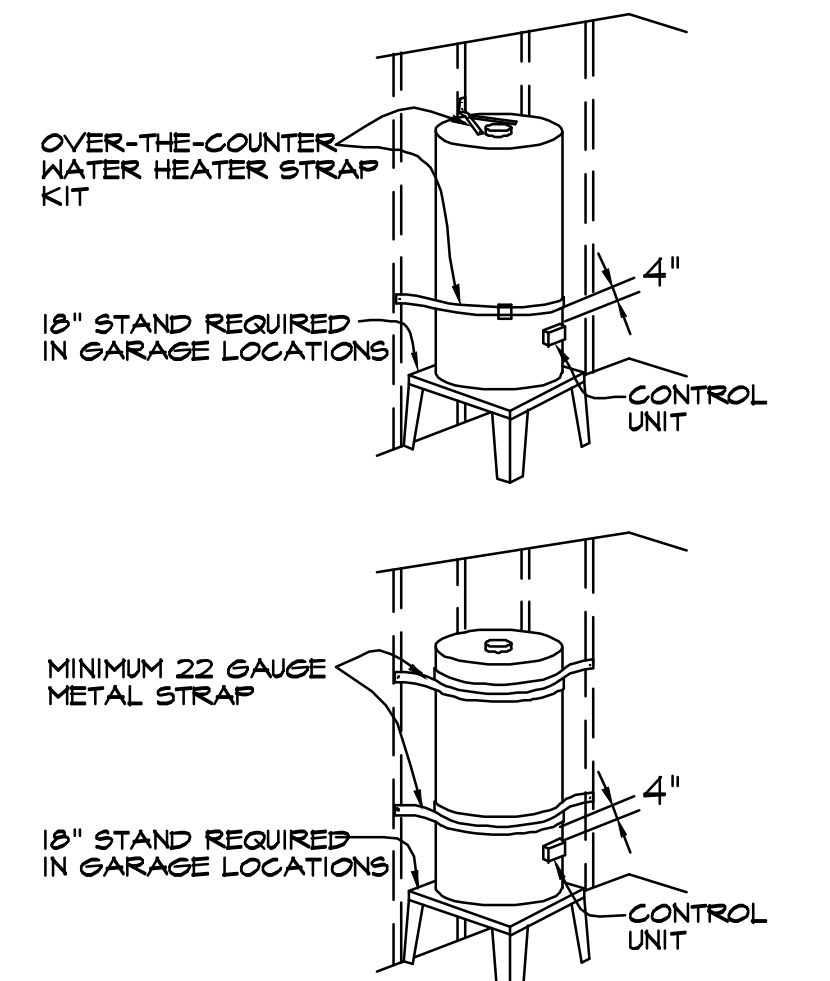


MECHANICAL NOTES:

- This plan is for schematic purposes only. See Floor Plan, Elevations and Sections for additional mechanical information and duct or register locations. Contractor shall provide a layout drawing including all duct and register sizes for review by Architect prior to installation.
- The locations of ducts, supply registers, soffits, and return air grilles are approximate. Unless otherwise noted verify heights of wall mounted registers. Do not run ducts until all register locations are marked in place and the owner and architect has been called to make visual review of all locations.
- All mechanical installations shall conform to the Uniform Mechanical Code (latest edition) and other applicable state and local requirements. All duct work shall be sized and installed in accordance with chapter 10 of IMC & C.A.C. Title 24. See project specifications for additional mechanical information.
- All ducting and equipment shall be sized for air conditioning. Supply and return ducts shall be painted black behind registers and grilles. Once system is in place contractor shall test system for the following:
 - Balance system to provide even heating and cooling in all rooms.
 - Adjust ducting to eliminate any excessive air flow "noise".
- Supply registers
 - Wall type: Hart & Cooley - A600 Series or equal.
 - Floor type: Hart & Cooley - 581 Regalaine Series or equal.
 - Finish: Satin aluminum finish adjustable lowered grille and multi-shutter valve.
 - Ceiling type: Hart & Cooley - 575-2-2 Six diffuser with mitered corners.
 - Finish: Satin aluminum finish (verify). Provide a sample register for the owner approval. Alternate registers to be standard white.
- FAU closet or alcove must be 12 inches wider than furnace or furnaces being installed. Provide a 3 inch minimum clear space at sides, back, and top of furnace.
- Provide a Honeywell or equal digital thermostat control for each FAU/AC unit at location shown on plan.
- Exhaust fans for baths and laundry room shall provide five air changes per hour. See electrical schedule. Discharge point for exhaust air will be at least 5 feet from any opening which allows air entry into building.
- Water heaters shall be provided with an exhaust flue through roof and a 3/4" copper P & T discharge line to exterior or drain. Provide metal seismic straps to wall framing at top and bottom of storage tank. One strap around top 1/3 of tank and one strap around bottom 1/3 of water tank.
- All roof mounted AC units shall be attached to a vibration isolation platform separated from roof.
- State Health and Safety Code Sect. 17421.4 bans the use of chlorinated polyvinyl chloride (CPVC) and crosslinked polyethylene (PEX) for interior water supply piping.
- PROVIDE 5 AIR CHANGES PER HOUR FOR BATHROOM & LAUNDRY ROOM VENTILATION

MECHANICAL NOTES:

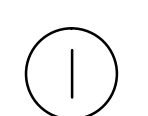
	FURNACE
	THERMOSTAT
	CEILING REGISTER - SUPPLY AIR
	CEILING REGISTER - RETURN AIR
	WALL REGISTER - SUPPLY AIR
	WALL REGISTER - RETURN AIR
	FLOOR REGISTER - SUPPLY AIR
	FLOOR REGISTER - RETURN AIR
	EXHAUST OUT
	FAN MOTOR MIN 5 AIR CHANGES PER HOUR
	HOSE BIBB
	GAS OUTLET
	VENT



ALL WATER HEATERS MUST BE STRAPPED TO RESIST MOVEMENT DURING AN EARTHQUAKE.

AT LEAST TWO RESTRAINTS MUST BE USED, ONE IN THE UPPER THIRD AND ONE IN THE LOWER THIRD OF THE WATER HEATER. FASTEN THE RESTRAINTS WITH A SCREW (NOT LESS THAN 1/4" IN DIAMETER) A MINIMUM OF 1-1/2" INTO A WOOD STUD OF THE WALL. USE A WASHER BETWEEN THE HEAD OF THE SCREW AND THE RESTRAINT.

WATER HEATER TIE DOWN:



LUMINAIRE SCHEDULE & LEGEND

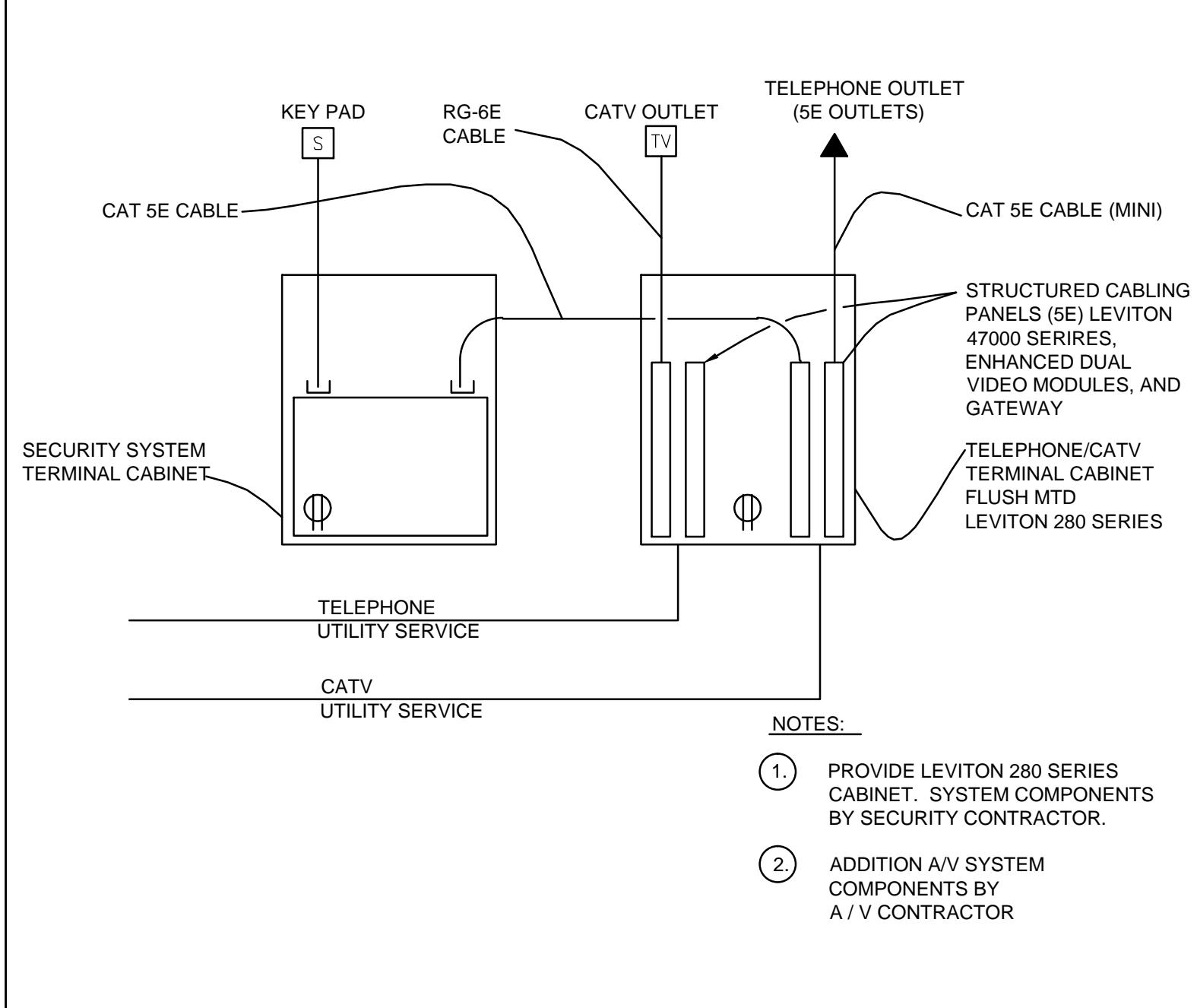
Symbol	Fixture	Description	Manufacturer
	AL		Lightoller 1100A1CMFT/12BTRM
	A2		Lightoller 11041/110MTRM
	A3		Lightoller 1100A1CMFT/12BTRM
	A4		Elco #EL2HE26/ELA-495H
	A5		Elco #R10H/ELA-495H
	A6		Lightoller 11041X/12M4HTRM
	A7		Lightoller 11041/110MTRM
	B1		Lightoller 2000A1G/2013VHTRM
	B2		Contrast #SMR2000H50WR2030VST
	B3		Lightoller 2000A1G/2024VHTRM
	B4		Lightoller 2000A1G/2013VHTRM
	B5		Lightoller 2000A1G/2006TRM
	B6		Elco #EL2641CA/EL2642M
	B7		Elco #EL14491CA/EL1452M
	C1		Lithonia #MFCM - 22DTT - 120
	C2		Lithonia #SFF - 252 - A12 - 120V
	C3		Lithonia #S152 - 120V - 0EB
	C4		Linco150-024
	C5		Lithonia #LP618TRT - 120V - 0EB - 6LFB5
	C6		Lumiere 121-LA-CF13-120-BK
	C9		Seagull Lighting #T950-T5B
	C10		Seagull Lighting #T9232BLE-T1
	C11		Hubbel/RABB or equal
	C12		DASALLIGHTING 516400-11
	C13		FOCUS #BQ - 08 - FD - ACIDVERDE
	C14		TUBE LIGHTING PRODUCTS SRF-3T4BK-CL-LENGTH
	C15		ELCO #EUC45B
	C16		Prima Lighting 84-2T-BA00-RD
	D1		Owner Furnished, Contractor Installed, Decorative Fixtures
	D2		Owner Furnished, Contractor Installed, Decorative Fixtures
	D3		Owner Furnished, Contractor Installed, Decorative Fixtures
	D4		Owner Furnished, Contractor Installed, Decorative Fixtures
	D5		Owner Furnished, Contractor Installed, Decorative Fixtures
	D6		Owner Furnished, Contractor Installed, Decorative Fixtures
	D7		Owner Furnished, Contractor Installed, Decorative Fixtures
	D8		Owner Furnished, Contractor Installed, Decorative Fixtures
	D9		Owner Furnished, Contractor Installed, Decorative Fixtures
	D10		Owner Furnished, Contractor Installed, Decorative Fixtures
	D11		Owner Furnished, Contractor Installed, Decorative Fixtures
	D12		Owner Furnished, Contractor Installed, Decorative Fixtures
	D13		Owner Furnished, Contractor Installed, Decorative Fixtures
	D14		Owner Furnished, Contractor Installed, Decorative Fixtures
	D15		Owner Furnished, Contractor Installed, Decorative Fixtures
	D16		Owner Furnished, Contractor Installed, Decorative Fixtures
	D17		Owner Furnished, Contractor Installed, Decorative Fixtures

LIGHTING MEASURES:

- 150(K)1. HIGH EFFICIENCY LUMINAIRES OTHER THAN OUTDOOR. HID. Contain only high efficiency lamps as outlined in Table 150-C, and do not contain a medium screw base socket (E24/E26). Ballasts for lamps 15 Watts or greater are electric and have an output frequency no less than 20 kHz.
- 150(K)1. HIGH EFFICIENCY LUMINAIRES - OUTDOOR. HID. Contain only high efficiency lamps as outlined in Table 150-C, luminaire has factory installed HID ballast.
- 150(K)2. Permanently installed luminaires in kitchens shall be high efficacy luminaires. Up to 50% of the wattage, as determined in Section 150(C), of permanently installed luminaires in kitchens may be in luminaires that are not high efficiency luminaires, provided that these luminaires are controlled by switches separate from those controlling the high efficiency luminaires.
- 150(K)3. Permanently installed luminaires in bathrooms, garages, laundry rooms, utility rooms shall be high efficiency luminaires. OR are controlled by an occupant sensor(s) certified to comply with Section 114(a).
- 150(K)4. Permanently installed luminaires located other than in kitchens, bathrooms, garages, laundry rooms, and utility rooms shall be high efficiency luminaires (except closets less than 70 ft) OR are controlled by a dimmer switch OR are controlled by an occupant sensor that complies with Section 114(a) that does not turn on automatically or have an always on option.
- 150(K)5. Luminaires that are recessed into insulated ceilings are approved for zero clearance insulation cover (IC) and are certified to ASTM E285 and labeled as air tight (AT) to less than 2.0 CFM at 75 Pascals.
- 150(K)6. Luminaires providing outdoor lighting and permanently mounted to a residential building or to other buildings on the same lot shall be high efficiency luminaires (not including lighting around swimming pools/water features or other Article 680 locations) OR are controlled by occupant sensors with integral photo control certified to comply with Section 114(a).

ELECTRICAL NOTES:

- The locations of switches, outlets and light fixtures shown on electrical plans are approximate. Do not run wire until after all boxes are in place and the owner or architect has been called to make visual review of all locations.
 - Verify all electrical requirements for new work and provide service as necessary. All new electrical wiring and installation shall comply with the latest adopted edition of the N.E.C., state and local requirements.
 - Rocker switches, dimmers, receptacles, wall plates and other related receptacles such as telephone Leviton jacks, GFCI receptacles and cable outlets shall be "Decora". Color of all items shall be "White" unless otherwise noted.
 - All electric switches unless noted on the plan are to be located 42 inches above the finish floor. All outlet receptacles shall be 12 inches above finish floor, unless noted otherwise. Verify locations for horizontally mounted outlets (marked "Horizontal" or "H") on plans. Multiple switches shall be ganged together unless noted otherwise.
 - Convenience outlets in bathrooms, kitchens, outdoors, basements and garages shall be ground fault interrupter circuit (GFI) types. Convenience outlets in bedrooms shall be ARC-Fault Interrupter circuit (AFIC) type.
 - Electrical outlet plate gaskets shall be installed on all receptacles, switches or other electrical boxes in exterior walls and any walls on perimeter of conditioned space.
 - Verify electrical requirements for new appliances and mechanical equipment prior to running wire, see Appliance Schedule and floor plans for equipment.
 - All electrical panels shall have permanent legible labels indicating circuit use, amperage, etc.
 - Verify with owner number of telephone lines to be provided to residence. Provide for cable TV and telephone per plans, verify size and shielding requirements for TV cable. Verify locations of telephone, cable and computer outlets with owner prior to installation. All communications wiring shall be run radially (not looped) from outlet to master communication panel.
 - Verify with owner any electrical stub outs for future electrical.
 - Verify with owner and coordinate installation requirements of sound system and speaker wire for sound system. (System and wiring are not in contract unless specified in bid.)
 - Smoke detectors shall be installed in each bedroom and at points centrally located serving sleeping areas, and on each level of residence. Smoke detectors shall be permanently wired to the building electrical system, and shall be equipped with battery back up per CBC section 907.2.10.
 - General contractor to verify with the owner and coordinate any electrical requirements for the installation of security system and/or intercom system. (System and wiring not in contract unless specified in bid.)
 - Junction boxes for ceiling fans shall be securely fastened to framing per fan manufacturer's instructions.
 - Bathroom exhaust fans shall be separately switched.
 - Mounting heights for light fixtures shown on plans are from finish floor or flatwork to the centerline of junction box, unless noted otherwise. Also refer to exterior and interior elevations for additional information regarding fixture mounting heights.
 - Owner supplied fixtures shall be installed by contractor.
 - The primary lighting in kitchen and bathrooms shall have compact fluorescent bulbs installed in recessed type fixtures or shall be fluorescent type fixture.
 - As used in this section a "wall space" is considered a wall unbroken along the floor line by doorway, fireplace, or similar opening. Each wall space two or more feet wide is treated individually from other wall spaces within a room. A wall space can include two or more walls of a room (around corners) where unbroken at the floor line. The purpose of this requirement is to minimize the use of cords across doorways, fireplaces and similar openings.
 - In kitchens, family rooms, dining rooms, breakfast rooms, living rooms, parlors, libraries, dens, sun rooms, bedrooms, recreation rooms, or similar rooms, receptacle outlets must be installed so that no point along the floor line in any wall space is more than six feet, measured horizontally from an outlet in that space. This includes any wall space two feet or more wide and the wall space occupied by fixed panels in exterior walls. The wall space afforded by fixed room dividers, such as freestanding bar-type counters, is included in the six foot measurement.
 - In kitchen and dining areas, a receptacle must be installed at each counter space wider than twelve inches. Counter-top spaces shall be supplied with receptacles spaced every four feet on center, per NEC Section 210-52(c). Receptacles inaccessible because of the installation of stationary appliances cannot be included as these required outlets.
 - Receptacle outlets, as much as is practical, must be spaced at equal distances. Receptacles in floors are not counted as part of the required number unless located close to the wall.
 - At least one wall receptacle must be installed in the bathroom, adjacent to the basin.
 - For a single-family dwelling, at least one outlet must be installed outdoors.
 - At least one outlet must be installed in each basement and attached garage, and in each detached garage with electric power.
 - Outlets in other sections of the more for special appliances, such as laundry equipment, must be located within size feet of the intended location of the intended appliance.
 - At least one outlet must be installed for the laundry.
- Lighting outlets must be installed as follows:
- At least one wall switch-controlled lighting outlet must be installed in every habitable room, in hallways, stairways, at all exterior exits, attached garages and in detached garages with electric power.
 - In habitable rooms, other than kitchens or bathrooms, one or more receptacles controlled by a wall switch is permitted in lieu of lighting outlets.
 - In hallways, stairways and at outdoor entrances, remote, central or automatic control of lighting is permitted.
 - At least one outlet must be installed in the attic, under-floor space, utility room and basement when used for storage or containing equipment requiring servicing.
 - All 120-Volt, single phase, 15 and 20 ampere outlets installed outdoors and in bathrooms must have ground-fault circuit interrupter protection when installed in the following locations:
 - Bathrooms
 - Within 6 feet of a kitchen sink.
 - Outdoors, garages, crawl spaces, and unfinished basements.
 - Where more than one smoke alarm is required to be installed, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all the alarms in the individual dwelling unit; the alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.
 - In new construction, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Smoke alarms shall emit a signal when the batteries are low; wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection, (per CBC Sec. 907.2.10.2)



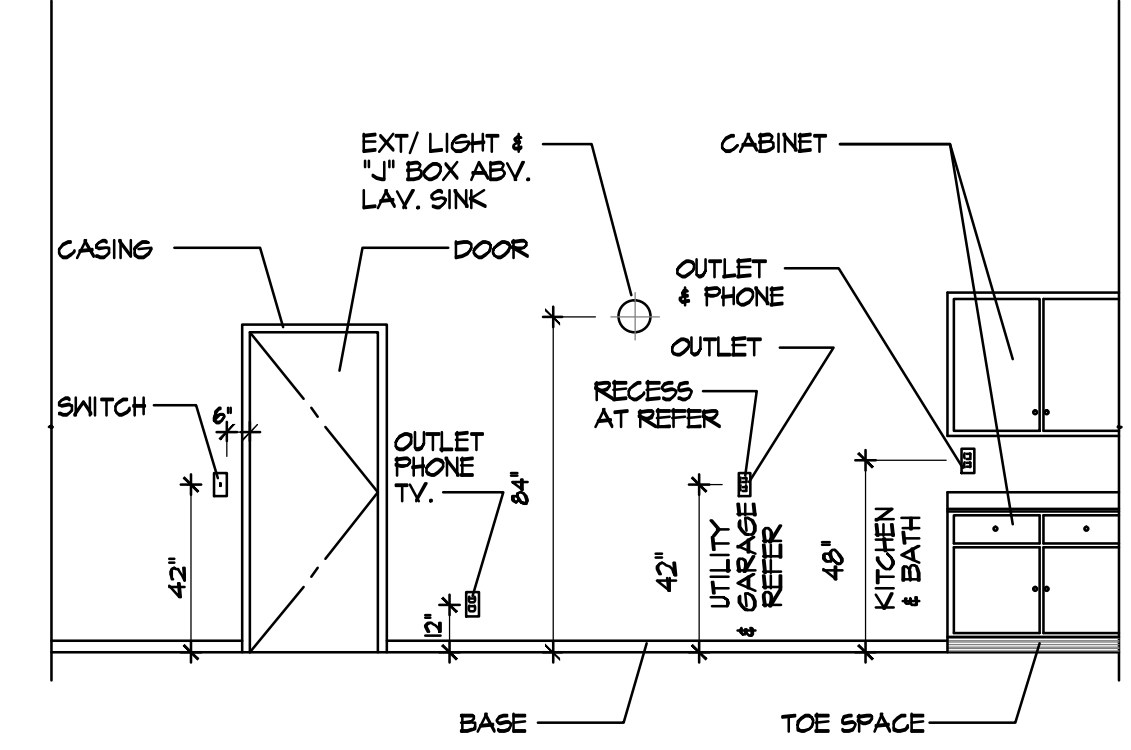
ELECTRICAL LEGEND

Symbol	Description
	DUPLEX OUTLET @ 12" AFF UNLESS OTHERWISE NOTED
	DUPLEX OUTLET @ 42" AFF UNLESS OTHERWISE NOTED
	DUPLEX OUTLET IN FLOOR
	FOURPLEX OUTLET
	220 V OUTLET
	WATERPROOF OUTLET
	DUPLEX OUTLET HALF HOT
	DEDICATED OUTLET CIRCUIT
	GROUND FAULT INTERRUPTER CIRCUIT
	HEIGHT TO CENTERLINE A.F.F.
	TELEPHONE OUTLET (2-LINE)
	T.V. CABLE
	COMPUTER CABLE
	GARBAGE DISPOSAL
	SERVICE DISCONNECT
	JUNCTION BOX (VERIFY VOLTAGE)
	WATERPROOF JUNCTION BOX
	EXHAUST FAN - 5 AIR CHANGES PER HOUR
	OVERHEAD GARAGE DOOR OPERATOR
	SECURITY KEYPAD
	SUB PANEL LOCATION
	SUB PANEL LOCATION
	DOORBELL
	600 AMPERE METER MAIN
	IRRIGATION / TIME CLOCK
	SINGLE POLE SWITCH-TOUCH PLATE BY LUTRON OR EQUAL
	3 WAY SWITCH
	DIMMER SWITCH
	PADDLE FAN WITHOUT LIGHT
	CEILING-MOUNTED SOUND SYSTEM
	SPEAKER LOCATION (VERIFY W/ OWNER)
	SMOKE DETECTOR - PERM. WIRED TO BUILDING POWER W/ BATTERY BACK-UP
	SMOKE & CARBON MONOXIDE DETECTOR - PERM. WIRED TO BUILDING POWER W/ BATTERY BACK-UP

ALL STANDARD WALL CONVENIENCE OUTLETS TO BE AT 12" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE

ADDITIONAL SYMBOLS

	FLOOR DRAIN
	HOSE BIBB



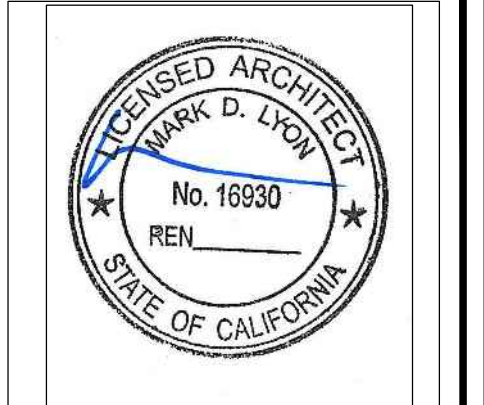
- NOTE:
- LOCATIONS ARE TYPICAL (U.O.N) ON E.M. PLANS.
 - SWITCHES SHALL BE ROCKER TYPE (LEVITON OR EQ) (VERIFY WITH OWNER).
 - COVER PLATES AND RECEPTACLES SHALL MATCH IN COLOR AND STYLE (LEVITON OR EQ) (VERIFY WITH OWNER).
 - WHERE RECEPTACLES ARE EXPOSED TO MOISTURE PROVIDE WEATHER-PROOF COVERS.
 - SEE E.M. SHEETS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 - VERIFY HEIGHTS WITH OWNER.
 - ALL PLATES TO BE WHITE (U.O.N) (VERIFY WITH OWNER).

RECEPTACLE LOCATIONS:

MEBUST RESIDENCE

5448 TAFT AVE
LA JOLLA, CA 92037

ARCHITECT MARK D. LYON INC.
410 BIRD ROCK AVE., LA JOLLA, CA. 92037 (858)459-1171 INFO@MDLIA.NET



MEBUST RESIDENCE

5448 TAFT AVE
LA JOLLA, CA 92037

REVISIONS:

SUBMITTAL DATE: 09.30.2013

PHASE: CONSTRUCTION DOCUMENTS

PROJECT NUMBER: 1306

REVIEWED BY: MDL

DRAWN BY: SEH

DATE: 09.30.2013

SHEET TITLE: MECHANICAL & ELECTRICAL LIGHTING PLAN

SHEET NO: MEI.0