GENERAL NOTES ELECTRICAL

1. THE EQUIPMENT ROUGH-INS AS SHOWN ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE, HOWEVER, IN SOME INSTANCES THE OWNER OR SUPPLIER MAY SUBSTITUTE OR THE EQUIPMENT MAY VARY FROM WHAT IS SHOWN. THEREFORE THE CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS WITH THE ARCHITECT AND OR OWNER PRIOR TO CONSTRUCTION.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE N.E.C. AND STATE AND LOCAL CODES AS THEY APPLY.
3. WIRING #10 OR SMALLER TO BE TYPE THW OR THHN, WIRING #8 OR LARGER TO BE TYPE THHN OR THWN, ALL CONDUCTORS TO BE COPPER.
4. PANEL BOARDS SHALL BE AS MANUFACTURED BY SQUARE "D", ITE, GENERAL ELECTRIC OR EQUIVALENT.
5. ALL DISCONNECT SWITCHES SHALL BE RATED FOR GENERAL DUTY U.O.N.
6. STARTERS AND RELATED WIRING SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. OVERLOAD UNITS SHALL BE INSTALLED AS PER GIVEN NAME PLATE DATA ON EQUIPMENT.
7. ANY FEES ASSOCIATED WITH CONSTRUCTION AND INSPECTION SHALL BE BORNE BY CONTRACTOR IN ORDER TO DELIVER TO THE OWNER A FINISHED BUILDING READY FOR OCCUPANCY AND 100% OPERATION.
8. METER AND PANEL BOARDS SHALL BE LABELLED WITH RESPECT TO THEIR TITLE, VOLTAGE AND PHASE, I.E., 120/208 VOLTS, 3 PHASE, 4 WIRES OR 120/240 VOLTS, 1 PHASE, 3 WIRES. LABELS SHALL BE PHENOLIC PLASTIC WITH WHITE LETTERS AND BLACK BACKGROUND. LABELS SHALL BE PERMANENTLY AFFIXED TO EQUIPMENT.
9. PANEL BOARDS SHALL CONTAIN A TYPE WRITTEN DIRECTORY WITH A PLASTIC COVER AFFIXED TO THE INSIDE OF THE DOOR.
10. CONTRACTOR SHALL SUBMIT 4 COPIES OF SHOP DRAWINGS TO THE A/E OR OWNER FOR APPROVAL OF EQUIPMENT AND DEVICES INSTALLED AS CALLED FOR HEREIN.
11. ANY COST INCURRED DUE TO LACK OF COOPERATION AMONG TRADES SHALL BE BORNE BY THE CONTRACTOR.
12. TRADE NAMES ARE GIVEN TO CLARIFY TYPE OF PRODUCT AND QUALITY DESIRED. SUBSTITUTION MAY BE MADE PENDING APPROVAL OF THE A/E UNLESS OTHERWISE NOTED.
13. CONTRACTOR SHALL VERIFY SERVICE VOLTAGE FROM UTILITY COMPANY AND BALANCE PANEL AS REQUIRED.
14. CONTRACTOR SHALL VERIFY LOCATION OF PARKING LOT LIGHTS AND PYLON SIGNS ON SITE PLAN OR ARCHITECT. RUN POWER TO PHOTO CELL AND TIME SWITCH.
15. ALL REMOTE EQUIPMENT IN REMOTE AREAS SHALL HAVE DISCONNECT SWITCH AT EACH PIECE OF EQUIPMENT.
16. ALL EXTERIOR RECEPTACLES, JUNCTION BOXES AND SERVICE EQUIPMENT SHALL BE WEATHERPROOF AND GFI TYPE.
17. ALL EXTERIOR CONDUIT FOR WIRING SHOULD BE MINIMIZED BY ROUTING IN CEILING SPACE. NO EXTERIOR CONDUIT WILL BE ACCEPTED.
18. REFER TO THE MECHANICAL DRAWINGS FOR THE LOCATION OF THERMOSTATS, UNITS AND OTHER SPECIAL EQUIPMENT. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL CONDUITS, JUNCTION BOXES AND DISCONNECT SWITCHES, THERMOSTAT, CONTROL WIRING AND MATCHING RECEPTACLE FOR HEAT PUMP UNITS.
19. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE AVAILABLE SHORT CIRCUIT CURRENT AT THE SUPPLY TERMINALS FROM THE UTILITY CO. THE SERVICE EQUIPMENT SHALL MEET OR EXCEED THIS RATING PER N.E.C. SUBMIT A COPY OF THE A.I.C. REPORT FROM UTILITY CO. TO A/E OR OWNER FOR FILE.
20. THE CONTRACTOR SHALL PROVIDE A UFER GROUND IN ADDITION TO OTHER GROUNDING AS PER N.E.C. REQMNTS.
21. ALL EQUIPMENT SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY AND SHALL BE INSTALLED AS PER LABELLING, (Ie: MAXIMUM FUSE SIZE MEANS FUSE PROTECTION REQUIRED).
22. ALL CONTROL DEVICES, (SWITCHES, THERMOSTATS, FIRE ALARM STATIONS, ETC.) TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA, SHALL BE MOUNTED AT MIN. C/L 36", MAX. C/L 48" FROM FLOOR FINISH.
23. ALL WIRING WITHIN LIVING UNITS TO BE CONCEALED. WIRING IN CONCEALED SPACES WHERE PERMITTED BY LOCAL CODE SHALL BE TYPE (NMC) NON METALLIC CABLE OF THE SIZE INDICATED ON THE DRAWINGS.
24. RECEPTACLES IN COMMON WALLS TO BE IN SEPARATE STUD SPACES FROM THOSE IN THE LIVING UNITS AT THE OTHER SIDE OF WALL. RECEPTACLES AND SWITCHES ON EXTERIOR WALLS SHALL BE PROVIDED WITH FOAM GASKETS.
25. PROVIDE NECESSARY WIRING FOR CONDENSING UNIT FOR MANAGERS OFFICE AND THERMOSTAT AS REQUIRED, LOCATE PER ACTUAL FIELD CONDITION.
26. NO OUTLET BOX SHALL EXCEED 12" AFF, EXCEPT ABOVE COUNTER TOP. JUNCTION BOXES SHALL BE INSTALLED FOR ALL TELEVISION, TELEPHONE AND THERMOSTAT OUTLETS. PLASTER RINGS, OPEN BACK BOXES OR MOUNTING PLATES ONLY SHALL NOT BE PERMITTED UNLESS SPECIFICALLY ALLOWED BY THE REGULATING AGENCY.
27. PROVIDE SINGLE STATION, 120V, SMOKE DETECTORS WITH BUILT-IN HORN IN ALL LIVING UNITS.
28. ELECTRICAL PANEL FOR HANDICAPPED UNIT SHALL BE INSTALLED THAT NO CIRCUIT BREAKER WILL EXCEED 48" ABOVE FLOOR LEVEL.
29. COORDINATE AND INCLUDE THE WIRING OF TELEPHONE OUTLETS AND SERVICE. PROVIDE GROUND WIRE AND GROUNDING PER TELEPHONE CO. REQUIREMENTS.
30. LIGHTING FIXTURES FOR LIVING UNITS SHALL BE PER OWNERS REQUIREMENTS.
31. GFCI TO BE PERFORMANCE TESTED AS PER ARTICLE 230.95 (C)

GENERAL NOTES MECHANICAL

1. ALL RECTANGULAR, ROUND AND FLEXIBLE DUCTS SHALL BE SIZED AS SHOWN ON THESE DRAWINGS. MINIMUM INTERNAL DIMENSIONS ARE GIVEN.
2. ALL SUPPLY AND RETURN DUCTS ARE SIZED FOR AIR VOLUME AND STATIC PRESSURE DROP WITHOUT INTERIOR INSULATION. SHOULD INTERIOR INSULATION BE USED, THE CONTRACTOR SHALL INCREASE THE DUCT SIZE ACCORDINGLY.
3. ALL SUPPLY AND RETURN DUCTS SHALL BE INSULATED. INTERIOR OR EXTERIOR INSULATION MAY BE USED. INSULATION SHALL BE 2" THICK .75 POUND PER CUBIC FOOT DENSITY FIBERGLASS DUCT WRAP. K=.28 AT 75 DEGREES F. INSULATION SHALL HAVE ALUMINUM FOIL FACING VAPOR BARRIER. RECTANGULAR DUCTWORK MAY BE LINED WITH 1-1/2" THICK DUCT LINER INSTEAD OF WRAPPING.
4. ALL FLEXIBLE ROUND DUCT SHALL HAVE 1" THICK FIBERGLASS INSULATION ENCASED IN A VAPOR BARRIER OF SEAMLESS, NON-COMBUSTIBLE, COPOLYMER PLASTIC. INSTALL JOHN-MANVILLE "INSULATED FLEX-MET" OR APPROVED EQUAL.
5. ALL FLEXIBLE DUCTS SHALL BE CONNECTED TO TRUNK OR BRANCH DUCTS WITH A MINIMUM OF FOUR SHEET METAL SCREWS AT EACH CONNECTION.
6. FLEX DUCT HANGER STRIPS SHALL BE 1" X 16 GA. MINIMUM.
7. INSTALL TURNING VANES IN ALL 90 DEG. DUCT ELBOWS AND AT ALL DUCT "TEES".
8. INSTALL ADJUSTABLE AIR VOLUME EXTRACTORS AT ALL BRANCH DUCT TO MAIN DUCT CONNECTIONS.
9. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED ACCORDING TO THE MOST RECENTLY PUBLISHED ASHRAE AND SMACNA STANDARDS. SEAL ALL JOINTS WITH DUCT TAPE (3M OR EQUAL).
10. RECTANGULAR METAL DUCT SHALL BE MILD GALVANIZED STEEL UNLESS NOTED OTHERWISE.
11. MANUFACTURERS MINIMUM CLEARANCE RECOMMENDATIONS SHALL BE MAINTAINED ON ALL EQUIPMENT AND DUCT WORK.
12. THE CONTRACTOR SHALL CAREFULLY COORDINATE THE LOCATION OF ALL DUCTS, GRILLES, DIFFUSERS, ETC., WITH THE CEILING GRIDS, PLUMBING AND FRAMING CONTRACTORS.
13. ALL RETURN AIR GRILLES SHALL BE EASILY REMOVABLE FOR CLEANING.
14. ALL CONTROL WIRING DIAGRAMS SHALL BE FURNISHED BY THE HVAC CONTRACTOR TO THE ELECTRICAL CONTRACTOR.
15. ALL CONTROL WIRING SHALL BE SUPPLIED BY ELECTRICAL CONTRACTOR FOR INSTALLATION.
16. THE CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF THE AIR BALANCE REPORT TO THE ARCHITECT OR ENGINEER. MANAGERS AREA ONLY.
17. THE CONTRACTOR SHALL CAREFULLY COORDINATE ALL THERMOSTAT LOCATIONS WITH INTERIOR FINISHES. VERIFY LOCATIONS WITH INTERIOR ELEVATIONS.
18. THE CONTRACTOR SHALL COOPERATE FULLY BETWEEN ALL OTHER TRADES.
19. THE CONTRACTOR SHALL SUPPLY FOR APPROVAL SIX (6) COPIES OF SHOP DRAWINGS TO COMPLETELY IDENTIFY THE QUALITY OF MATERIALS AND/OR EQUIPMENT INTENDED FOR INSTALLATION TO ARCHITECT OR OWNER.
20. THE SUBMISSION OF A BID OR PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND/OR LABOR DUE TO DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, UNLESS THESE DIFFICULTIES COULD HAVE BEEN FORESEEN EVEN THOUGH PROPER EXAMINATION HAD BEEN MADE.

GENERAL NOTES PLUMBING

1. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATION OF STATE FIRE MARSHALL, TITLE 24, PARTS 4 & 5, CALIFORNIA ENERGY COMMISSION REGULATIONS OF ~~THE STATE OF~~ CA., ADMINISTRATIVE CODE, THE (UPC 1991 AND ALL) OTHER APPLICABLE STATE AND LOCAL LAW AND REGULATION.
2. MANUFACTURERS DIRECTION, SHALL BE FOLLOWED IN ALL CASES WHERE THE MANUFACTURER OF EQUIPMENT OR APPLIANCE HAVE FURNISHED DIRECTIONS COVERING POINTS NOT COVERED BY THE DRAWINGS AND SPECIFICATIONS.
3. QUALITY OF FIXTURES SHALL BE IN ACCORDANCE WITH SECTION 901 UPC.
4. TOILETS TO BE TANK TYPE, THAT WILL USE NO MORE THAN 2.75 GALLONS PER FLUSH OR PER TITLE 24 REQUIREMNETS.
5. PROVIDE APPROVED DISHWASHER AIR GAP FITTING ON THE DISCHARGE SIDE OF THE DOMESTIC DISHWASHING MACHINE.
6. COMBUSTION AIR FURNACE AND WATER HEATER SHALL COMPLY WITH UMC REQUIREMENTS.

WASTE & VENT SYSTEM NOTES:

1. PIPE FITTING SHALL BE APPROVED ABS PLASTIC DRAINAGE TYPE OR AS PER LOCAL BUILDING CODE REQUIREMNETS.
2. SLOPE TO BE 1/4" PER FOOT, SECURED AT 48" ON CENTERS.
3. DRAINS 5'- 0" OR LONGER SHALL HAVE A CLEANOUT. CLEANOUT SHALL NOT PASS THROUGH MORE THAN 135 DEG. CHANGE OF DIRECTION.
4. VENTS SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF AND 3'- 0" ABOVE ANY WINDOW, DOOR OR AIR INTAKE.
5. SYSTEM SIZED IN ACCORDANCE WITH CHAPTER 4, 1985 UNIFORM PLUMBING CODE.
6. VENT PIPING MAY BE OFFSET AT 45 DEG. ANGLES AND STILL BE CONSIDERED VERTICAL.
7. FIELD INSTALLED PIPING SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH THE LOCAL ENFORCEMENT AGENCY.
8. VENT RISERS MAY EXTEND DIRECTLY THROUGH ROOF, IN LIEU OF GROUPED VENT CONFIGURATION SHOWN.

GAS PIPING NOTES:

1. ALL GAS PIPING SHALL USE STANDARD WEIGHT BLACK IRON OR STEEL.
2. APPLIANCE CONNECTORS SHALL BE LISTED BY AN APPROVED LISTED AGENCY.
3. APPLIANCE SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTED MANUFACTURERS INSTALLATION INSTRUCTION.
4. ACCESSIBLE SHUT-OFF VALVE TO BE INSTALLED IN FUEL SUPPLY PIPING OUTSIDE EACH APPLIANCE.

WATER PIPING NOTES:

1. WATER PIPING AND FITTINGS SHALL BE COPPER OR GALVANIZED.
2. SUPPLY TUBING TO BE 3/8" O.D. WITH MAXIMUM LENGTH 18" AND BRASS FLARE FITTINGS.
3. PIPING SHALL BE SECURED AT 48" INTERVAL AND AT CHANGES IN DIRECTIONS.
4. SHOWERHEAD, LAVATORY AND SINK FAUCETS SHALL HAVE A MAXIMUM FLOW NOT TO EXCEED 2.75 GPM.
5. HOSE BIBBS SHALL BE PROTECTED BY AN APPROVED NON REMOVABLE TYPE BACKFLOW PREVENTION DEVICE
6. ALL FITTINGS, FIXTURES AND MATERIALS SHALL BE LISTED BY AN APPROVED TESTING AGENCY.
7. INSTALL 1/2 ARMAFLEX INSULATION ON ALL HOT & COLD WTR LINES ABV CLG & BEL SLAB.
8. SHOWER VLVS SHALL BE PRESSURE BALANCED TYPE VLVS. PER ANSI - SCALD.
9. PROVIDE HB (2) AROUND PERIMETER OF BLDG. SEE PLUMBING DRAWINGS.
10. PROVIDE WATER HAMMER ARRESTORS ON ALL CW & HW PIPING.
11. ALL WATER CLOSETS AND ASSOCIATED FLUSHOMETER VALVES SHALL NOT USE MORE THAN 1.6 GALLONS PER FLUSH.

I HAVE REVIEWED THE CURRENT CALIFORNIA ENERGY CONSERVATION STANDARDS FOR RESIDENTIAL BUILDINGS. IN MY PROFESSIONAL JUDGEMENT, THE DESIGN ON THIS SET OF PLANS AND SPECIFICATIONS WILL CONFORM SUBSTANTIALLY WITH TITLE 24 SUBCHAPTER 7 & 8, SECTIONS 150 & 151.

REGISTERED PROFESSIONAL ENGINEER ARTURO OCAMPO CABRERA E 010569 ELECTRICAL STATE OF CALIFORNIA

ARTURO O. CABRERA P.E.
ME 18-8 ELECTRICAL EE 010569

FIRE SPRINKLER NOTES:

1. AN APPROVED AUTOMATIC FIRE ALARM SYSTEM SHALL BE PROVIDED FOR THE BUILDING. THE ALARM SYSTEM SHALL INCLUDE PROVISIONS FOR SMOKE DETECTIONS AND MANUAL OPERATION IN CORRIDORS AND AUTOMATIC DETECTION IN STORAGE ROOMS, LAUNDRY ROOM, WATER HEATER ROOM, MECHANICAL ROOM AND SIMILAR COMMON AREAS. (10.306)UFC.
2. SUBMIT FIRE ALARM PLANS AND SPECIFICATIONS TO LOCAL FIRE MARSHALL FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. (2.206)UFC.
3. APPROVED LISTED SMOKE DETECTORS SHALL BE MOUNTED ON THE CEILING OR WALL AT A POINT CENTRALLY LOCATED IN THE AREA GIVING ACCESS TO THE BEDROOMS. SUCH DETECTING UNITS SHALL NOT BE INTERCONNECTED WITH THE BUILDINGS PRINCIPAL FIRE ALARM SYSTEM. (1210) T-19 CAC.
4. SUBMIT TWO SETS OF FIRE SPRINKLER PLANS AND HYDRAULIC CALCULATIONS TO LOCAL FIRE MARSHALL FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. (2.206)UFC.

   NOTE: THE FOLLOWING PROVISIONS SHALL BE INCLUDED IN THE SPECIFICATIONS OF THE SPRINKLER SYSTEM.

   A. ISOLATION CONTROL VALVES EQUIPPED WITH TAMPER SWITCHES SHALL BE PROVIDED AT EACH FLOOR LEVEL.

   B. QUICK RESPONSE SPRINKLER HEADS SHALL BE PROVIDED IN ALL BEDROOMS.

   C. THE AUTOMATIC SPRINKLER SYSTEM SHALL BE SUPERVISED BY AN APPROVED CENTRAL STATION SERVICE. (10.310)UFC.
5. PROVIDE EMERGENCY BATTERY BACK-UP LIGHTING DEVICE AT TOP OF EACH STAIRWAY.
6. ITEM 1 TO 5 ABOVE SHALL BE PERFORMED AND/OR SUBMITTED BY AN APPROVED FIRE PROTECTION CONTRACTOR TO LOCAL FIRE MARSHALLS OFFICE HAVING JURISDICTION FOR APPROVAL PRIOR TO INSTALLATION.

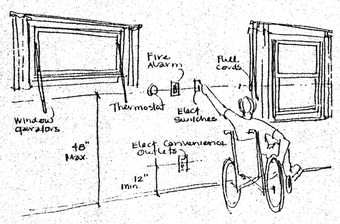
Individuals in wheelchairs have difficulty in reaching either high or low ff mounted outlets or controls. Persons with limited vision can more readily find such controls when all are installed at a uniform height above the floor.

Application
- Switches controlling lighting, receptacle outlets, appliances, heating and air conditioning, and ventilation equipment.
- Requirements not applicable to existing building when providing equivalency satisfying compliance results unreasonable hardship.

Switches
- Center of switches not less than 3 ft. or more than 4 ft. above floor.

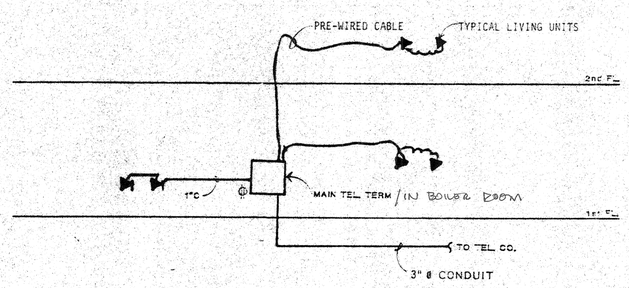
Receptacle Outlets
- Center of 15, 20, and 30 amp receptacles (except permanently installed baseboard heaters) not less than 12" above floor.
- Floor outlets acceptable next to sliding panels or walls and other special convenience locations.
- Baseboard outlets acceptable in relocatable partitions, window walls.

REF. TITLE 24.



HANDICAP REQUIREMENT

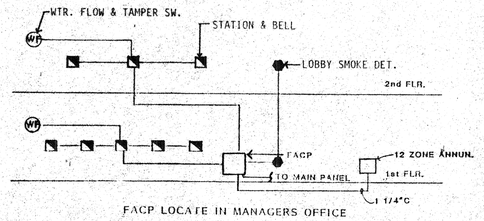
NO SCALE



BLOCK DIAGRAM - TELEPHONE SYSTEM

NO SCALE

NOTE: BLOCK DIAGRAM IS ALSO TYPICAL FOR TV SYSTEM



FACP LOCATE IN MANAGERS OFFICE

BLOCK DIAGRAM - FIRE ALARM SYSTEM

NO SCALE:

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NORTH

SHEET TITLE: MISC. NOTES AND DETAILS

DRAWN	R.V.
CHKD	A. CABRERA
SCALE	NTS
DATE	OCT. 7, 1992
JOB NO.	92002

SHEET NO. MPE-1

OF