

GAS/ELECTRIC PACKAGED UNITS

| SYM | MODEL | HT'G-IN | HT'G | AFUE | COOL'G | SEER | EER | CFM | VOLT | PH | MCA | MOCPP | WT* | NOTES |
|-------|--------------------|---------|--------|------|--------|------|-------|------|------|----|------|-------|-----|---|
| RTU-1 | CARRIER 48TCL006-5 | 60,000 | 50,000 | 80 | 59,000 | 13.0 | 10.75 | 2000 | 208 | 3 | 25.9 | 30 | 734 | FACTORY CURB, AUTO-CHANGEVER THERMOSTAT, ECONOMIZER |
| RTU-2 | CARRIER 48TCLA04-5 | 60,000 | 50,000 | 80 | 34,600 | 13.0 | 11.0 | 1200 | 208 | 3 | 19.4 | 25 | 648 | FACTORY CURB, AUTO-CHANGEVER THERMOSTAT, ECONOMIZER |
| RTU-3 | CARRIER 48TCLA04-5 | 60,000 | 50,000 | 80 | 34,600 | 13.0 | 11.0 | 1200 | 208 | 3 | 19.4 | 25 | 648 | FACTORY CURB, AUTO-CHANGEVER THERMOSTAT, ECONOMIZER |
| RTU-4 | CARRIER 48TCLA04-5 | 60,000 | 50,000 | 80 | 34,600 | 13.0 | 11.0 | 1200 | 208 | 3 | 19.4 | 25 | 648 | FACTORY CURB, AUTO-CHANGEVER THERMOSTAT, ECONOMIZER |
| RTU-5 | CARRIER 48TCLA05-5 | 60,000 | 50,000 | 80 | 45,000 | 13.0 | 11.0 | 1600 | 208 | 3 | 23.5 | 30 | 705 | FACTORY CURB, AUTO-CHANGEVER THERMOSTAT, ECONOMIZER |
| RTU-6 | CARRIER 48TCLA05-5 | 60,000 | 50,000 | 80 | 45,000 | 13.0 | 11.0 | 1600 | 208 | 3 | 23.5 | 30 | 705 | FACTORY CURB, AUTO-CHANGEVER THERMOSTAT, ECONOMIZER |

*INCLUDES CURB AND ENCONOMIZER

EXHAUST FANS

| SYM | MODEL | CFM | S.P. | VOLT | PH | AMPS | HP | WATTS | WT | CONTROLS | NOTES/LOCATION |
|------|--------------------------|-----|------|------|----|------|----|-------|-----|-----------------------|-----------------|
| EF-1 | BROAN LOSONE SELECT L100 | 115 | 0.1" | 115 | 1 | 1.1 | - | 87 | <10 | SWITCH W/ LIGHTS | RESTROOM A104 |
| EF-2 | BROAN LOSONE SELECT L100 | 115 | 0.1" | 115 | 1 | 1.1 | - | 87 | <10 | SWITCH W/ LIGHTS | RESTROOM A115 |
| EF-3 | BROAN LOSONE SELECT L200 | 214 | 0.1" | 115 | 1 | 1.8 | - | 127 | <10 | CONTINUOUS OPEN HOURS | LAB A117 |
| EF-4 | BROAN LOSONE SELECT L200 | 214 | 0.1" | 115 | 1 | 1.8 | - | 127 | <10 | CONTINUOUS OPEN HOURS | BREAK ROOM A116 |
| EF-5 | BROAN LOSONE SELECT L100 | 115 | 0.1" | 115 | 1 | 1.1 | - | 87 | <10 | THERMOSTAT | COMPRESSOR ROOM |
| EF-6 | BROAN LOSONE SELECT L100 | 115 | 0.1" | 115 | 1 | 1.1 | - | 87 | <10 | SWITCH W/ LIGHTS | RESTROOM B115 |
| EF-7 | BROAN LOSONE SELECT L100 | 115 | 0.1" | 115 | 1 | 1.1 | - | 87 | <10 | SWITCH W/ LIGHTS | RESTROOM C102 |

GENERAL MECHANICAL NOTES

- VERIFY FIELD CONDITIONS AND ARCHITECTURAL PLANS PRIOR TO BIDDING.
- INSTALLING CONTRACTOR SHALL PAY FOR ALL PERMITS AND LICENSES REQUIRED FOR LOCAL MUNICIPALITY.
- INSTALLING CONTRACTOR TO SURVEY SITE AND STUDY COMPLETE ARCHITECTURAL PLANS PRIOR TO SUBMITTING BID. SOUTHLAND ENERGY CONSULTANTS WILL NOT BE LIABLE FOR DETAILS OMITTED ON PLANS WHICH MAY BE REQUIRED IN THE FIELD. THIS PLAN IS DIAGRAMATIC IN NATURE, THE PLAN DOES NOT SHOW ALL TRANSITIONS OR FITTINGS WHICH MAY BE REQUIRED.
- INSTALLING CONTRACTOR TO SUPPLY ALL MATERIALS AND LABOR WHICH COMPRISE A COMPLETE WORKING H.V.A.C. SYSTEM THAT COMPLIES WITH THE MOST RESTRICTIVE BUILDING AND MECHANICAL CODES IN AFFECT.
- ALL WORK AND MATERIALS SHALL COMPLY WITH THE MOST RESTRICTIVE GOVERNING CODES AND REGULATIONS IN EFFECT.
- SERVICE, REPAIR, OR REPLACEMENT OF EXISTING UNITS, AIR HANDLING UNITS, REMOTE CONDENSERS, FURNACES, BOILERS, FANS, CONTROLS OR THERMOSTATS ARE NOT INCLUDED IN THIS SCOPE OF WORK UNLESS SPECIFICALLY ADDRESSED AND DETAILED ON THE MECHANICAL DRAWINGS. SUCH ITEMS SHALL BE REPAIRED AND COST CHARGED TO THE BUILDING OWNER AS A SEPARATE CHANGE-ORDER.
- THIS INSTALLATION SHALL COMPLY WITH THE 2010 CALIFORNIA MECHANICAL CODE, THE INTERNATIONAL BUILDING CODE AND LOCAL CODES, AS APPLICABLE.
- DUCTWORK TO BE GALVANIZED SPIRAL IRON OR APPROVED FLEX. CONCEALED DUCTWORK SHALL BE INSULATED AS PER TITLE 24 PART 6 ENERGY REPORT WITH R-4.2 AS A MINIMUM.
- THE LAST SEVEN FEET TO ANY INLET OR OUTLET IN ENCLOSED INSTALLATIONS TO BE CASCO "SILENT FLEX" OR EQUAL, U.N.O. (UNLESS NOTED OTHERWISE)
- SUPPLY DIFFUSERS TO BE CURVED BLADE TYPE. CARNES, KRUEGER, TITUS, J. & J. OR EQUAL. ALL DIFFUSERS TO BE 4-WY THROW U.N.O.
- RETURN AIR GRILLES TO MATCH SUPPLY DIFFUSERS, U.N.O.
- ANY TRANSITIONS OR OFFSETS IN DUCTWORK SHALL BE MADE AS TO MAINTAIN THE FACE AREA OF DUCTWORK EQUAL TO OR GREATER THAN SIZE LISTED ON PLANS.
- PROVIDE AUTO-CHANGE-OVER THERMOSTAT MOUNTED AT 48" ABOVE FINISHED FLOOR.
- MECHANICAL CONTRACTOR TO PROVIDE MANUAL DAMPERS IN ALL SUPPLY AIR BRANCH DUCTS. ADJUST TO WITHIN 5% OF AIR QUANTITIES SHOWN ON PLANS.
- ALL DUCT JOINTS TO BE SEALED WITH TWO WRAPS OF UL 181 APPROVED DUCT TAPE OR MASTIC AFTER BEING FASTENED WITH THREE SHEET METAL SCREWS, EXCEPT IN EXPOSED LOCATIONS.
- ALL ROOF PENETRATIONS SHALL BE CO-ORDINATED WITH AND SEALED BY THE ROOFING CONTRACTOR. CONTRACTOR SHALL INSTALL EQUIPMENT AND FLASHING AFTER VERIFYING INSTALLATION WITH THE ROOFING CONTRACTOR AND ARCHITECT.
- ALL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE DUCT CONSTRUCTIONS STANDARDS SET FORTH IN THE CMC.
- ALL INSULATION AND LINING MATERIAL INSTALLED WITHIN DUCTS SHALL HAVE MOLD, HUMIDITY AND EROSION SURFACES THAT MEETS THE REQUIREMENTS OF THE REFERENCED STANARDS FOR AIR DUCTS IN CHAPTER 17 OF CMC. CMC 605.0
- ANY AND ALL FACTORY MANUFACTURED DUCTS WILL BE CLASS 1 OR 0. CMC 604.3
- ANY INSULATION APPLIED TO THE EXTERIOR OF DUCTS LOCATED IN THE BUILDING TO HAVE FLAME SPREAD OF NOT MORE THAN 25 AND SMOKE-DENSITY NOT EXCEEDING 50 WHEN TESTED AS A COMPOSITE INSULATION. CMC 605.0
- DUCTS SHALL BE SUPPORTED PER THE MINIMUM REQUIREMENT OF THE CMC TABLE 6-7 AND SHALL BE BRACED AND GUYED TO PREVENT LATERAL OR HORIZONTAL MOVEMENT. CMC 604.2.4
- SUPPLY- AND RETURN-AIR DUCTS AND PLENUMS SHALL BE INSULATED TO ACHIEVE THE MINIMUM THERMAL (R) VALUE AS SET FOR IN THE 2010 CMC 605.0.
- FACTORY MADE DUCTS AND FACED INSULATIONS SHALL BE LEGIBLY PRINTED WITH THE NAME OF THE MANUFACTURER, THE THERMAL (R) VALUE AT INSTALLED THICKNESS AND THE FLAME-SPREAD AND SMOKE-DEVELOPED RATINGS OF THE COMPOSITE MATERIAL. CMC 605.0
- ALL APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE SECURELY FASTENED IN PLACE. SUSPENDED EQUIPMENT SHALL HAVE SEISMIC RESTRAINTS.
- ACCESS SHALL BE PROVIDED TO H.V.A.C. EQUIPMENT. ROOF LADDERS, HATCHES, STAIRS OR OTHER ACCESSES SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
- ALL UNIT SUPPLY FANS SHALL BE WIRED FOR CONSTANT BLOWER OPERATION DURING OCCUPIED PERIODS UNLESS ADEQUATE NATURAL VENTILATION IS PROVIDED PER CBC AND TITLE 24 ENERGY STANDARDS.
- SET FRESH AIR DAMPER ON EACH PACKAGED UNIT TO PROVIDE A MINIMUM 15 CFM PER OCCUPANT OR AS NOTED ON PLANS. CMC CHAPTER 4
- PROVIDE DUCT-MOUNTED SMOKE DETECTORS ON ALL SUPPLY PLENUMS WITH MORE THAN 2000 CFM. DETECTOR SHALL BE WIRED INTO 24V CONTROL CIRCUIT AND SHALL SHUT DOWN UNIT UPON SMOKE DETECTION. CMC 609.0
- ROOF MOUNTED EQUIPMENT SHALL BE LABELED AS TO THE SPACE IT SERVES, WHEN MORE THAN ONE HEATING OR COOLING UNIT SERVES THE OCCUPANTS.

LEGEND

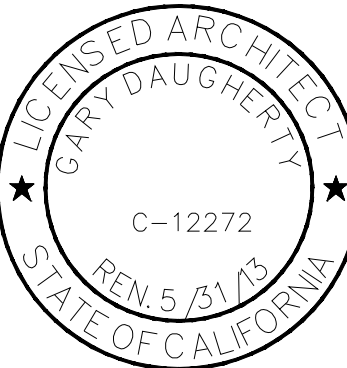
| SYMBOL | DESCRIPTION |
|--------|--|
| | RETURN OR SUPPLY GRILLE |
| | ROUND CEILING DIFFUSER |
| | NEW DUCT |
| | NEW FLEX |
| | NEW THERMOSTAT |
| | MANUAL VOLUME DAMPER (TYP. ALL SUPPLY) |
| | POINT OF CONNECTION |
| | DUCT MOUNTED SMOKE DETECTOR |

HVAC NOTES & SCHEDULES

SCALE: **1**
N.T.S.

| NO. | REVISION | BY | DATE |
|-----|----------|----|------|
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NEW PROFESSIONAL OFFICE FOR:
JAMES HOCH, D.D.S.
32246 CLINTON KEITH ROAD, WILDOMAR, CA 92595

DATE: 11.28.11
JOB NO: TM/SL/JH
DRAWN: PK
CHECKED: GD/PK
SCALE: AS NOTED
SHEET

M1.0
OF SHEETS