOF-1	R-2 R-19	BLOCK METAL	ROOF		
SE OF CONSTRUCTION NEW CONSTRUCTION ADDITION ALTERATION UN	OTEL/MOTEL GUEST NCONDITIONED (File A ERFORMANCE						
TATEMENT OF COMPLIANCE							
is Certificate of Compliance list the building features and performance specifications needed to com rts 1 and 6 of the California Code of Regulations. This certificate applies only to building envelope e documentation preparer hereby certifies that the documentation is accurate and complete.	npiy with Title 24, e requirements.						
	ATE 06/21/99	WINDOWS					
e Principal Envelope Designer hereby certifies that the proposed building design represented in this cuments is consistent with the other compliance forms and worksheets, with the specifications, and	d with any other	(eg. Willdow-1)	PANES (eg. Wood	l, Metal, etc.)	XTERIOR OVERHANG HADE? CREDIT?	(eg. Clear, Tinte	
Iculations submitted with this permit application. The proposed building has been designed to mee quirements contained in sections 110, 116 through 118, and 143 or 149 of Title 24, Part 6, Chapter case check one:	t the envelope	WNDOW-1	2 GLAS	SS BLOCK	N N	CLEAR	
I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Profession	ons Code to sian t	this					
document as the person responsible for its preparation; and that I am a civil engineer or archite I affirm that I am eligible under the exemption to Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation.	ect. de by Section 5537	37.2 of				***************************************	
licensed contractor preparing documents for work that I have contracted to perform.							
l affirm that I am eligible under the exemption to Division 3 of the Business and Professions Coc of theCode to sign this document as the person resp preparation; and for the following reason:	oonsible for its						
INCIPAL ENVELOPE DESIGNER - NAME SIGNATURE LIC. No. C-17067	DATE 06/21/	/99	W-77000-000-000-000-000-000-000-000-000-	497844			
IVELOPE MANDATORY MEASURES						1770 AMALAN AMATALA	
dicate location on plans of Note Block for Mandatory Measures		SKYLIGHTS  SKYLIGHT NAME			SKYLIGHT MATERIAL	GLAZING TYPE	
STRUCTION TO APPLICANT	A TOTAL OF THE PARTY OF THE PAR	(eg. SKY-1) N/A	PANES (eg. Wood,	, Metal, etc.) (ea	g. Glass, Plastic, etc.)	(eg. Clear, Tinte	ed) FIELD
r detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refe	er to the Nonresider	ential	and a state of the	PAGGINA PAGA	.,		
nual published by the California Energy Commission. V—1: Required on plans for all submittals. Parts 2 may be incorporated in schedules on plans. V—2: Used for all submittals: choose appropriate version depending on method of envelope compliance. V—3 and ENV—4: Optional. Use if default U—values are not used. Choose appropriate version for assembly		NOTES TO FIEL  Nonresidential Cor	D-For Building Depo	artment Use Only		J	anuary 1996
inual published by the California Energy Commission. V—1 : Required on plans for all submittals. Parts 2 may be incorporated in schedules on plans. V—2 : Used for all submittals: choose appropriate version depending on method of envelope compliance. V—3 and ENV—4 : Optional. Use if default U—values are not used. Choose appropriate version for assembly		Nonresidential Cor  Y-2  OVERALL	npliance Form  ENVELOPE N	METHOD	Part 4 of 4	EI	VV-2
nual published by the California Energy Commission. V-1: Required on plans for all submittals. Parts 2 may be incorporated in schedules on plans. V-2: Used for all submittals: choose appropriate version depending on method of envelope compliance. V-3 and ENV-4: Optional. Use if default U-values are not used. Choose appropriate version for assembly  Intersidential Compliance Form  OVERALL ENVELOPE METHOD Part 3 of 4	Janua ENV	Nonresidential Cor  OVERALL  PROJECT NAME	npliance Form	METHOD ASIUM	Part 4 of 4	EI	1996 VV—2 /21/99
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PROJECT NAME PINE VALLEY GYMNASIUM  A B C D E F G H  WNDOW/SKYLIGHT NAME (eg. Wall-1, Sky-1)	Janua ENV- DATE 06/21  J STANDARD  A RSHG TO (Bx ated) (Gr SC**) (Bx	Nonresidential Con	PINE VALLEY GYMN  PUSTMENT CALCULATIONS PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S	ASIUM  B C ON GROSS DOOR AREA AREA	E MINDOW ADJUST. MINDOW FACTOR	DATE 06	VV-2 /21/99 G ADJUST. WALL AREA
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window/skyught name (eg. Wall-1, sky-1)  Window-1  Windo	DATE 06/21   J   C   STANDARD   (Bx of sceed) (7 0.88 3.00	Nonresidential Con  V—2  OVERALL  PROJECT NAME  WINDOW AREA AD  CHECK IF NOT AP  WALL NAM (eg. Wall—1, Wall)  308	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  OO OO  OO OOO  OO OO  OO OOO  OO OO  OO OOO	ASIUM  B C ON GROSS DOOR AREA AREA	E MINDOW ADJUST. MINDOW FACTOR	DATE 06	VV-2 /21/99 G ADJUST. WALL AREA
Weight   Section   Secti	DATE 06/21   J   C   STANDARD   (Bx of sceed) (7 0.88 3.00	Nonresidential Con  V—2  OVERALL  PROJECT NAME  WINDOW AREA AD  CHECK IF NOT AP  WALL NAM (eg. Wall—1, Wall)  308	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  OO OO  OO OOO  OO OO  OO OOO  OO OO  OO OOO	ASIUM  GROSS DOOR AREA AREA	E MINDOW ADJUST. MINDOW FACTOR	DATE 06	VV-2 /21/99 G ADJUST. WALL AREA
WINDOW/SKYLIGHT NAME	Janua   ENV     DATE 06   21     STANDARD   TO     (or SC**) (Bx     7	Nonresidential Con  V—2  OVERALL  PROJECT NAME  WINDOW AREA AD  CHECK IF NOT AP  WALL NAM (eq. Wall—1, Wall)  308	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  ORIENTATIO  O	ASIUM  S  B C ON GROSS AREA AREA  O O O O O O O O O O O O O O O O O O	E MINDOW ADJUST. MINDOW FACTOR	DATE 06	VV-2 /21/99 G ADJUST. WALL AREA
window/skyught name (eg. Wall-1, sky-1)  Window-1  Windo	Janua   ENV     DATE 06/21     J	Nonresidential Con  V—2  OVERALL  PROJECT NAME  WINDOW AREA AD  CHECK IF NOT AP  WALL NAM (eg. Wall—1, Wall)  308	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  OIL	ASIUM  S  B C ON GROSS AREA AREA  O O O O O O O O O O O O O O O O O O	E MINDOW ADJUST. MINDOW FACTOR	DATE 06	VV-2 /21/99 G ADJUST. WALL AREA
WINDOW/SKYLIGHT NAME	Janua   ENV     DATE 06   21     STANDARD   TO     (or SC**) (Bx     7	Nonresidential Con  V—2  OVERALL  PROJECT NAME  WINDOW AREA AD  CHECK IF NOT AP  WALL NAM (eg. Wall—1, Wall)  308  SKYLIGHT AREA	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  ORIENTATIO  O	ASIUM  GROSS DOOR AREA AREA  O O O O O O O O O O O O O O O O O O	WINDOW ADJUST. FACTOR (From Part 1)	EN  DATE 06  F  ADJUST. WNDOW AREA (DXE)  B	VV-2 /21/99  [G] ADJUST. WALL AREA 3-(F+c)
The proposed polars for James Pine Valley Gymnasium (eg. Well-1, Skyrloght Name (eg. Well-1, Skyrloght Name (eg. Well-1, Skyr-1)    Window-1    Window-1    Window-1    1.14    387    0.22    1.00   36   383    Window-1    1.14   387   0.22   1.00   36   383   384   385   386   386   387   387   387   387   387   387   387   388   38	Janua   ENV     DATE 06   21     STANDARD   TO     (or SC**) (Bx     7	Nonresidential Con  V—2  OVERALL  PROJECT NAME  WINDOW AREA AD  CHECK IF NOT AP  WALL NAM (eg. Wall—1, Wall)  308  SKYLIGHT AREA	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  ORIENTATIO  O	ASIUM  GROSS DOOR AREA AREA  O O O O O O O O O O O O O O O O O O	WINDOW ADJUST. FACTOR (From Part 1)	EN  DATE 06  F  ADJUST. WINDOW AREA (DXE)  B  ADJUST.	VV-2 /21/99  [G]  ADJUST, WALL AREA 9-(F+C)
NUMBOW-1  Nequied on plans for oil submittats. Parts 2 may be incorporated in schedules on plans.  Part 1: Required on plans for oil submittats. Parts 2 may be incorporated in schedules on plans.  Part 2: Used for all submittats: choose appropriate version depending on method of envelope compliance.  Prover ALL ENVELOPE METHOD Part 3 of 4  PROJECT NAME PINE VALLEY GYMNASIUM  DVERALL HEAT GAIN  AREA SC H V H/V OHF (BXCXXX)  WINDOW/SKYLIGHT NAME (eg. Well-1; Sky-1)  WINDOW-1  1:27  MINDOW-1  1:27  MINDOW-1  1:27  MINDOW-1  1:14  387  0.22 1.0  36  38:	Janua   ENV     DATE 06   21     STANDARD   TO     (or SC**) (Bx     7	Nontesidential Con  Nontes	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  OII - 2)  OII - 2)  TOTAL  PLICABLE (See Part 1 of 4)	ASIUM  B C ON GROSS DOOR AREA AREA  O O O O O O O O O O O O O O O O O O	WINDOW ADJUST. FACTOR (From Part 1)	EN  DATE 06  F  ADJUST. WINDOW AREA (DXE) B  ADJUST. SKYLIGHT AREA	VV-2 /21/99  [G] ADJUST. WALL AREA 9-(F+c)
WINDOW/SKYLIGHT NAME	Janua   ENV     DATE 06   21     STANDARD   TO     (or SC**) (Bx     7	Nontesidential Con  Nontes	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  ORIENTATIO  O	ASIUM  GROSS DOOR AREA AREA  OOO OOO OOO OOO OOO OOO OOO OOO OOO	WINDOW ADJUST. FACTOR (From Part 1)  C SKYLIGHT SKYLIGHT FACTOR	EN  DATE 06  F  ADJUST. WINDOW AREA (DXE) B  ADJUST. SKYLIGHT AREA	JV-2  /21/99  G  ADJUST. WALL AREA B-(F+C)  ADJUST. ROOF AREA
window/skylight name (gg. woll-1, sky-1)  Weighting (gg. woll-1, sky-1)  Window-1  1.27  Sequence of the skylight of the skyli	Janua   ENV     DATE 06   21     STANDARD   TO     (or SC**) (Bx     7	Nontesidential Con  Nontes	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  ORIENTATIO  O	ASIUM  GROSS DOOR AREA AREA  OOO OOO OOO OOO OOO OOO OOO OOO OOO	WINDOW ADJUST. FACTOR (From Part 1)  C SKYLIGHT SKYLIGHT FACTOR	EN  DATE 06  F  ADJUST. WINDOW AREA (DXE) B  ADJUST. SKYLIGHT AREA	JV-2  /21/99  G  ADJUST. WALL AREA B-(F+C)  ADJUST. ROOF AREA
WINDOW/SKYLIGHT NAME	Janua   ENV     DATE 06   21     STANDARD   TO     (or SC**) (Bx     7	Nontesidential Con  Nontes	ENVELOPE N  PINE VALLEY GYMN  DJUSTMENT CALCULATIONS  PLICABLE (See Part 1 of 4)  ORIENTATIO  N E S  ORIENTATIO  O	ASIUM  GROSS DOOR AREA AREA  OOO OOO OOO OOO OOO OOO OOO OOO OOO	WINDOW ADJUST. FACTOR (From Part 1)  C SKYLIGHT SKYLIGHT FACTOR	EN  DATE 06  F  ADJUST. WINDOW AREA (DXE) B  ADJUST. SKYLIGHT AREA	JV-2  /21/99  G  ADJUST. WALL AREA B-(F+C)  ADJUST. ROOF AREA

PINE VALLEY GY				DATE OC (O1 (O
The state of the s	MNASIUM		* TIO TREETT SURFACE AS T	06/21/9
WINDOW AREA TEST				
A. DISPLAY PERIMETER	O ft	X 6 =	0 sf	DISPLAY AREA
B. GROSS EXTERIOR WALL AREA	11,734 sf	X 0.40 =	<b>4,694</b> sf	40% AREA
C. GROSS EXTERIOR WALL AREA	11,734 sf	X 0.10 =	1,173 sf	MINIMUM STND. AREA
D. ENTER LARGER OF A or B			<b>4,694</b> sf	MAXIMUM STND. AREA
E. ENTER PROPOSED WINDOW AREA			1,854 sf	PROPOSED AREA
1. IF E IS GREATER THAN D: D. MAXIMUM STANDARD AI	REA E. PRO	OPOSED AREA	WINDOW ADJU	JSTMENT FACTOR
B. HIMITON STANDARD AL	÷ [		=	-
2. IF E IS LESS THAN C:		GO TO 4 OF 4	TO CALCULATE AD	JUSTED AREAS.
C. MINIMUM STANDARD AF		OPOSED AREA	WINDOW ADJU	JSTMENT FACTOR
_	÷ [	CO TO 4 OF 4	TO CALCULATE AD	- AREAS
SKYLIGHT AREA TEST				
ATRIUM I	HEIGHT	FT		
AINOM				
F	- IF<55	IF>55		
STANDARD 	% = 0.05	STANDA	RD % = 0.1	
STANDARD	X	=   REA STANDAR	RD SKY. AREA	
		PROPOS		
IF THE PROPOSED SKYLIGHT AREA IS GREATE	THAN STANDARD S		ED SKY, AREA	NEXT CALCULATION
FOR THE SKYLIGHT AREA ADJUSTMENT. IF NO			FROCEED TO THE	IVENT CALCULATION
1. IF PROPOSED SKYLIGHT AREA > OR = ST	FANDARD SKYLIGHT AF	REA:		
STANDARD SKYLIGHT AR	REA PROPOSED	SKYLIGHT AREA	SKY⊔GHT AD	JUSTMENT FACTOR

Nonresidential Compliance Form



GORDON H CHONG
& Partners

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San Francisco
CA 94104-4012

Tel 415 433.0120
fax 415 433.4368

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ISSUES/REVISONS

1. 50% CONSTRUCTION DOCUMENTS 5/26/99
2. DSA SUBMITTAL 9/01/99

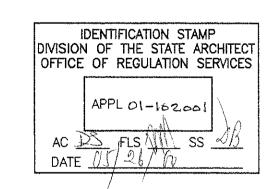
3. DSA BACKCHECK 3/31/00

NEW GYMNASIUM AT PINE VALLEY MIDDLE SCHOOL

FOR THE

SAN RAMON VALLEY
UNIFIED SCHOOL
DISTRICT
AND
CITY OF SAN RAMON

KEY PLAN



PROJECT NO.: 98305.00 DRAWN BY: BZ

DATE: 3/31/00 CHECKED BY: PK

SCALE: NONE

SHEET TITLE:

TITLE 24

ENVELOPE

DSA SUBMITTAL

MP4.2

January 1996