

GENERAL NOTES

- 1. CONTRACTOR SHALL VERIFY SITE PRIOR TO BEGINNING TO DETERMINE ANY DISCREPANCIES OR CONCERNS NOT SHOWN ON PLANS THAT MAY AFFECT HIS BID.
2. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF REGARDING ANY ALL REQUIREMENTS AND LIMITATIONS OF THE SPACE AVAILABLE FOR THE INSTALLATION OF ALL WORK AND DEVICES HEREUNDER SPECIFIED.
3. THE CONTRACTOR SHALL NOT FABRICATE ANY OUTDOOR UTILITY. HE HAS VERIFIED IN THE FIELD THAT THE SHOWN OUTDOOR CAN BE INSTALLED AT ALLOCATED SPACE.
4. CONTRACTOR SHALL COORDINATE ALL DUCT LOCATIONS WITH ELECTRICAL, STRUCTURAL, AND OTHER TRADES.
5. PROVIDE CONDENSATION HUMIDITY DAMPERS WHERE DUCT CROSSES FIRE SEPARATIONS, PROVIDE FIRE DAMPERS AND FIRE SMOKE DAMPERS WHEREVER SHOWN AND ALL AGENCIES REQUIRE TO HAVE AT AN ADDITIONAL COST TO OWNER.
6. ALL DUCTS AND PLENUMS USED TO CONVEY THE CONDENSED AIR OR VENTILATION AIR SHALL BE MADE OF CONTINUOUS SHEET METAL, FLEXIBLE DUCT SHALL NOT PENETRATE THROUGH ANY WALL, FULL HEIGHT FIRE RATED AND/OR SMOKE WALL.
7. TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON-BENEFICIAL TO THE OCCUPIED AREA. TEMPERATURE REQUIREMENTS SHALL BE SEaled WITH APPROVED ARBOL.
8. MAINTENANCE LABEL WILL BE AFFIXED TO MECHANICAL EQUIPMENT & A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE.
9. FLEXIBLE DUCT INSTALLATION ASSEMBLY SHALL MEET THE STATE FIRE MARSHAL REQUIREMENTS FOR A FIRE SPREAD AND SMOKE DEVELOPMENT RATING.
10. MECHANICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR ON ALL FLOOR AND CEILING OPENINGS FOR DUCTS, PIPING AND RISERS. REQUIREMENTS AS PER IBC, CSPD, DDCS, OR AS REQUIRED PRIOR TO CONSTRUCTION. FAILURE TO DO THIS SHALL BE THE RESPONSIBILITY OF CONTRACTOR. EQUIPMENT SHALL NOT FIT.

- 11. PROVIDE VOLUME DAMPER (AO, SUPPLY, RETURN AND EXHAUST) BRANCK OUTLET ONLY.
12. COORDINATE THERMOSTAT LOCATIONS WITH ALL TRADES AND CLEAR ALL OBSTRUCTIONS TO TEMPERATURE. THERMOSTAT SHALL BE LOCATED MINIMUM 4'-6" AFF. IN ACCORDANCE WITH ADA REQUIREMENTS.
13. PROVIDE SEISMIC SEPARATION JOINT ON ALL DUCT, PIPING CROSSING AT ALL SEISMIC SEPARATION JOINTS.
14. SMOKE DAMPER SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR AND FIRE AND SMOKE DAMPER SHALL AUTOMATICALLY CLOSE UPON RECEIVING SIGNAL FROM FIRE ALARM CONTROL PANEL, OR LOSS OF BUILDING POWER TO MOTOR.
15. ALL MECHANICAL EQUIPMENT LOCATIONS, DUCT CROSS, ETC. SHALL BE PER MECHANICAL DRAWINGS. COORDINATE WITH ALL OTHER CONTRACTORS FOR LOCATIONS AND CLEARANCES.
16. PENETRATIONS OF WIRES, CONDUITS, ETC. INTO WALLS REQUIRING PROTECTED OPENINGS SHALL BE INSTALLED, FIRE STOP MATERIAL SHALL BE A TESTED ASSEMBLY APPROVED BY THE OSHPD FIRE MARSHAL.
17. MANUFACTURER AND MODEL NUMBER SHOWN ON EQUIPMENT SCHEDULE ARE THE BASIS OF DESIGN. REFER TO THE SPECIFICATION FOR EQUIPMENT PRODUCTS.
18. ALL SUPPLY DUCTWORK FROM AIR HANDLING UNITS TO VARIABLE AIR FLOW UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
19. ALL SUPPLY DUCTWORK FROM VARIABLE AIR FLOW UNITS TO OUTLETS SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
20. ALL FLEXIBLE DUCT SHALL BE CERTIFIED BY THE MANUFACTURER AND INSTALLED IN COMPLIANCE WITH SECTIONS 496.2.2 AND 497 OF THE CMC.
21. COLD AIR DUCTS SHALL BE INSULATED TO PREVENT CONDENSATION PROBLEMS (R-5).
22. THERMAL OR ACoustICAL LINING MATERIALS SHALL NOT BE INSTALLED WITHIN 24" OF THE DUCT. INSULATION SHALL BE INSTALLED IN THE UNOCCUPIED AREAS SHOWN AS OPERATING, MECHANICAL AND RECOVERY ROOMS, HURRISKES, STORAGE ROOMS AND RECYCLE REPAIR ROOMS. INSULATION SHALL BE INSTALLED WITH 2" GAP BETWEEN EACH COURSE OF INSULATION. THE BOTTOM OF OUTDOOR AIR HANDLES SHALL BE LOCATED NOT LESS THAN 18" ABOVE GROUND LEVEL (OR ABOVE ROOF LEVEL 497.2.1).
23. EXHAUST OUTLETS SHALL BE LOCATED A MIN. OF 10' ABOVE ADJACENT AREAS AND 10' FROM DOORS, OCCUPIED AREAS AND OUTDOOR VENTING (497.2.2).
24. OUTDOOR AIR HANDLES SHALL BE LOCATED 25% FROM EXHAUST OR VENTILATING SYSTEMS. DOWNSTREAM EQUIPMENT SHALL BE INSTALLED IN UNOCCUPIED AREAS THAT MAY COLLECT DEBRIS SUCH AS OTHER ROOMS, PLUMBING, THE BOTTOM OF OUTDOOR AIR HANDLES SHALL BE LOCATED NOT LESS THAN 18" ABOVE GROUND LEVEL (OR ABOVE ROOF LEVEL 497.2.1).
25. HVAC SYSTEM AND COMPONENTS WILL BE TESTED, ADJUSTED AND BALANCED IN ACCORDANCE WITH ONE OF THE FOLLOWING STANDARDS:
- TABS CONSTRUCTION SPECIFICATIONS INSTITUTE MASTERPOINT 25 (5/18 AND 1999)
- NBS'S STANDARDS FOR TESTING, ADJUSTMENT, AND BALANCING OF ENVIRONMENTAL SYSTEMS (7TH EDITION)
- ASHRAE STANDARD 154-2000
- ASHRAE STANDARD 154-2000
26. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MINIMUM OF 4" REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY.
27. ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENTS (DAMPERS) SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEET METAL TO PREVENT COLLAPSE OR DAMAGE TO DUCTS AND VENTILATING EQUIPMENT.
28. AN AIR FLEXIBLE WITH A MINIMUM OF 1" PER FOOT FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY.
29. REFRIGERANT PIPE SEES SHOWN ON PLANS ARE FOR INFORMATION ONLY. FINAL PIPE SEES SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

SEISMIC BRACING NOTES

- A. PROVIDE SEISMIC BRACING OF MECHANICAL PLUMBING AND FIRE PROTECTION SYSTEMS IN ACCORDANCE WITH REQUIREMENTS OF THE CURRENT NATIONAL BUILDING CODE (SECTION 1.5).
B. DUCTWORK AND PIPING SHALL BE SUPPORTED AND BRACED WITH ONE OF THE FOLLOWING OSHPD PRE-APPROVED SYSTEMS:
1. TOWARD ONE END SEISMIC RESTRAINT SYSTEM, OSHPD PRE-APPROVAL.
2. LIMITED FLEXIBLE BRACING SYSTEM, APPROVAL 09/24/13.
3. MASON SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED PIPING, OSHPD PRE-APPROVAL 09/24/13.
4. BARRIER ROUGHNESS SEISMIC BRACING SYSTEM, OSHPD PRE-APPROVAL.
C. CALCULATIONS AND DRAWINGS SHALL BE SUBMITTED FOR DUCTWORK, PIPING AND SUPPORTS AND BRACING SHOWING:
1. LOCATION OF SEISMIC BRACING.
2. REACTION FORCES TO THE SUPPORTING STRUCTURE.
3. MANUFACTURERS DESIGNATION OF SUPPORT DEVICES.
4. CALCULATION SHALL INCLUDE REFERENCES TO THE MANUFACTURERS LITERATURE FOR ALLOWABLE LOADS ON THE DUCTS, CALCULATIONS AND DRAWINGS SHALL BE APPROVED, STAMPED AND SIGNED BY A LICENSED MECHANICAL ENGINEER OR EQUIPMENT VENDOR SUBJECT TO REVIEW BY THE MECHANICAL ENGINEER OF RECORD AND TO OSHPD.
D. SEISMIC BRACING POINTS SHALL BE SUBMITTED ON CONTRACTORS COORDINATED SHOP DRAWINGS.
E. CONTRACTOR SHALL SUBMIT WRITTEN CERTIFICATION BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA THAT THE WORKING INSTALLATION COMPLIES WITH THE REQUIREMENTS OF THE CURRENT CODE WITH CALIFORNIA AMENDMENTS.
F. ANCHORAGE OF ALL EQUIPMENT SHALL BE PER TABLED CHECK FOR ATTACHMENTS OF EQUIPMENT. TABLES SHALL BE SUPPORTED DIRECTLY ON THE FLOOR OR ROOF STRUCTURE. FURNITURE OR TOWNSHIP OR MOVABLE EQUIPMENT SHALL BE SUPPORTED BY WALLS THAT ARE SUPPORTED AND ANCHORED TO RESIST THE FORCES PRESCRIBED IN CHAPTER 13 OF ASCE 7-10, 2010 CBC AND THE AMENDMENTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD AND OSHPD AS PART OF FIELD REVIEW INSPECTIONS. THE INSPECTOR OF RECORD SHALL BE ASURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.
G. BRACING, SUPPORT AND BRACING OF MECHANICAL & FIRE SPRINKLER PIPING SHALL COMPLY WITH THE 2013 SECTION OF IMPS 13 AND CHAPTER 13-02, ASCE 7-10, 2010 CBC.
H. A COPY OF CHOSEN BRACING SYSTEM INSTALLATION GUIDE MANUAL SHALL BE ON THE JOB SITE PRIOR TO STARTING THE INSTALLATION OF THE COMPONENT, EQUIPMENT HANGERS AND OR BRACES.

ANCHORAGE NOTES

- ALL MECHANICAL EQUIPMENT SHALL BE RACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA UNLESS OTHERWISE NOTED ON THE DRAWINGS:
FIXED EQUIPMENT ON CONCRETE 33% OF EQUIPMENT WEIGHT
FIXED EQUIPMENT ON STRUCTURE 50% OF EQUIPMENT WEIGHT
FOR FLEXIBLY MOUNTED EQUIPMENT USE 2 TIMES THE ABOVE VALUES AND FOR SMALL THERMAL VERTICAL FORCE USE 1/3 THE HORIZONTAL FORCE.
WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF LOCAL BUILDING DEPARTMENT.

AUTOMATIC SHUTOFFS

- PER CMR - AIR MOVING SYSTEMS SUPPLYING AIR IN EXCESS OF 2000 CUBIC FEET PER MINUTE (AFAI) TO DISINFECTED SPACES WITHIN BUILDINGS SHALL BE EQUIPPED WITH AN AUTOMATIC SHUTOFF. AUTOMATIC SHUTOFFS SHALL BE INSTALLED AT THE POINT OF ENTRY INTO THE MAIN SUPPLY DUCT SERVED BY SUCH EQUIPMENT. SMOKE DETECTORS WHICH WILL DETECT PRODUCTS OF COMBUSTION FROM HEAT AND/OR SMOKE (COOL) WITH THE CALIFORNIA RULING CODE SHALL BE LABELED BY AN APPROVED AGENCY FOR REDUCED INSTANTANEOUS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS. SUCH DEVICES SHALL BE COMPATIBLE WITH THE OPERATING REQUIREMENTS, TOLERANCES, AND HUMIDITY OF THE SYSTEM. WHERE FIRE DETECTION ALARM SYSTEMS ARE PROVIDED FOR THE BUILDING, THE SMOKE DETECTOR REQUIRED FOR THIS SECTION SHALL BE SUPPLEMENTED BY SUCH SYSTEMS AND SHALL ACTIVATE THE FIRE ALARM SYSTEM. MANUAL SHUTOFFS SHALL BE INSTALLED ON THE DUCT FOR DUCT SMOKE SENSORS TO FUNCTION PROPERLY.

COMBUSTION AIR CALCULATIONS

Table with columns: BOILER TAG NO., FUEL INPUT, VENT CONNECTOR, and TOTAL BTUH INPUT. Includes notes on combustion air requirements and references to applicable codes.

APPLICABLE CODES & STANDARDS FOR REVISED LABBS

- THE AUTHORITY HAVING JURISDICTION (AHJ), LABBS & LAFD.
AREAS CLASSIFIED AS "OSHPD" CHINA ARE SUBJECT TO SPECIFIC "OSHPD" REQUIREMENTS FOUND IN 2013 CODE.
2010 CALIFORNIA BUILDING STANDARDS ADMINISTRATION CODE (CALIFORNIA CODE OF REGULATIONS (COUR) TITLE 24, PART 7)
2010 CALIFORNIA BUILDING CODE (CBC)
CALIFORNIA CODE OF REGULATIONS (COUR) TITLE 24, PART 7
2011 CITY OF LOS ANGELES ELECTRICAL CODE (LAW) AMENDMENTS (BASED ON 2010 CALIFORNIA ELECTRICAL CODE (CEC) / CALIFORNIA CODE OF REGULATIONS (COUR) TITLE 24, PART 16)
2008 CALIFORNIA ENERGY CODE (CALIFORNIA CODE OF REGULATIONS (COUR) TITLE 24, PART 6)
2010 CALIFORNIA FIRE CODE (FC)
CALIFORNIA CODE OF REGULATIONS (COUR) TITLE 24, PART 9
2009 INTERNATIONAL FIRE CODE (IFC) / CALIFORNIA AMENDMENTS (C)
2010 CALIFORNIA DESIGN BUILDING CODE
CALIFORNIA CODE OF REGULATIONS (COUR) TITLE 24, PART 10
2009 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2010 CALIFORNIA REFERENCED STANDARDS CODE
CALIFORNIA CODE OF REGULATIONS (COUR) TITLE 24, PART 12
2012 NFPA 99, HEALTHCARE FACILITIES CODE
2012 NFPA 101, LIFE SAFETY CODE
2010 NFPA 110, STANDARDS FOR EMERGENCY AND STANDBY POWER SYSTEMS
B.U.D.G. CODE FOR OSHPD'S BUILDING COMPONENTS 2013 CODE (PART 2 OF COR TITLE 24)

FIRE/SMOKE DAMPERS

- PROVIDE FIRE & SMOKE DAMPERS WHERE REQUIRED BY CHAPTER 6 & 9 OF THE 2010 CALIFORNIA BUILDING CODE (C.B.C.).
FIRE DAMPERS AND SMOKE DAMPER DETAILS WILL BE REFERRED TO ONLY THE MANUFACTURERS PHASING INSTRUCTIONS.
FIRE DAMPERS SHALL BE PROVIDED WITH AN APPROVED MEANS OF ACCESS, LARGE ENOUGH TO PERMIT INSPECTION AND MAINTENANCE OF THE DAMPER AND ITS OPERATING PARTS. THE ACCESS SHALL NOT IMPAIR FIRE-RESISTIVE CONSTRUCTION. ACCESS SHALL NOT BE THE USE OF TOOLS, KEYS OR SIMILAR EQUIPMENT. ACCESS POINTS SHALL BE REMOVED, REINFORCED OR IN REPAIR BEFORE SMOKE DAMPER OR FIRE DAMPER ACCESS DOORS SHALL BE IN GOOD CONDITION FOR THE REQUIRED DUCT CONSTRUCTION. 2010 CBC 906.4.
DUCT ENDS IN CHINA AND FIRE-SMOKE DAMPER SUBSTITUTES ARE KEYS OR OTHER DIMENSION AND THIS SHALL BE INCREASED BY MIN. OF 2" ON EACH SIDE.
THE SMOKE DETECTOR SHALL ACTIVATE THE FIRE ALARM SYSTEM, (CMC SECTION 909.9) CURRENT TRANSMITTER.
PENETRATIONS OF BRACKETS SHALL BE REQUIRED TO HAVE A FIRE-RESISTANT, RATING AND SHALL BE REQUIRED TO BE PENETRATED THROUGH PENETRATION FIRE STOP SHALL BE TESTED USING U.L.C. STANDARD 1-5, (I.C.C. SECTION 703.6 & 714)
SMOKE DETECTORS AND TOTAL AREA COVERED SMOKE DETECTOR PROVIDED UNDER SECTION 900 AND INSTALLED UNDER SECTION 900.5.
ALL POWER WIRING TO DAMPERS AND DETECTORS UNDER DIVISION 26

BOILER MACHINE ROOM CALCULATION

Table for boiler machine room calculation showing boiler room height, total number of boilers, volume per unit, and required boiler room volume.

ELEVATOR HOISTWAY VENT CALCULATION

Table for elevator hoistway vent calculation showing hoistway SF, vent duct size, and vent cover SDF.

LEGEND section containing a grid of symbols and abbreviations for various mechanical components like dampers, valves, and actuators, with corresponding descriptions.

MECHANICAL SHEET LIST

Table listing mechanical sheet numbers, descriptions, and quantities for various components like dampers, valves, and actuators.



ARCHITECT
HKS ARCHITECTS, INC.
STRUCTURAL ENGINEER
MECHANICAL ENGINEER
ELECTRICAL ENGINEER
LANDSCAPE ARCHITECT
ACOUSTICAL ENGINEER
CODE
HEALTHCARE TECHNOLOGY GROUP
SECURITY
FIRE SERVICES
HEALTHCARE TECHNOLOGY GROUP



HEALTH SCIENCES CAMPUS
Norris Healthcare Consultation Center

TENANT IMPROVEMENT
2204 E Alcazar Street, Los Angeles, CA 90033

OWNER
LOS ANGELES COUNTY SUPERIOR COURT
150 S. GARDEN STREET, LOS ANGELES, CA 90012

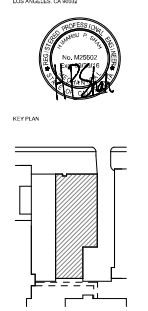
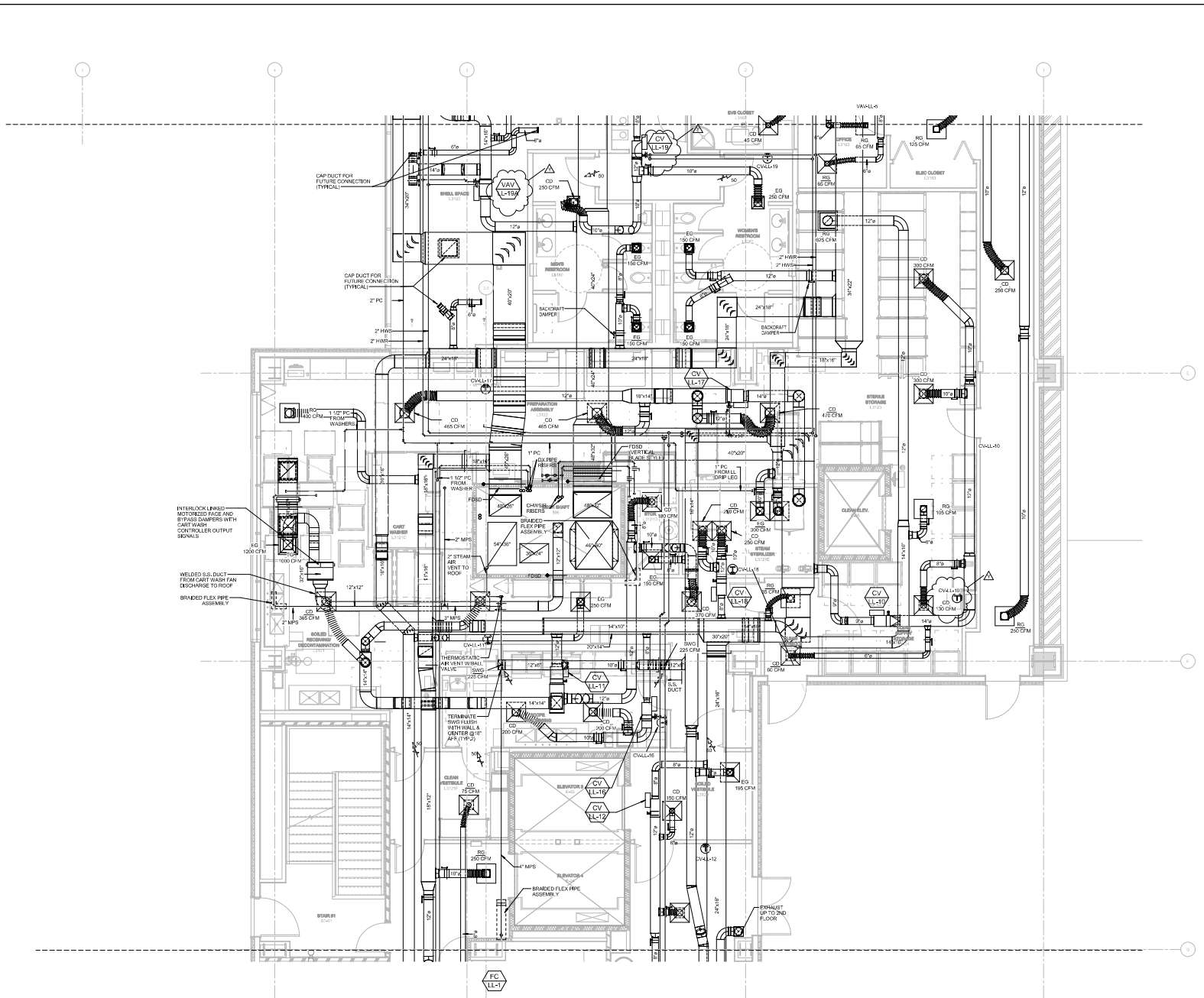


Table with columns: REV. NO., DESCRIPTION, DATE. Includes a date stamp: 15/02/2015.

TM-001



- GENERAL NOTES:
1. COIL AND DIFFUSERS AND RETURN GRILLS SHALL BE SUPPORTED AND BRACED PER DETAIL BTM00.
 2. DUCTWORK SHALL BE SUPPORTED AND BRACED PER DETAIL BTM00 AND DETAIL BTM01.
 3. PIPING SHALL BE SUPPORTED AND BRACED PER DETAIL BTM00, BTM01, BTM02, AND BTM03.
 4. GENERAL AIR UNITS AND DUCT MOUNTED REHEAT COILS SHALL BE SUPPORTED AND BRACED PER DETAIL BTM00.
 5. DUCTWORK PENETRATING ACCIDENTAL WALL SHALL BE PER DETAIL BTM00.
 6. PIPING PENETRATING ACCIDENTAL WALL SHALL BE PER DETAIL BTM00.
 7. PIPING PENETRATING RATED WALL SHALL BE PER DETAIL BTM00.
 8. FIRE DAMPERS SHALL BE INSTALLED PER DETAIL BTM00.
 9. BRACED FLEX PIPE ASSEMBLY SHALL BE RATED FOR TEMPERATURE & PRESSURE OF THE HIGH AND MEDIUM PRESSURE STEAM, HIGH AND MEDIUM PRESSURE CONDENSATE, AND PUMP CONDENSATE PIPING SYSTEMS. COMPLETE STEAM DRAINAGE OR STEAM PIPING SYSTEM INCLUDING MOMENT CURVES, ANCHORS, AND/OR APPROVED SUPPORT SYSTEM SHALL BE PROVIDED BY CONTRACTOR.



ARCHITECT
HKS ARCHITECTS, INC.
1000 W. 8TH STREET, SUITE 1000
LOS ANGELES, CA 90024

STRUCTURAL ENGINEER
TAMM TAYLOR & GAMES
300 ILWACO AVENUE, 14TH FLOOR
PASADENA, CA 91101

MEP ENGINEER
TAMM TAYLOR & GAMES
300 ILWACO AVENUE, 14TH FLOOR
PASADENA, CA 91101

CIVIL ENGINEER
HWA CONSULTING ENGINEERS
1880 CENTER STREET, 3RD FLOOR
LOS ANGELES, CA 90024

LANDSCAPE ARCHITECT
PETERSON ARCHITECTURAL PARTNERS
3742 SOUTH HEBBURN
LAKELAND, CALIFORNIA 90045

ACOUSTICAL ENGINEER
NEWSON-BROWN ASSOCIATES LLC
2001 W. 8TH STREET, SUITE 300
SANTA ANA, CA 92705

CODE
2009 SOUTH STATE COLLEGE BUILDING CODE
2009 IBC CODES

HEALTHCARE TECHNOLOGY
GSA
1800 CENTRAL GEORGE PATTON DR.
FRANKLIN, TN 37067

SECURITY
TFC
100 TECHNOLOGY DRIVE
IRVINE, CA 92618

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KUL SERVICE CO.
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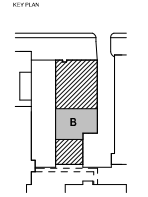
HEALTH SCIENCES CAMPUS

Norris Healthcare Consultation Center

TENANT IMPROVEMENT

1516 San Pablo Street, Los Angeles, CA 90033

OWNER
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REV.	DESCRIPTION	DATE
1	Approved	03/27/17
2	Approved	03/27/17
3	Approved	03/27/17
4	Approved	03/27/17
5	Approved	03/27/17
6	Approved	03/27/17
7	Approved	03/27/17
8	Approved	03/27/17
9	Approved	03/27/17
10	Approved	03/27/17

PROJECT NUMBER
15002.200

DATE
04/27/17

ISSUE FOR PLAN CHECK

MECHANICAL LOWER LEVEL PLAN - CENTER

SHEET NO.

1 MECHANICAL LOWER LEVEL PLAN - CENTER