POWER PLAN LEGEND

SYM.	DESCRIPTION
⊖	STANDARD 120V DUPLEX RECEPTACLE, NEMA 5-2 OR 18" H (UNLESS OTHERWISENOTED)
⊖ GFI	GFI RECEPTACLE
-◐	DRYER RECEPTACLE: 30A, 250V, 3-POLE, 4-WIRE, NEMA 14-30R OR BY MANUFACTURER .
(J)	JUNCTION BOX
$ $←	SWITCH VARIABLE FAN CONTROLLER
⊏┘	POWER DISCONNECT
(WH)	WATER HEATER SIZE AS NOTED
▦	AIR CONDITIONING COND. UNIT SEE MECH SHEETS FOR UNIT DETAILS

NEW PANEL: MDP
LOCATION: RM 124
FEEDER SOURCE: METER

VOLTAGE: 120/240V, 400A 3Ø, 4W
ENCLOSURE: FLUSH MOUNTED W/EQUIPMENT GRND BAR
400A MAIN, 22,000 AIC

CKT. NO.	THHN WIRE SIZE	LOAD DESCRIPTION / LOCATION	BREAKER AMP	BREAKER POLE	LOAD (VA)	LOAD (VA)	BREAKER POLE	BREAKER AMP	LOAD DESCRIPTION / LOCATION	THHN WIRE SIZE	CKT. NO.
1					7,566	8,148					2
3	#6	AHU #1 15KW	60	3	7,566	8,148	3	100	A/C #1	#2	4
5					7,566	8,148					6
7					13,164	4,488	2	60	A/C #2	#6	8
9	#2	AHU #2 30KW	100	3	13,164	4,488					10
11					13,164	14,374	2	60	SUB PANEL	#6	12
13					2,286	14,274					14
15	#10	SK306 STEAM HUMIDIFIER 6 KW	25	3	2,286	3,600	2	30	DRYER #1	#10	16
17					2,286	3,600					18
19	#10	DRYER #2	30	2	3,600						20
21					3,600						22
23											24

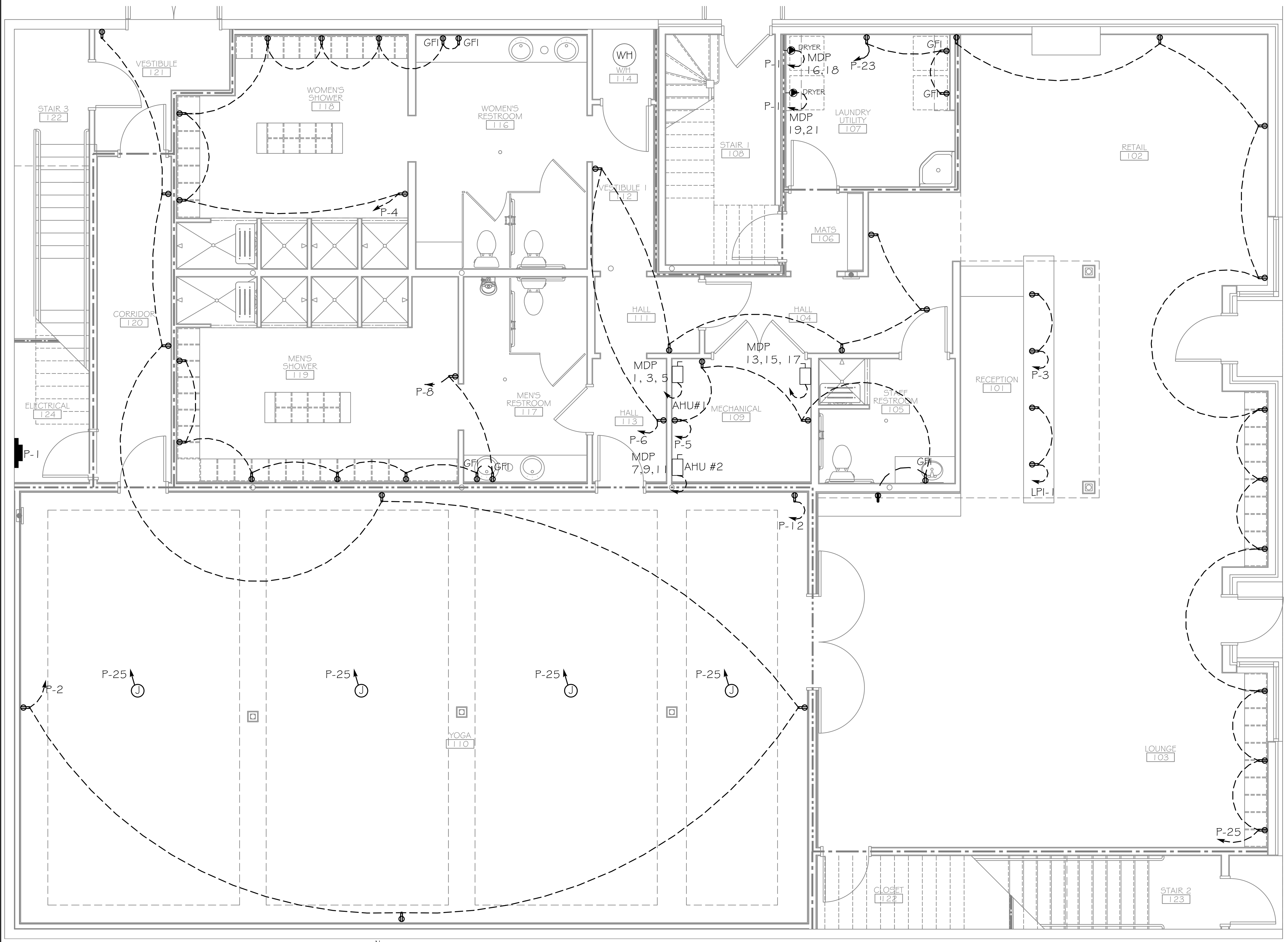
SOLID NEUTRAL NEUTRAL WIRE (W) — TOTAL CONNECTED LOAD (145,516VA) — AØ 53,526VA BØ 42,852VA CØ 49,138VA — GROUND BUS GROUND WIRE (G)

PANEL: LP-1
LOCATION: RM 124
FEEDER SOURCE: MDP

VOLTAGE: 120/240V, 100A 1Ø, 3W
ENCLOSURE: FLUSH MOUNTED; MLO; W/EQUIPMENT GND BAR; 22,000 AIC

CKT. NO.	THHN WIRE SIZE	LOAD DESCRIPTION / LOCATION	BREAKER AMP	BREAKER POLE	LOAD (VA)	LOAD (VA)	BREAKER POLE	BREAKER AMP	LOAD DESCRIPTION / LOCATION	THHN WIRE SIZE	CKT. NO.
1	#12	RECEPTION RECEPTACLES	20	1	1,000	1,120	1	20	YOGA ROOM & CORRIDOR RECEPTACLES	#12	2
3	#12	RECEPTION RECEPTACLES	20	1	1,000	1,280	1	20	WOMENS RESTROOM AND SHOWER RECEPTACLES	#12	4
5	#12	MECHANICAL, STAFF RESTROOM,	20	1	800	960	1	20	HALL AND VESTIBLE RECEPTACLES	#12	6
7	#12	APRILAIRE DEHUMIDIFIER 1770	20	1	1,680	1,280	1	20	MENS RESTROOM AND SHOWER	#12	8
9	#12	ELECTRONIC STAND ALONE CONTROLLER	20	1	1,800	1,800	1	20	LAUNDRY RECEPTACLES	#12	10
11	#12	RETAIL & LOUNGE RECEPTACLES	20	1	1,600	500	1	20	TIME SWITCH AND SENSORS	#12	12
13	#12	LOUNGE, STAFF RESTROOM, HALL AND VESTIBLE RECESSED, STRIP, & PENDANT LIGHTING	20	1	570	658	1	20	WOMENS,MENS RESTROOMS,CORRIDOR RECESSED LIGHTING. LAUNDRY,MATS,MECH.& STAIR LIGHTS.	#12	14
15	#12	RETAIL TRACK LIGHTS	20	1	1,100	1,300	1	20	EMERGENCY EXIT LIGHTS	#12	16
17	#12	STAIRS, WALL-MOUNTED FLOURESCENT LIGHTS AND EXTERIOR LIGHTS	20	1	224	1,426	1	20	WOMENS AND MENS SHOWER RECESSED LIGHTING	#12	18
19	#12	YOGA FLOURESCENT LIGHTS	20	1	1,206	1,688	1	20	YOGA FLOURESCENT LIGHTS	#12	20
21	#12	YOGA FLOURESCENT LIGHTS	20	1	1,688	1,688	1	20	YOGA FLOURESCENT LIGHTS	#12	22
23	#12	MENS, WOMENS, AND STAFF RESTROOM FAN LIGHTS & SINK LIGHTS	20	1	340	1,100	1	20	EXIT LIGHTS THROUGHT BUILDING AND YOGA ROOM FANS	#12	24
25	#12	YOGA ROOM JUNCTION BOXES	20	1	640	–	1	20	SPARE	#12	26
27	#12	SPARE	20	1	–	–	1	20	SPARE	#12	28
29	#12	SPARE	20	1	–	–	1	20	SPARE	#12	30

SOLID NEUTRAL NEUTRAL WIRE (W) — TOTAL CONNECTED LOAD (VA)=28,648 — AØ=14,374 BØ=14,274 — GROUND BUS GROUND WIRE (G)



1 ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

GENERAL REQUIREMENTS

A. ELECTRICAL CONTRACTOR SHALL COORDINATE FULLY WITH OTHER CONTRACTORS ASSOCIATED WITH THIS PROJECT TO VERIFY ALL EQUIPMENT LOCATIONS, CONNECTION REQUIREMENTS, ELEVATIONS AND LOCATIONS OF PIPES, CONDUITS AND DUCTS TO PREVENT CONFLICTS DURING CONSTRUCTION. ANY RELOCATION OR REROUTING OF EQUIPMENT, PIPES, CONDUITS, DUCTS OR MATERIALS RESULTING FROM A LACK OF COORDINATION BETWEEN CONTRACTORS WILL BE AT THE CONTRACTORS EXPENSE.

B. EQUIPMENT ROUGH-INS SHOWN ARE ACCURATE TO THE BEST OF DESIGNER'S KNOWLEDGE. HOWEVER, IN SOME INSTANCES, THE OWNER OR SUPPLIER MAY SUBSTITUTE, OR THE EQUIPMENT ITEM MAY VARY FROM WHAT IS SHOWN. THEREFORE, THE CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS WITH THE OWNER PRIOR TO CONSTRUCTION. FAILURE OF THE ELECTRICAL CONTRACTOR TO VERIFY THESE DIMENSIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION DIRECTLY UPON THE CONTRACTOR.

C. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED DISCONNECT SWITCHES AND MOTOR STARTERS TO ALL EQUIPMENT.

D. ELECTRICAL CONTRACTOR SHALL REVIEW WITH OWNER AND SIGNAGE MANUFACTURER, REQUIREMENTS AND LOCATION OF BUILDING SIGNAGE PRIOR TO CONSTRUCTION AND PROVIDE 120VAC CONNECTION AS REQUIRED.

E. ELECTRICAL CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS AT JOB COMPLETION TO ARCHITECT.

F. ALL WORK SHALL BE INSTALLED PER ALL GOVERNING CODES.

G. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL DRYER/RECEPTACLES COMPLETE. REFER TO INSTRUCTION MANUAL FOR DETAILS.

H. ALL EXTERIOR LIGHTING AND SIGN CIRCUIT BREAKERS TO BE "SWITCH GRADE".

I. NOT USED.

J. ALL JUNCTION BOXES INSTALLED ABOVE OR DIRECTLY BELOW THE SUSPENDED CEILING SHALL BE SUPPORTED IN ACCORDANCE WITH ARTICLE 314-23 OF THE 2002 NEC.

K. COMPUTER AND PHONE WIRING SHALL BE ROUTED IN 3/4" CONDUIT TO PHONE BOARD IN OFFICE FROM DEVICE LOCATION.

L. ALL ISOLATED GROUND RECEPTACLE CIRCUITS SHALL BE EQUIPPED WITH INSULATED GROUND CONDUCTOR AND SEPARATE NEUTRAL WIRE.

M. NEUTRAL WIRES FOR ISOLATED GROUND CIRCUITS SHALL NOT BE SHARED WITH OTHER BRANCH CIRCUITS. PROVIDE SEPARATE NEUTRAL WIRE FOR EACH ISOLATED GROUND CIRCUIT.

N. ISOLATED GROUND CIRCUITS SHALL NOT BE ROUTED WITHIN SAME CONDUIT AS GENERAL BRANCH CIRCUIT WIRING. PROVIDE SEPARATE CONDUIT FOR SERVICE TO ISOLATED GROUND CIRCUITS.

O. ISOLATED GROUND RECEPTACLES SHALL UNDER NO CIRCUMSTANCE BE INSTALLED IN COMMON JUNCTION BOX WITH NON-ISOLATED GROUND TYPE RECEPTACLE.

P. NOT USED

Q. USE CIRCUIT BREAKERS U.L. LISTED AS HACR TYPE FOR USE WITH HVAC AND REFRIGERATING EQUIPMENT HAVING MOTOR GROUP COMBINATIONS AND MARKED FOR USE WITH HACR TYPE CIRCUIT BREAKERS.

R. ALL EXIT SIGNS, EMERGENCY EGRESS LIGHTS AND NIGHT LIGHT FIXTURES SHALL BE CONNECTED TO THE BRANCH CIRCUITS INDICATED AHEAD OF RESPECTIVE CONTROL SWITCH, IN ORDER TO PROVIDE UNSWITCHED SOURCE TO FIXTURES.

RACEWAY SYSTEMS

A. ALL BRANCH CIRCUIT WIRING SHALL BE ROUTED IN EMT, ELECTRICAL METALLIC TUBING. USE STEEL SET SCREW TYPE FITTINGS ON ALL EMT.

B. CONDUIT SHALL BE SUPPORTED AT INTERVALS PER NEC REQUIREMENTS AND SHALL BE SECURELY FASTENED TO BUILDING WITH AN APPROVED FASTENING SYSTEM.

WIRING, WIRING DEVICES, PLATES AND GROUNDING

A. ALL WIRING SHALL CONSIST OF COPPER CONDUCTORS WITH THERMOPLASTIC INSULATION RATED FOR SIX HUNDRED (600) VOLTS. ALL WIRING INSULATION SHALL BE HEAT AND MOISTURE RESISTANT TYPES THW, THWN, OR THHN FOR INTERNAL AND DRIVE LOCATIONS.

B. MINIMUM CONDUCTOR SIZE SHALL BE NO. 12 AWG FOR ALL POWER CIRCUITS (I.E. RECEPTACLES, LIGHTING, EQUIPMENT POWER, ETC.).

C. ALL SPLICES AND CONNECTIONS SHALL BE MADE IN OUTLET BOXES, JUNCTION BOXES OR EQUIPMENT WHERE ACCESSIBLE.

D. CONDUCTORS SHALL BE PULLED WITHOUT THE USE OF OIL OR GREASE. WIRE PULLING LUBRICANTS WHICH ARE APPROVED FOR USE WITH CONDUCTOR INSULATION MAY BE USED. CARE SHALL BE TAKEN IN PULLING WIRE TO ASSURE THAT MAXIMUM ALLOWABLE PULLING TENSION OF WIRE IS NOT EXCEEDED. WIRING WITH DAMAGED CONDUCTORS OR INSULATION WILL NOT BE ACCEPTED.

E. ALL PLUG-IN DEVICES SHALL BE GROUNDED TYPE. A GROUNDING JUMPER FROM RECEPTACLE TO OUTLET BOX SHALL BE INSTALLED WHERE CONDUIT SYSTEM IS USED FOR GROUND.

F. INSTALL INSULATED GREEN GROUNDING CONDUCTOR (NO. 12 AWG MINIMUM) IN RACEWAYS AS INDICATED ON DRAWINGS AND IN ALL NON-METALLIC RACEWAYS PER NEC.

G. SWITCHES FOR LIGHTING CONTROL SHALL BE ROCKER STYLE WITH.

H. DUPLEX RECEPTACLES SHALL BE INDUSTRIAL GRADE, THREE (3) WIRE GROUNDING, FINDER GROOVE, TWENTY (20) AMP, NEMA 5-20R 125 VAC.

I. PLATES SHALL BE FURNISHED AND INSTALLED FOR ALL WIRING DEVICES, TELEPHONE OUTLETS, JUNCTION BOXES, ETC.

J. PLATES FOR FLUSH MOUNTED DEVICES SHALL BE STAINLESS STEEL. PLATES FOR SURFACE MOUNTED BOXES SHALL BE GALVANIZED STEEL.

LIGHTING FIXTURES

A. PROVIDE LIGHTING FIXTURES, OF SIZES, TYPES AND RATINGS INDICATED; COMPLETE WITH, BUT NOT LIMITED TO, HOUSINGS, ENERGY-EFFICIENT LAMPS, LAMP HOLDERS, REFLECTORS, ENERGY EFFICIENT BALLASTS, STARTERS AND WIRING. SHIP FIXTURES FACTORY-ASSEMBLED, WITH THOSE COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. DESIGN FIXTURES WITH CONCEALED HINGES AND CATCHES, WITH METAL PARTS GROUNDED AS COMMON UNIT, AND SO CONSTRUCTED AS TO DAMPEN BALLAST GENERATED NOISE.

B. FLUORESCENT BALLASTS PROVIDED FOR FOUR (4) FOOT T-8 FLUORESCENT LAMPS SHALL BE TWO-LAMP ENERGY SAVING, ELECTRONIC TYPE.

C. INSTALL INTERIOR LIGHTING FIXTURES AT LOCATIONS AS INDICATED, IN ACCORDANCE WITH FIXTURE MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC, NECA'S "STANDARD OF INSTALLATION", NEMA STANDARDS, AND WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT LIGHTING FIXTURES FULFILL REQUIREMENTS.

D. PROVIDE AND INSTALL ALL LIGHT FIXTURES INDICATED COMPLETE WITH SPECIFIED LAMPS. FLUORESCENT LAMPS SHALL BE 48" 32W. T-8, RAPID START WITH NOMINAL OPERATING TEMPERATURES OF 3,500 K - MINIMUM INITIAL LIGHT OUTPUT OF 2850 LUMENS. COMPACT FLUORESCENT LAMPS SHALL BE 26 WATT COMPACT FLUORESCENT LAMPS SHALL BE HIGH COLOR RENDERING, HIGH EFFICIENCY LAMPS WITH NOMINAL OPERATING TEMPERATURE OF 3,500 K.

E. FASTEN LIGHTING FIXTURES SECURELY TO STRUCTURAL SUPPORTS; AND ENSURE THAT FIXTURES ARE PLUMB AND LEVEL.

F. FLUORESCENT FIXTURES INSTALLED IN LAY-IN CEILINGS SHALL BE SUPPORTED BY ADDITIONAL WIRE SUPPORT AT TWO CORNERS. ATTACHED TO CEILING GRID, AND ANCHORED TO STRUCTURAL MEMBER. THIS ADDITIONAL WIRE SUPPORT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND IS NOT CONSIDERED PART OF GENERAL GRID LAYOUT.

G. PROVIDE EQUIPMENT GROUNDING CONNECTIONS FOR INTERIOR LIGHTING FIXTURES AS INDICATED. TIGHTEN CONNECTION TO COMPLY WITH TIGHTENING TORQUES SPECIFIED IN UL STD 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDS.

H. ALL LIGHT FIXTURES SHALL BE U.L. LISTED.

FIRE RATED WALL PENETRATIONS

A. PROVIDE U.L. LISTED FIRESTOP SYSTEM SEALANTS AROUND ALL CONDUITS PASSING THROUGH ALL RATED WALLS OR FLOORS IN ACCORDANCE WITH THE U.L. FIRE RESISTANCE DIRECTORY.

B. THE SELECTED SYSTEM MUST BEAR AN APPROVED U.L. PENETRATION SYSTEM NUMBER AND BE INSTALLED IN ACCORDANCE WITH THE SELECTED SYSTEM TAKING INTO ACCOUNT THE CONSTRUCTION AND THE RATING OF THE RATED ASSEMBLY BEING PENETRATED AND THE TYPE OF PENETRATION BEING MADE.

C. THE ELECTRICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS TO CONFIRM NUMBER AND EXTENT OF ALL FIRE RATED PARTITIONS IN THE FACILITY.

D. APPROVED PRODUCTS:
(1) HILTI CS240
(2) TERMCO FYRESHIELD
(3) 3M CP-25

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JOB No: 2175 | DATE: 6-7-2013
DRAWN BY: JCT | CHECKED BY: KJK

REVISIONS

#	DESCRIPTION	DATE

FIRST FLOOR PLAN

SHEET No: 11 of 14

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