GENERAL NOTES

1. ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH ALL CURRENT LOCAL CODES, NATIONAL ELECTRICAL CODE 2002 (NEC), AND UTILITY COMPANY CRITERIA.
2. ALL BRANCH CIRCUIT CONDUCTORS, WIRES AND CABLE SHALL BE COPPER TYPE THHN-90 C 600V UNLESS NOTED OTHERWISE. THE MINIMUM WIRE SHALL BE #14. CONDUCTORS #10 AND SMALLER SHALL BE SOLID AND LARGER WIRES SHALL BE STRANDED.
3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, TESTING, AND INSPECTION FEES.
4. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS, SPECIFICATIONS OR CODE REQUIREMENT, THE NOTE WHICH ESTABLISHES THE HIGHER STANDARD SHALL PREVAIL.
5. RECORD DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT BEFORE FINAL RECORD PAYMENT WILL BE ISSUED.
6. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS (EXCLUDING LAMPS) FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE BY THE ARCHITECT.
7. ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BEAR THE LABELS OF; THE UNDERWRITER'S LABORATORIES (U.L.), ETL, OR OTHER APPROVED TESTING LABORATORIES FOR THEIR SPECIFIC USES. ALL EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED.
8. LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER THOSE SHOWN ON THE ELECTRICAL DRAWINGS.
9. ANY MENTION OF SPECIFIC VOLTAGE, LOAD, MOUNTING, ARRANGEMENTS, HEIGHTS, OR LOCATIONS ON THE ELECTRICAL DRAWINGS DOES NOT RELIEVE THE ELECTRICAL CONTRACTOR OF THE RESPONSIBILITY TO VERIFY THE SPECIFIC REQUIREMENTS PRIOR TO PURCHASE OR ROUGH-IN.
10. THE ELECTRICAL CONTRACTOR SHALL BALANCE THE PHASE LEGS OF ALL PANELS OR DISTRIBUTION SECTIONS INCLUDED IN CONTRACT WITHIN +10%.
11. ALL PANELS SHALL HAVE TYPED DIRECTORIES WITH CIRCUITS LABELED AND TAGGED.
12. VERIFY ALL FUSE SIZES AND TYPES WITH THE A/C EQUIPMENT MANUFACTURER.
13. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ROOF PENETRATIONS WITH THE MECHANICAL PIPE CURBS. WHERE CONDUIT MUST BE RUN ON THE ROOF IT SHALL BE RACKED WITH OTHER TRADES WHERE POSSIBLE OR PROVIDED WITH ITS OWN ROOF RACK SUPPORT SYSTEM WITH PROPER ROOF PLATE SO AS NOT TO CAUSE DAMAGE TO THE ROOF COVERING.
14. ALL FIXTURE TRIMS SHALL BE OF THE APPROPRIATE TYPE FOR THE CEILING IN WHICH THEY ARE TO BE INSTALLED.
15. FLUORESCENT LAMP & BALLAST MANUFACTURERS SHALL BE LISTED IN THE "DIRECTORY OF CERTIFIED FLUORESCENT LAMP BALLAST AND CERTIFIED LUMINAIRE MANUFACTURERS". SEPT. 1991.
16. ALL FIXTURES IN CONDITIONED SPACES SHALL BE EQUIPPED WITH STATE LISTED ENERGY SAVING BALLAST PER C.E.C. TITLE 24.
17. ALL INSTRUMENTS, APPARATUS, AND EQUIPMENT SHALL BE TESTED AND PROVED TO BE ELECTRICALLY AND MECHANICALLY SOUND AND WITHOUT DEFECTS. THE SYSTEM SHALL BE TESTED FOR SHORTS AND FAULTS. SHORTED OR FAULTED CONDUCTORS SHALL BE REMOVED AND REPLACED. ALL METERS, CABLES, TEST EQUIPMENT, OR APPARATUS NECESSARY FOR TESTING SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.
18. ALL CONDUITS SHALL BE INSTALLED CONCEALED. ALL DEVICE OPENING COVER PLATES SHALL BE FLUSH WITH FINISHED SURFACES UNLESS OTHERWISE NOTED.
19. ALL CONDUITS SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO WALLS AND STRUCTURAL MEMBERS AND SHALL BE RACKED WITH 90 DEGREE BENDS WHERE REQUIRED.
20. CONDUITS AND ELECTRICAL RACEWAYS SHALL NOT BE SUPPORTED NOR ATTACHED TO SUSPENDED CEILING GRID T-BARS OR CEILING SUPPORT WIRES.
21. NO CONDUIT TO BE RUN THROUGH HVAC AIR HANDLING DUCTS.
22. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A GROUND WIRE IN PVC CONDUIT AS PER THE NATIONAL ELECTRICAL CODE. GROUND WIRES ARE NOT SHOWN, BUT SHALL BE INCLUDED WITHIN THE ELECTRICAL CONTRACTOR'S BASE BID.
23. ALUMINUM CONDUCTORS # 4 AND LARGER ARE APPROVED FOR USE.
24. ALL JUNCTION OR PULL BOXES EXPOSED TO WET/DAMP/OUTDOOR CONDITIONS SHALL BE LISTED FOR THIS USE.
25. ALL JUNCTION OR PULL BOXES ABOVE THE SUSPENDED LAY-IN CEILING SHALL BE MOUNTED 1'-0" ABOVE THE CEILING LINE AND IN AN ACCESSIBLE LOCATION.
26. CONDUITS AND JUNCTION BOXES IN EXPOSED AREAS SHALL BE INSTALLED IN PROTECTED AREAS, IE; COLUMN WEBS.
27. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING DELIVERY, RECEIVING, UNLOADING, UNCRATING, STORING, SETTING IN PLACE, AND PROTECTING FROM DAMAGE OR WEATHER DURING CONSTRUCTION FOR ALL NEW EQUIPMENT OR SALVAGED EXISTING EQUIPMENT STORED BETWEEN BEING RELOCATED.
28. ROOF TOP RECEPTACLES SHALL BE PROVIDED WITHIN 25'-0" OF EACH ROOF TOP UNIT. BOXES SHALL BE WEATHERPROOF AND RECEPTACLES SHALL BE G.F.I. PROTECTED. PROVIDE CIRCUITRY, CONDUIT, WIRE AND CIRCUIT BREAKERS AS REQUIRED.
29. FINAL EQUIPMENT CONNECTION TO PILOT CONTROL DEVICES SHALL BE MADE WITH 1'-0" MINIMUM LENGTH OF FLEXIBLE CONDUIT OR SEALTITE, IE; SOLENOID VALVES, MOTORIZED DAMPERS, ETC..
30. ELECTRICAL CONTRACTOR MAY ELECT TO USE ONE FEED THROUGH G.F.I. RECEPTACLE TO FEED "SLAVE" G.F.I. RECEPTACLE(S).
31. THE PLANS AND SPECIFICATIONS ARE COMPLIMENTARY TO EACH OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE BINDING AS IF CALLED FOR BY BOTH.
32. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE WEATHERPROOF. ONLY RECEPTACLES INDICATED FOR G.F.I. PROTECTION SHALL BE SO PROTECTED.
33. ALL PROTECTIVE DEVICES (INCLUDING CIRCUIT BREAKERS, FUSED SWITCHES, COMBINATION MOTOR STARTERS, ETC.) SHALL HAVE AN INTERRUPTING CAPACITY EQUAL TO OR EXCEEDING THE AVAILABLE FAULT CURRENT OR SERIES. (SEE RATING SHOWN ON SINGLE LINE AND PANEL SCHEDULES).
34. THE MAIN SWITCHBOARD WITH METERING FACILITIES SHALL BE COMPLETELY CONTAINED IN A FREESTANDING SERVICE SECTION MOUNTED WHERE SHOWN ON THE PLANS AND AS REQUIRED BY THE SERVING UTILITY. ALL FUSES SHALL BE AS PER DRAWINGS. PROVIDE UNDERGROUND PULL SECTION AS REQUIRED BY UTILITY COMPANY.
35. LIGHTING PANELS SHALL BE DEAD FRONT TYPE, INTERCHANGEABLE, "QUICK BREAK" CIRCUIT BREAKERS. CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE SERIES RATED.
36. TELEPHONE OUTLETS SHALL BE PROVIDED WITH ACCESS FOR FUTURE CABLE INSTALLATIONS.
37. ALL WORK SHALL BE PERFORMED IN A NEAT WORKMAN LIKE MANNER.
38. FIXTURES SHALL BE RATED FOR FEED THROUGH WIRING.
39. LIGHTING FIXTURE NUMBERS, VOLTAGES, AND LAMP TYPES ON THE LIGHTING FIXTURE SCHEDULE SHALL BE USED AS A CRITERIA FOR PRODUCING MINIMUM REQUIREMENTS ON THIS JOB. THE ELECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROPER VOLTAGES, NUMBERS, LAMP TYPES, AND MOUNTINGS.
40. ALL ELECTRICAL EQUIPMENT SHALL BE LISTED BY U.L. OR OTHER APPROVED LISTINGS OF TESTING LABORATORIES PER N.E.C., SECTION 110-2.
41. ALL UNDERGROUND CONDUITS SHALL BE SCH 40 PVC.
42. EXPOSED CONDUITS TO BE EMT W COMPRESSION FITTINGS.
43. A FIRE ALARM SYSTEM WILL BE PROVIDED PER DIVISION 2.1 GROUP A

ELECTRICAL FIXTURE SCHEDULE

MARK	MANUFACTURER CATALOG NUMBER	VOLTS	LAMPS	TOTAL WATTS	MOUNTING	REMARKS	QTY
F1	LSI INDUSTRIES 2LLCG 228 SS5 RPW UE	277	2/28W T5	56	RECESSED	T-BAR CEILINGS	56
F2	LSI INDUSTRIES LA 232 SD SSO UE	277	2/32W T8	64	RECESSED	T-BAR CEILINGS	17
F3	LSI INDUSTRIES W44 2 217 SS010 UE (TWB/TWBS/SCK BRACKETS)	277	2/17W T8	34	SURFACE		31
F4	LSI INDUSTRIES S 1 25 SS010 UE	277	1/25W T8	25	SURFACE	SOFFIT	14
F5	PEACHTREE LIGHTING 9" PSCFTU-9257	277	2/57W 4PIN	114	RECESSED		31
F6	PEACHTREE LIGHTING 6" PSCFTU-6142	277	1/42W TRT	42	RECESSED		56
F7A	PRUDENTIAL LIGHTING 2' P-8920-2BX-CWA-YGW-DC-277-X3B	277	(2) T8 BX 39W	78	RECESSED	HARD LID CEILINGS	57
F7B	PRUDENTIAL LIGHTING 3' P-8930-2BX-CWA-YGW-DC-277-X3B	277	(4) T8 BX 39W	156	RECESSED	HARD LID CEILINGS	14
F7C	PRUDENTIAL LIGHTING 4' P-8940-2BX-CWA-YGW-DC-277-X3B	277	(4) T8 BX 39W	156	RECESSED	HARD LID CEILINGS	7
F7D	PRUDENTIAL LIGHTING 5' P-8950-2BX-CWA-YGW-DC-277-X3B	277	(6) T8 BX 39W	234	RECESSED	HARD LID CEILINGS	2
F8	LIGHTOLIER LIGHTING 40471U-3	277	1/42W CFL	42	SURFACE	AIR CRAFT CABLE PENDENT MOUNT	10
F9	GUTH LIGHTING S12-E5-4164T-D/CSXX W/LAMPS	277	6/42W TT CFL	252	PENDENT	AIR CRAFT CABLE PENDENT MOUNT	37
F10	GUTH LIGHTING SI-E-5-2-D-2-8-842T-D	277	8/42W TT CFL	336	SURFACE	PENDENT MOUNT	28
F11	EUREKA LIGHTING MOONRISE 3530SC FT524 277	277	1/24W T5	24	WALL	WALL MOUNT	14
F12	EUREKA LIGHTING MOONRISE 3530SC FT524 277	277	1/24W T5	24	WALL	WALL MOUNT	5
F13	WE-EF LIGHTING USA 622-6251 (OLV330)	277	CMH35 T-6	39	WALL	WALL MOUNT	17
F14	PEACHTREE LIGHTING PCT-632	277	1/32W FL	32	WALL	WALL MOUNT	40
F15	PEACHTREE LIGHTING PCTK-9242	277	2/42W 1/32W FL	116	WALL	WALL MOUNT-(2) 42W LAMPS DN & (1) 32W LAMP UP	35
F16	US ARCHITECTURAL LIG VPR-R-III-175MH-277-1-PTB23-COLOR	277	1/175W T6MH	175	POST TOP	WALK WAY COURT YARD-FULL CUT OFF	13
F16P	US ARCHITECTURAL LIG RNTS 104 11 1 PT27				POLE	WALK WAY COURT YARD POLE ONLY	13
F17	DELRAY LIGHTING 7300-2-42-UE	277	2/42W CFL	84	SURFACE	PENDENT MOUNT	11
F18	INTENSE FIXTURE IFHS55032E / IC519C-SF	277	32W CPF	32	RECESSED	RESTROOM DOWN LIGHT	31
F19	LIGHTECH INC. SL8120 PLT18 277 W	277	2/18TRT	36	RECESSED	STEP LIGHTS	25
F20	AFFORDABLE QUALITY LIGHTING AK-LED-WARM -WHITE	120	0.8W/FT LED	51.2	COVE	BANQUETTE COVE LIGHTING-(2) 64' RUNS	6
F21	RUUD LIGHTING HCL405-D 1-50W	277	50W MH	50	RECESSED	LOUVERS BOLLARD LIGHT FIXTURE	2
FEX	BEGHELLI USA OL2 SA LG 1C XX	277	LED	0.5	SURFACE	ALL CEILLINGS	30
FEX1	BEGHELLI USA LC1 SA LG 2 AL W	277	LED	0.5	SURFACE	ALL CEILLINGS WITH WIRE CAGE	4
F22	NOT USED						
F23	NOT USED						
F24	RUUD LIGHTING HS-1-4-V-2X-32-U-5	277	2/32W FL	64	SURFACE	LUNCH SHELTER	10

ABBREVIATIONS

A	AMPS
A.F.	AMP FRAME/FUSE
A.F.F	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
AL	ALUMINUM
ARCH.	ARCHITECT; ARCHITECTURAL
A.T.	AMP TRIP
BATT.	BATTERY
BKBD.	BACKBOARD
BLDG.	BUILDING
CAB.	CABINET
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT.	CIRCUIT
C.O.	CONDUIT ONLY WITH PULL WIRE
C.W.	COLD WATER
CU	COPPER
CLG.	CEILING
C.L.	CENTER LINE
CT	CURRENT TRANSFORMER
DB	DISTRIBUTION BOARD
D.L.	DAMP LOCATION LISTING
D.W.	DISHWASHER
DIST.	DISTRIBUTION
E.C.	ELECTRICAL CONTRACTOR
EDF	ELECTRIC DRINKING FOUNTAIN
EF	EXHAUST FAN
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EM	EMERGENCY
EQUIP.	EQUIPMENT
EXIST.	EXISTING
FA	FIRE ALARM
F.C.	FAN COIL
FIXT.	FIXTURE
FL.; FLR.	FLOOR
FLUOR.	FLUORESCENT
FTG.	FOOTING
GC	GENERAL CONTRACTOR
G.D.	GARBAGE DISPOSER
G.F.I.	GROUND FAULT INTERRUPTER
G.F.R.	GROUND FAULT RELAY
G.G.	GREEN GROUND
GRD.	GROUND
HP	HORSE POWER
H.O.A.	HAND-OFF-AUTOMATIC
INC.	INCANDESCENT
J.B.	JUNCTION BOX
L.D.	LOW DENSITY RATING
LOC.	LOCATION
LTG.	LIGHTING
M	METER
MCC	MOTOR CONTROL CENTER
MANUF.	MANUFACTURER
MECH.	MECHANICAL
MIN.	MINIMUM
MIN.	MINUTE
MTD.	MOUNTED
MTG. HT.	MOUNTING HEIGHT
N.F.	NON-FUSED
N.E.C.	NATIONAL ELECTRICAL CODE
N.I.C.	NOT IN CONTRACT
N/L	NIGHT LIGHT
P	POLE
PL	PROPERTY LINE
PNL	PANEL
PWR	POWER
RECEPT.	RECEPTACLE
REF.	REFRIGERATOR
REQ.	REQUIREMENTS
RM.	ROOM
S.C.D.	SHORT CIRCUIT DUTY
S.C.I.	SHORT CIRCUIT INTERRUPTING
SW.	SWITCH
SWGR.	SWITCHGEAR
SYM.	SYMMETRICAL
T.V.	TELEVISION
T.C.	TIME CLOCK
TEL.;TELE. BRD.	TELEPHONE BOARD
TH.	THERMOSTAT
TRANSF.	TRANSFORMER
TYP.	TYPICAL
UGPS	UNDERGROUND PULL SECTION
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLTS
V.L.	VERIFY EXACT LOCATION/MOUNTING HEIGHT PRIOR TO BASE BID (INCLUDE ALL FINDINGS WITHIN THE BASE BID)
WG	WIRING GUTTER
WP	WEATHERPROOF
W.T.	WATER TIGHT, DEVICE, EQUIPMENT, MATERIALS & INSTALLATION
WTR. HTR.	WATER HEATER

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE NECESSARY, REFERENCE WILL BE MADE TO AMERICAN STANDARDS INSTITUTE ABBREVIATIONS ANSI Y1.1 OR MILITARY STANDARD ABBREVIATIONS MIL-STANDARD, AND ANY STANDARD INDUSTRY CONVENTIONS.

ELECTRICAL SYMBOLS

LIGHTING (NOT ALL SYMBOLS USED)

- SURFACE MOUNT LIGHT FIXTURE
- SURFACE MOUNT LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- RECESSED LIGHT FIXTURE
- RECESSED LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- PARABOLIC LIGHT FIXTURE
- PARABOLIC LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- STRIP LIGHT FIXTURE
- STRIP LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- STRIP CONTINUATION
- RECESSED DOWN LIGHT FIXTURE
- RECESSED DOWN LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- SURFACE MOUNT DOWN LIGHT FIXTURE
- SURFACE MOUNT DOWN LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- SURFACE MOUNT LIGHT FIXTURE W/ WALL WASH TRIM
- RECESSED LIGHT FIXTURE W/ WALL WASH TRIM
- TRACK LIGHTING
- TRACK LIGHT FIXTURE
- LIGHT FIXTURE, SMALL BOX, PATIO
- 4 LAMP LIGHT BAR, BATH VANITY
- BUG-EYE WALL MOUNT EMERGENCY LIGHT
- CEILING MOUNT EXIT SIGN-SINGLE FACE. SHADING INDICATES DIRECTION OF FACE. ARROW INDICATES ORIENTATION OF FIXTURE ARROWS.
- CEILING MOUNT EXIT SIGN-DOUBLE FACE. SHADING INDICATES DIRECTION OF FACE. ARROW INDICATES ORIENTATION OF FIXTURE ARROWS.
- WALL MOUNT EXIT SIGN-SINGLE FACE. ARROW INDICATES ORIENTATION OF FIXTURE ARROWS.
- LL — LOW LEVEL WALL MOUNT EXIT SIGN-SINGLE FACE. ARROW INDICATES ORIENTATION OF FIXTURE ARROWS.
- EXIT SIGN SINGLE ARROW
- EXIT SIGN DOUBLE ARROW

SITE LIGHTING

- SITE LIGHTING BOLLARD
- SITE LIGHTING POLE MOUNT FIXTURE
- SITE LIGHTING POLE MOUNT FIXTURE
- SITE LIGHTING POST TOP FIXTURE

POWER

- NON-FUSED DISCONNECT SWITCH-HP RATED AND WEATHERPROOF AS REQUIRED
- FUSED DISCONNECT SWITCH-HP RATED WITH FUSES PER EQUIPMENT MANUFACTURER AND WEATHERPROOF AS REQUIRED
- (3) MOTOR STARTER-SUBSCRIPT INDICATES NEMA SIZE
- (3) NON-FUSED DISCONNECT W/ STARTER-HP RATED. SUBSCRIPT INDICATES NEMA SIZE.
- (3) COMBINATION FUSED DISCONNECT W/ STARTER-HP RATED WITH FUSES PER EQUIPMENT MANUFACTURER. SUBSCRIPT INDICATES NEMA SIZE.
- FLUSH MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- SURFACE MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- T — FLOOR MOUNT TRANSFORMER. REFER TO SINGLE LINE DIAGRAM FOR SIZE AND TYPE.
- DISTRIBUTION SWITCHBOARD REFER TO SINGLE LINE DIAGRAM.
- SINGLE RECEPTACLE, WALL MOUNTED @18" A.F.F. UNDER SINK SPACE. U.O.N.
- DUPLEX RECEPTACLE, WALL MOUNTED @18" A.F.F. U.O.N.
- DUPLEX RECEPTACLE W/ SWITCH CONNECTED, WALL MOUNTED @18" A.F.F. U.O.N.
- DUPLEX RECEPTACLE W/ DEDICATED CKT, WALL MOUNTED @18" A.F.F. U.O.N.
- GFCI — DUPLEX GFI RECEPTACLE, WALL MOUNTED @18" A.F.F.. U.O.N.
- TRIPLE RECEPTACLE, WALL MOUNTED @18" A.F.F. U.O.N.
- QUAD RECEPTACLE, WALL MOUNTED @18" A.F.F. U.O.N.
- DUPLEX RECEPTACLE IN FLOOR MOUNT BOX WITH SERVICE FITTING.
- QUADPLEX RECEPTACLE IN FLOOR MOUNT BOX WITH SERVICE FITTING.
- RECEPTACLE, 20A, 250V, WALL MOUNTED @18" A.F.F. U.O.N.
- SPECIAL RECEPTACLE, SIZE AND NEMA CONFIGURATION AS INDICATED ON DRAWING
- EXHAUST FAN, OR MOTOR LOAD. REFER TO MECHANICAL DRAWINGS FOR SPECIFIC LOAD REQUIREMENTS OR AS NOTED. NUMBER INDICATES HORSEPOWER.
- MULTI OUTLET WIREMOLD. SEE FLOOR PLANS FOR ADDITIONAL INFO.

SWITCHING/DIMMING

- a,b — * WALL MOUNT ROOM OCCUPANCY SENSOR/AUTOMATIC LIGHTING CONTROL SWITCH @48" A.F.F. U.O.N.
- CEILING MOUNT ROOM OCCUPANCY SENSOR/AUTOMATIC LIGHTING CONTROL
- $M — * WALL MOUNT SINGLE POLE SWITCH @48" A.F.F. U.O.N. (POWER)
- $a,b — * WALL MOUNT SINGLE POLE SWITCH @48" A.F.F. U.O.N. (LIGHTING) (3)
- M — CEILING MOUNT LOW VOLTAGE SWITCH, WATTSTOPPER CI-200(LIGHTING)

* SUBSCRIPTS AT SYMBOL INDICATE THE FOLLOWING.

2 - DOUBLE POLE	P - PILOT LIGHT
3 - THREE WAY	R - REMOTE CONTROL SWITCH
4 - FOUR WAY	M - MOTOR STARTING SWITCH
K - KEY OPERATED	RL - ROTARY LOCK KEY TYPE SWITCH
D - DIMMER	PB - PUSHBUTTON

a,b,c,etc.- INDICATES SWITCHING OF CONNECTED DEVICES W/ COINCIDING SUBSCRIPTS AND NUMBER OF SWITCHES AT LOCATION.

NOTE: ALL WALL SWITCHES CONTROLLING EMERGENCY CIRCUITS SHALL BE ENGRAVED WITH "EMERGENCY"

- DIMMING SYSTEM RECALL STATION
- DIMMING SYSTEM ENTRY STATION WITH PRE SET BUTTONS
- DIMMING MASTER ENTRY STATION WITH PRE SET BUTTONS
- DIMMING SYSTEM CONTROL CONSOLE

CONDUIT/BOXES/MISC.

- J — JUNCTION BOX, CEILING MOUNTED/ IN ACCESSIBLE CEILING. SIZED PER N.E.C.
- J — JUNCTION BOX, WALL MOUNTED. FIELD VERIFY MOUNTING HEIGHT PRIOR TO ROUGH-IN. SIZED PER N.E.C.
- T — THERMOSTAT OUTLET BOX. WALL MTD. @48" A.F.F. PROVIDE 1/2" C.O. TO RESPECTIVE EQUIPMENT.
- A — AMBIENT LIGHT SENSOR. (3)
- FSD — FIRE SMOKE DAMPER
- P — ~~PULLBOX, SIZED PER N.E.C. OR AS NOTED. CONCRETE WITH BOLT DOWN COVER.~~
- PLYWOOD BACKBOARD FOR TERMINATIONS. SEE PLANS FOR SIZE.
- INDICATES FLEXIBLE CONNECTION TO EQUIPMENT.
- H1B-1(#12) — CONDUIT, HOME RUN TO PANEL BOARD H1B, CIRCUIT 1 WITH 12 GAUGE WIRES.
- CONDUIT RUN CONCEALED, IN WALLS, FLOOR, OR ABOVE CEILING.
- CONDUIT RUN CONCEALED BELOW GRADE, 3/4"C MINIMUM.
- X — CONDUIT RUN EXPOSED
- FA — 3/4" CONDUIT WITH FIRE ALARM CONDUCTORS. SEE FIRE ALARM PLANS.
- CONDUIT STUB OUT, CAP & MARK.
- I — 3/4" C. WITH INTERCOMMUNICATION SYSTEM CABLE. U.O.N.
- C — 3/4" C. WITH CLOCK SYSTEM CABLE. U.O.N.
- A — 3/4" C. WITH AUTONOMOUS SOUND SYSTEM CABLE. U.O.N.
- TV — 3/4" C. WITH TELEVISION DISTRIBUTION CABLE. U.O.N.
- C,I — 3/4" C. WITH COMBINATION OF CABLES NOTED ABOVE. U.O.N.
- S — 3/4" C. WITH INTRUSION ALARM CABLE. U.O.N.
- D — 3/4" C. WITH DATA CABLE.

SEE SPECIFICATIONS AND/OR SIGNAL PLANS FOR ALL CABLE REQUIREMENTS.

- BRANCH CIRCUIT WIRING, 2 #12 IN 1/2" CONDUIT OR AS NOTED OR SYMBOLIZED

1/2"C-3 #12	1/2"C-6 #12
1/2"C-4 #12	3/4"C-7 #12
1/2"C-5 #12	3/4"C-8 #12

NOTES:
ALL MOUNTING HEIGHTS ARE ON CENTER. REFER TO FIXTURE SCHEDULE FOR MORE INFORMATION.

PLAN CALL OUT SYMBOLS

(NOT ALL SYMBOLS USED)

- 1A / 100 / 2 — LIGHT FIXTURE CALL OUT, "1A" INDICATES FIXTURE TYPE (REFER TO FIXTURE SCHEDULE), "100" INDICATES TOTAL FIXTURE WATTAGE. NUMBER ADJACENT INDICATES QUANTITIES. (NUMBER IS SHOWN FOR BRANCH CIRCUIT PURPOSE ONLY, NOT FOR MATERIAL TAKE-OFF).
- AH / 2 — MECHANICAL EQUIPMENT CALLOUT, "AH" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND FULL RATING.
- 3 / E-1 — DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.
- 2 — PLAN NOTE REFERENCE.
- 4 — REVISION REFERENCE.

Received
JUL 23 2008
Diffenbaugh

COMMUNICATIONS SYMBOLS

(NOT ALL SYMBOLS USED)

- DATA OUTLET BOX, ℄ + 18" A.F.F., 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET WITHOUT INSTRUMENT, ℄ +18" A.F.F., 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- DATA OUTLET IN FLOOR BOX WITH SERVICE FITTING. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET IN FLOOR BOX WITH SERVICE FITTING. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- COMBINATION TELEPHONE AND DATA OUTLET IN FLOOR WITH SERVICE FITTING WITH ADMINISTRATIVE TELEPHONE PER SPECS. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET +18" A.F.F. OR AS NOTED WITH ADMINISTRATIVE TELEPHONE, PER SPECIFICATIONS. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET MOUNTED FLUSH IN FLOOR BOX WITH ADMINISTRATIVE TELEPHONE, PER SPECIFICATIONS. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET +48" OR AS NOTED WITH STAFF STATION HANDSET, PER SPECIFICATIONS. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- DUPLEX VOICE/DATA TELEPHONE OUTLET WITH STAFF STATION HANDSET PER SPECIFICATIONS AT ℄ 18" A.F.F. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- DUPLEX VOICE/DATA TELEPHONE OUTLET WITH ADMINISTRATIVE STATION HANDSET PER SPECIFICATIONS AT ℄ 18" A.F.F. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TWO VOICE/DATA OUTLETS WITH RECEPTION TELEPHONE STATION PER SPECIFICATIONS. MOUNT IN CASEWORK PER ARCHITECT.
- B C — SURFACE WALL MOUNTED CLOCK, FIELD VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION. "B" INDICATES BATTERY OPERATED ANALOG CLOCK. "D" INDICATES DIGITAL SECONDARY CLOCK REFER TO SPECIFICATIONS. PROVIDE 4/S DP BOX FOR DIGITAL CLOCK
- C D — RECESSED DIGITAL CLOCK PER SPECIFICATIONS
- TV — TELEVISION OUTLET.
- S — SURFACE WALL MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
- S — SURFACE MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
- WEATHERPROOF, VANDALPROOF FLUSH MOUNTED P.A. SPEAKER, WALL MOUNTED +8'-0" A.F.F. "ET" INDICATES EXTENDED THROW TYPE PER SPECS.
- M — MICROPHONE OUTLET MOUNTED FLUSH IN FLOOR.
- M — MICROPHONE OUTLET WALL MOUNTED +18" A.F.F. OR AS NOTED.
- S — CEILING FLUSH MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
- FLUSH MOUNTED CLOCK, SPEAKER COMBINATION PER SPECIFICATIONS.
- V — WALL MOUNTED VOLUME CONTROL.
- FLUSH MOUNTED LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- SURFACE MOUNTED LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED

DRAWING LIST

E0.0	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
E0.1	SINGLE LINE DIAGRAM
E0.2	PANEL SCHEDULES
E0.3	TITLE 24 DOCUMENTS-INDOOR
E0.4	TITLE 24 DOCUMENTS-OUTDOOR
E0.5	LIGHTING CONTROL PANEL (LCP) SCHEDULE
E1.0	ELECTRICAL SITE PLAN
E1.1	LIGHTING SITE PLAN
EA2.0	BUILDING A POWER PLAN
EB2.1	BUILDING B SEGMENT A POWER PLAN
~~EB2.2~~	~~BUILDING B SEGMENT B POWER PLAN~~
EB2.3	BUILDING B SEGMENT A SYSTEMS PLAN
EB2.4	BUILDING B SEGMENT B SYSTEMS PLAN
EA3.0	BUILDING A LIGHTING PLAN
EB3.1	BUILDING B SEGMENT A LIGHTING PLAN
EB3.2	BUILDING B SEGMENT B LIGHTING PLAN
EA4.0	BUILDING A ROOF POWER PLAN
EB4.1	BUILDING B SEGMENT A ROOF POWER PLAN
~~EB4.2~~	~~BUILDING B SEGMENT B ROOF POWER PLAN~~
EA5.1	BUILDING A PHOTOMETRIC STUDY
EA5.2	BUILDING B PHOTOMETRIC STUDY
EB5.3	SITE PHOTOMETRIC STUDY

TRUE NORTH

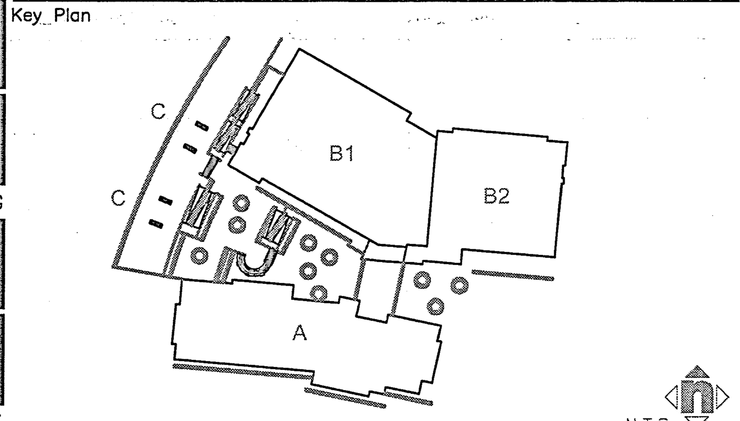
HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING

A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 FAX: 714-505-7080 LICENSE NO. 724633

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A.J. KIRKWOOD & ASSOC. INC.
LICENSE No. CIO-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

CITY OF RIVERSIDE

SM HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

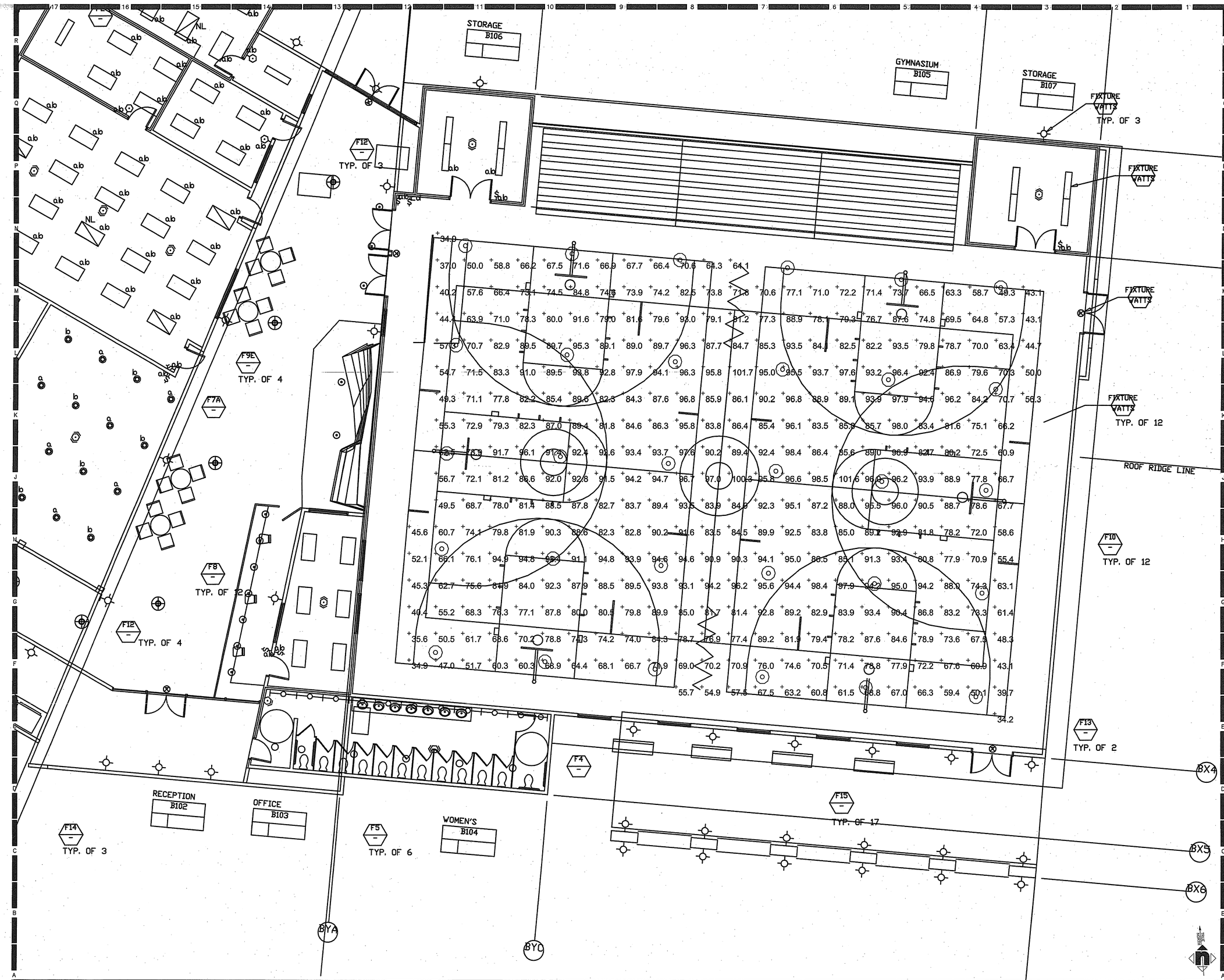
Drawing Title
GENERAL NOTES, ABBREVIATIONS AND SYMBOLS

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	E0.0
Date: 06-22-07	Sheet 1 of ## 21

O:\466 Orange Terrace Library\E-DRAWINGS\E0.0.dwg, 7/23/2008 11:57:55 AM, trent, 30x42, Copyright (c): A.J. Kirkwood and Associates



BUILDING 'B' PHOTOMETRIC BASKET BALL COUIRT STUDY | 1

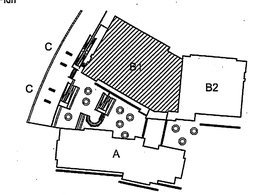
1/32" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
27762 WALNUT AVE. TUSTIN, CA 92780
TEL 714-505-5977 FAX 714-505-7520 LICENSE NO. 724633

AS BUILT

Key Plan



N.T.S.

Consultant: Electrical Contractor

LICENSED ELECTRICAL CONTRACTOR
LICENSE NO. CO-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE
LIBRARY /
COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

BUILDING 'B' PHOTOMETRIC

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
LICENSE NO. C-19759
EXP. 02-24-09
STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	EB5.4
Date: 05-17-07	Sheet 20 of 21

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E5.3_E5.4 BUILDING A PHOTOMETRIC STUDY – SEGMENT A & B.dwg , May 17,2007–8:04am

PLEASE RECYCLE E5.3_E5.4 BUILDING A PHOTOMETRIC STUDY – SEGMENT A & B.DWG

Copyright (C) A.J. Kirkwood and Associates

BUILDING 'B' PHOTOMETRIC BANQUET RM STUDY - SEGMENT A 1

1/8" = 1'-0"

BUILDING 'B' PHOTOMETRIC ENTRY & MEETING AREA STUDY - SEGMENT A 2

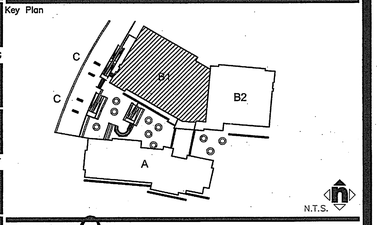
1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2762 WALNUT AVE. TUSTIN, CA 92780

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
LICENSE No. CIO-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

BUILDING 'B' PHOTOMETRIC-SEGMENT A

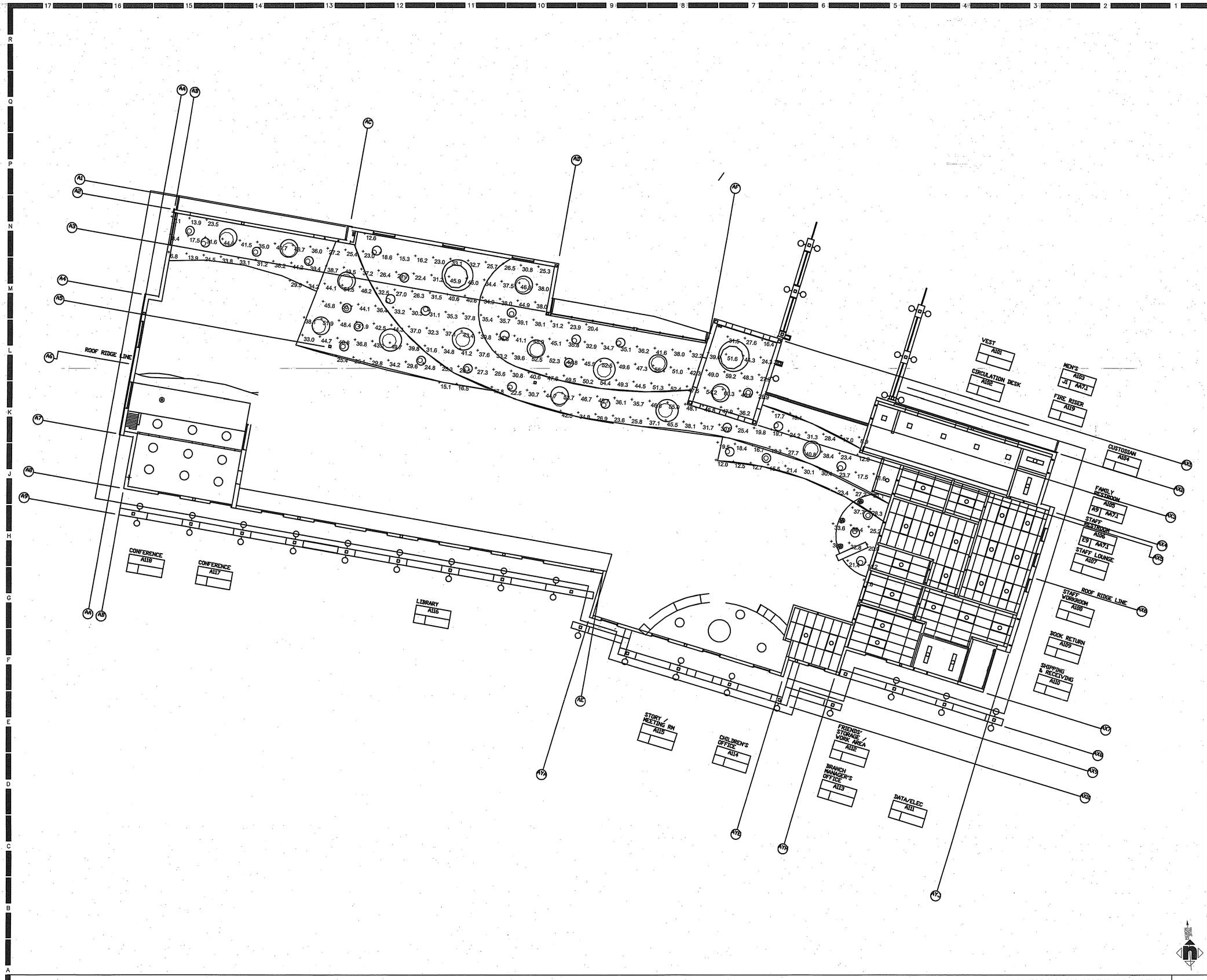
Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No. EB5.3
Reviewed:	
Date: 05-17-07	Sheet 19 of 21

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E5.3_E5.4 BUILDING A PHOTOMETRIC STUDY - SEGMENT A & B.dwg May 17,2007-8:04am

PLEASE RECYCLE E5.3_E5.4 BUILDING A PHOTOMETRIC STUDY - SEGMENT A & B.DWG



BUILDING 'A' PHOTOMETRIC STUDY - 1

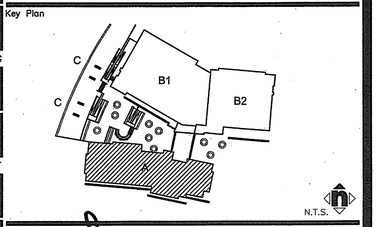
1/8" = 1'-0"

HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780

AS BUILT

Key Plan



N.T.S.

Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
LICENSE No. CIO-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

BUILDING 'A' PHOTOMETRIC

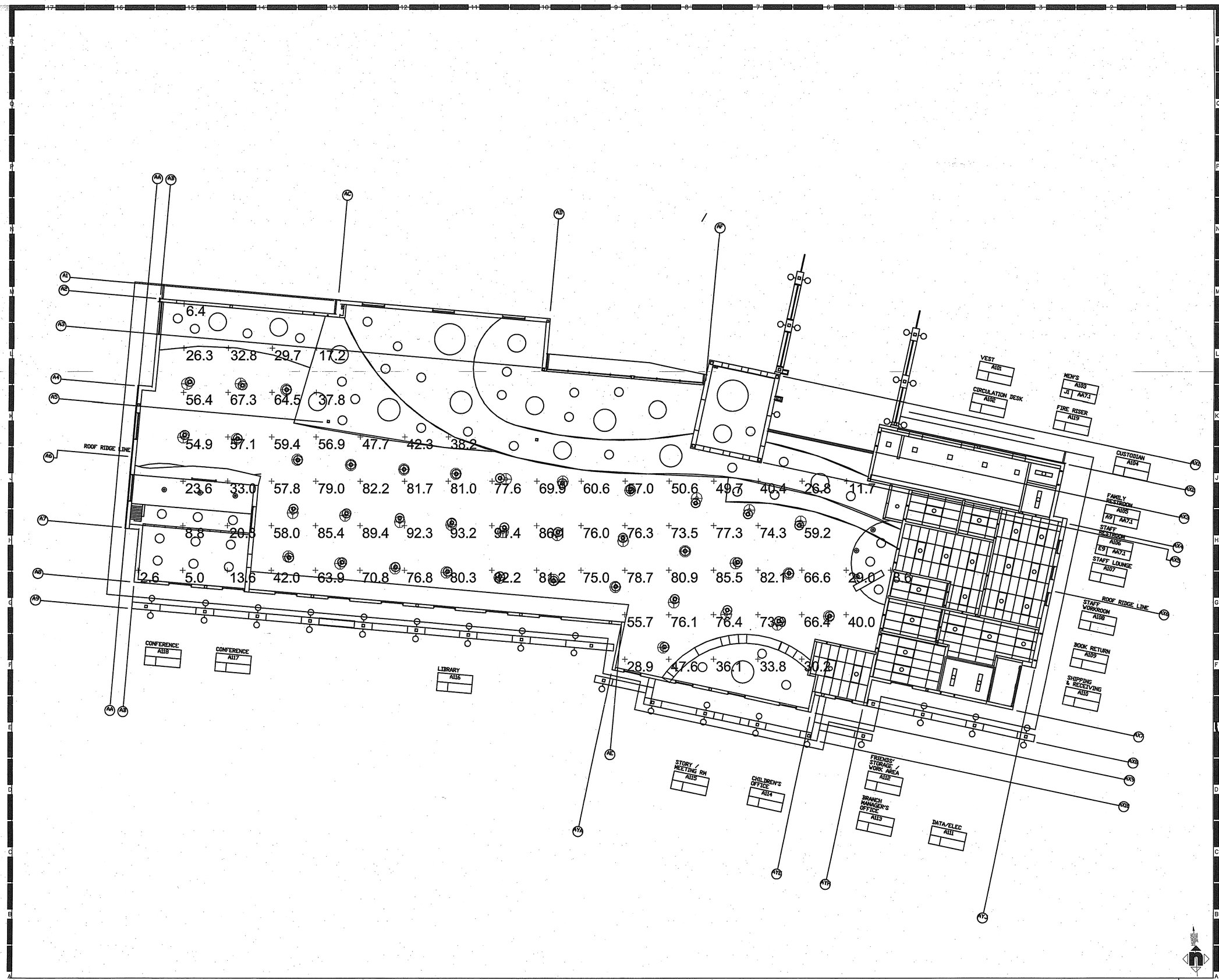
Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	EA5.2
Date: 05-17-07	Sheet 18 of 21

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E5.1_E5.2 BUILDING B PHOTOMETRIC STUDY - SEGMENT A & B.dwg May 17,2007-8:04am

PLEASE RECYCLE E5.1_E5.2 BUILDING B PHOTOMETRIC STUDY - SEGMENT A & B.DWG



BUILDING 'A' PHOTOMETRIC STUDY 1

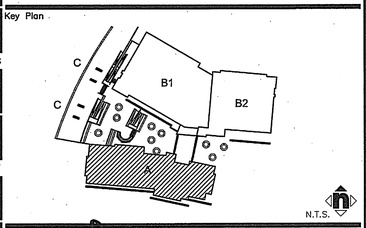
1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-2977 FAX 714-505-7030 LICENSE NO. 724633

AS BUILT

Key Plan



N.T.S.

Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
LICENSE No. C10-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

BUILDING A' PHOTOMETRIC

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	EA5.1
Date: 05-17-07	Sheet 17 of 21

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E5.1_E5.2 BUILDING B PHOTOMETRIC STUDY - SEGMENT A & B.dwg May 17,2007-8:04am

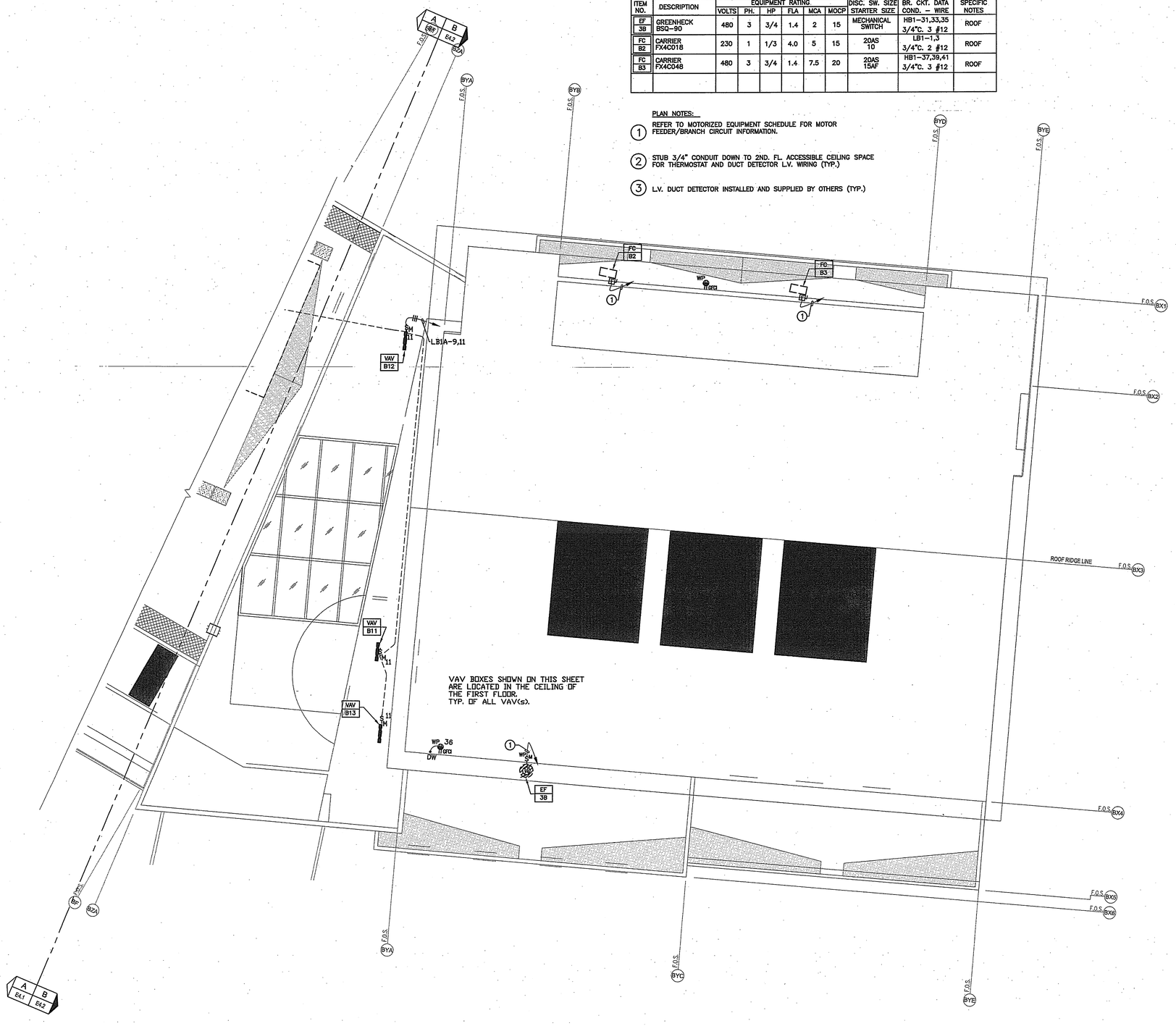
PLEASE RECYCLE E5.1_E5.2 BUILDING B PHOTOMETRIC STUDY - SEGMENT A & B.DWG

MOTORIZED EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	EQUIPMENT RATING VOLTS	PH.	HP	FLA	MCA	MOCP	DISC. SW. SIZE STARTER SIZE	BR. CKT. DATA COND. – WIRE	SPECIFIC NOTES
EF 3B	GREENHECK BSQ-90	480	3	3/4	1.4	2	15	MECHANICAL SWITCH	HB1-31,33,35 3/4"C. 3 #12	ROOF
FC B2	CARRIER FX4C018	230	1	1/3	4.0	5	15	20AS 10	LB1-1,3 3/4"C. 2 #12	ROOF
FC B3	CARRIER FX4C048	480	3	3/4	1.4	7.5	20	20AS 15AF	HB1-37,39,41 3/4"C. 3 #12	ROOF

PLAN NOTES:

1. REFER TO MOTORIZED EQUIPMENT SCHEDULE FOR MOTOR FEEDER/BRANCH CIRCUIT INFORMATION.
2. STUB 3/4" CONDUIT DOWN TO 2ND. FL. ACCESSIBLE CEILING SPACE FOR THERMOSTAT AND DUCT DETECTOR L.V. WIRING (TYP.)
3. L.V. DUCT DETECTOR INSTALLED AND SUPPLIED BY OTHERS (TYP.)



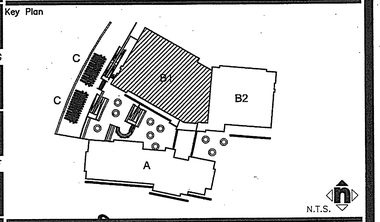
HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING

A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 FAX 714-505-7050 LICENSE NO. 724633

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
KIRKWOOD & ASSOC. INC.
LICENSE No. CIO-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title BUILDING 'B' ROOF POWER PLAN- SEGMENT B

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

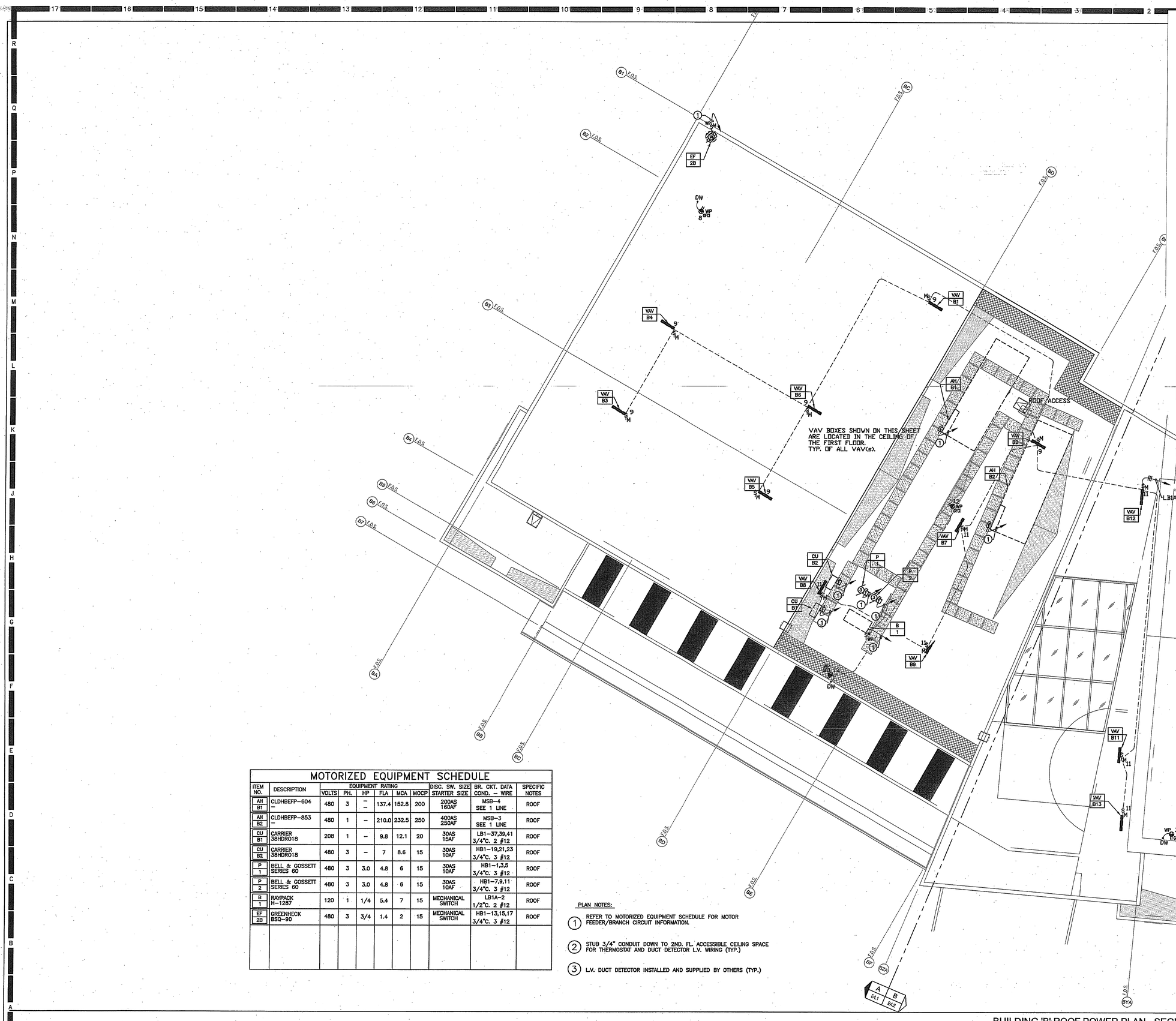
Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	EB4.2
Date: 05-17-07	Sheet 15 of 21

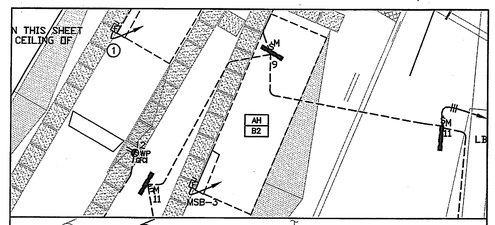
BUILDING 'B' ROOF POWER PLAN - SEGMENT B | 1

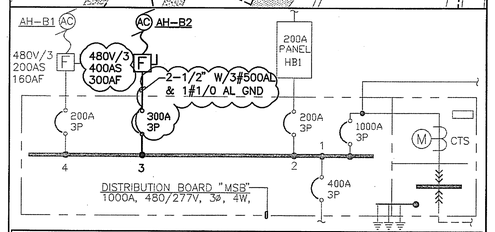
1/8" = 1'-0"

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E4.1_E4.2 BUILDING B ROOF POWER PLAN – SEGMENT A & B.dwg May 17,2007–8:04am

PLEASE RECYCLE E4.1_E4.2 BUILDING B ROOF POWER PLAN – SEGMENT A & B.DWG







MOTORIZED EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	EQUIPMENT RATING VOLTS	PH.	HP	FLA	MCA	MOCP	DISC. SW. SIZE STARTER SIZE	BR. CKT. DATA COND. – WIRE	SPECIFIC NOTES
AH B2	CLDHBEFP-853 –	480	3	–	253	269	300	400AS 300AF	MSB-3 SEE 1 LINE	ROOF

PROJECT: ORANGE TERRACE LIBRARY	DATE: –
	SCALE: 1/8"=1'-0"
SHEET DESCRIPTION: AIR HANDLER B2	DRAWN BY: NS
	REVIEWED BY: BS
A. J. KIRKWOOD & ASSOCIATES, INC. 2752 WALNUT AVE. TUSTIN, CA 92780 Tel: 714-505-1977 FAX: 714-505-7030 LICENSE NO. 724633	SEAL: LICENSED ELECTRICAL CONTRACTOR CSLB LICENSE NO. 724633 STATE OF CALIFORNIA
	SHEET: E1 — 1 OF 1

MOTORIZED EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	EQUIPMENT RATING VOLTS	PH.	HP	FLA	MCA	MOCP	DISC. SW. SIZE STARTER SIZE	BR. CKT. DATA COND. – WIRE	SPECIFIC NOTES
AH B1	CLDHBEFP-604 –	480	3	–	137.4	152.8	200	200AS 160AF	MSB-4 SEE 1 LINE	ROOF
AH B2	CLDHBEFP-853 –	480	1	–	210.0	232.5	250	400AS 250AF	MSB-3 SEE 1 LINE	ROOF
CU B1	CARRIER 38HDR018	208	1	–	9.8	12.1	20	30AS 15AF	LB1-37,39,41 3/4"C. 2 #12	ROOF
CU B2	CARRIER 38HDR018	480	3	–	7	8.6	15	30AS 10AF	HB1-19,21,23 3/4"C. 3 #12	ROOF
P 1	BELL & GOSSETT SERIES 60	480	3	3.0	4.8	6	15	30AS 10AF	HB1-1,3,5 3/4"C. 3 #12	ROOF
P 2	BELL & GOSSETT SERIES 60	480	3	3.0	4.8	6	15	30AS 10AF	HB1-7,9,11 3/4"C. 3 #12	ROOF
B 1	RAYPACK H-1287	120	1	1/4	5.4	7	15	MECHANICAL SWITCH	LB1A-2 1/2"C. 2 #12	ROOF
EF 2B	GREENHECK BSQ-90	480	3	3/4	1.4	2	15	MECHANICAL SWITCH	HB1-13,15,17 3/4"C. 3 #12	ROOF

PLAN NOTES:

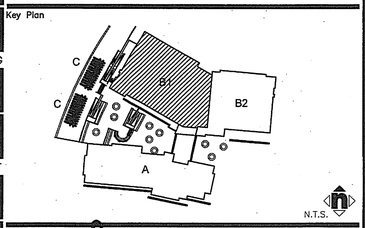
1. REFER TO MOTORIZED EQUIPMENT SCHEDULE FOR MOTOR FEEDER/BRANCH CIRCUIT INFORMATION.
2. STUB 3/4" CONDUIT DOWN TO 2ND. FL. ACCESSIBLE CEILING SPACE FOR THERMOSTAT AND DUCT DETECTOR L.V. WIRING (TYP.)
3. L.V. DUCT DETECTOR INSTALLED AND SUPPLIED BY OTHERS (TYP.)

BUILDING 'B' ROOF POWER PLAN - SEGMENT A | 1

1/8" = 1'-0"

AS BUILT

Key Plan



N.T.S.

Consultants

LICENSED ELECTRICAL CONTRACTOR A. J. KIRKWOOD & ASSOC., INC. LICENSE No. CO-724633 EXP. 07/31/08 ELECTRICAL STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

BUILDING 'B' ROOF POWER PLAN- SEGMENT A

Architect's Seal

LICENSED ARCHITECT CHRISTOPHER RICHARD TAYLOR REG. NO. C-19759 REN. 02-24-09 STATE OF CALIFORNIA

Designed:	Project No. 2340001	
Drawn: BM	Scale: AS NOTED	
Checked:	Drawing No.	
Reviewed:	EB4.1	
Date: 05-17-07	Sheet 14 of 21	

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E4.1_E4.2 BUILDING B ROOF POWER PLAN - SEGMENT A & B.dwg May 17,2007-8:03am

PLEASE RECYCLE E4.1_E4.2 BUILDING B ROOF POWER PLAN - SEGMENT A & B.DWG

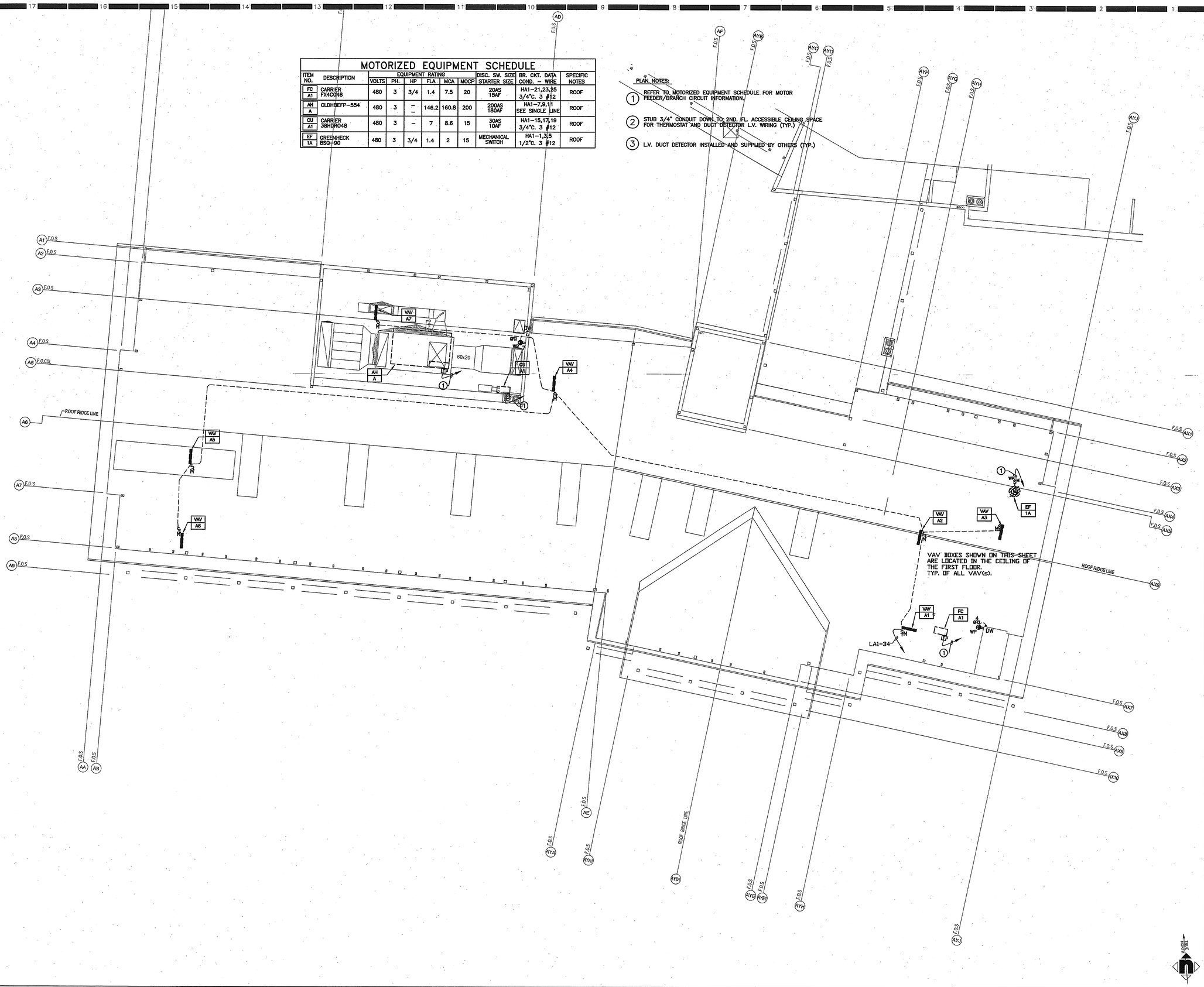
O:\466 Orange Terrace Library\E-DRAWINGS\E4.1_E4.2 BUILDING B ROOF POWER PLAN - SEGMENT A & B.dwg, 5/17/2007 8:03:29 AM, BRIEL, AKUT Expires 6/1 (LMS) X-ref(s): XREFS, Copyright (c) A.J. KIRKWOOD and ASSOCIATES

MOTORIZED EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	EQUIPMENT RATING VOLTS	PH.	HP	FLA	MCA	MOCP	DISC. SW. SIZE STARTER SIZE	BR. CKT. DATA COND. – WIRE	SPECIFIC NOTES
FC / A1	CARRIER FX4C048	480	3	3/4	1.4	7.5	20	20AS 15AF	HA1–21,23,25 3/4"C. 3 #12	ROOF
AH / A	CLDHBEFP–554	480	3	– –	146.2	160.8	200	200AS 180AF	HA1–7,9,11 SEE SINGLE LINE	ROOF
CU / A1	CARRIER 38HDR048	480	3	–	7	8.6	15	30AS 10AF	HA1–15,17,19 3/4"C. 3 #12	ROOF
EF / 1A	GREENHECK BSQ–90	480	3	3/4	1.4	2	15	MECHANICAL SWITCH	HA1–1,3,5 1/2"C. 3 #12	ROOF

PLAN NOTES:

1. REFER TO MOTORIZED EQUIPMENT SCHEDULE FOR MOTOR FEEDER/BRANCH CIRCUIT INFORMATION.
2. STUB 3/4" CONDUIT DOWN TO 2ND. FL. ACCESSIBLE CEILING SPACE FOR THERMOSTAT AND DUCT DETECTOR L.V. WIRING (TYP.)
3. L.V. DUCT DETECTOR INSTALLED AND SUPPLIED BY OTHERS (TYP.)

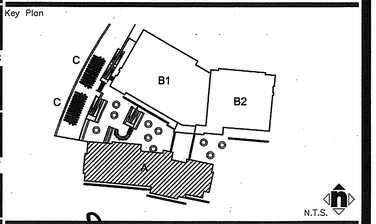


HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

A. J. KIRKWOOD & ASSOCIATES, INC.
2762 WALNUT AVE. TUSTIN, CA 92780

AS BUILT

Key Plan



Consultant

LICENSED ELECTRICAL CONTRACTOR
KIRKWOOD & ASSOC. INC.
LICENSE No. C10-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

BUILDING 'A' ROOF POWER PLAN

Architect's Seal

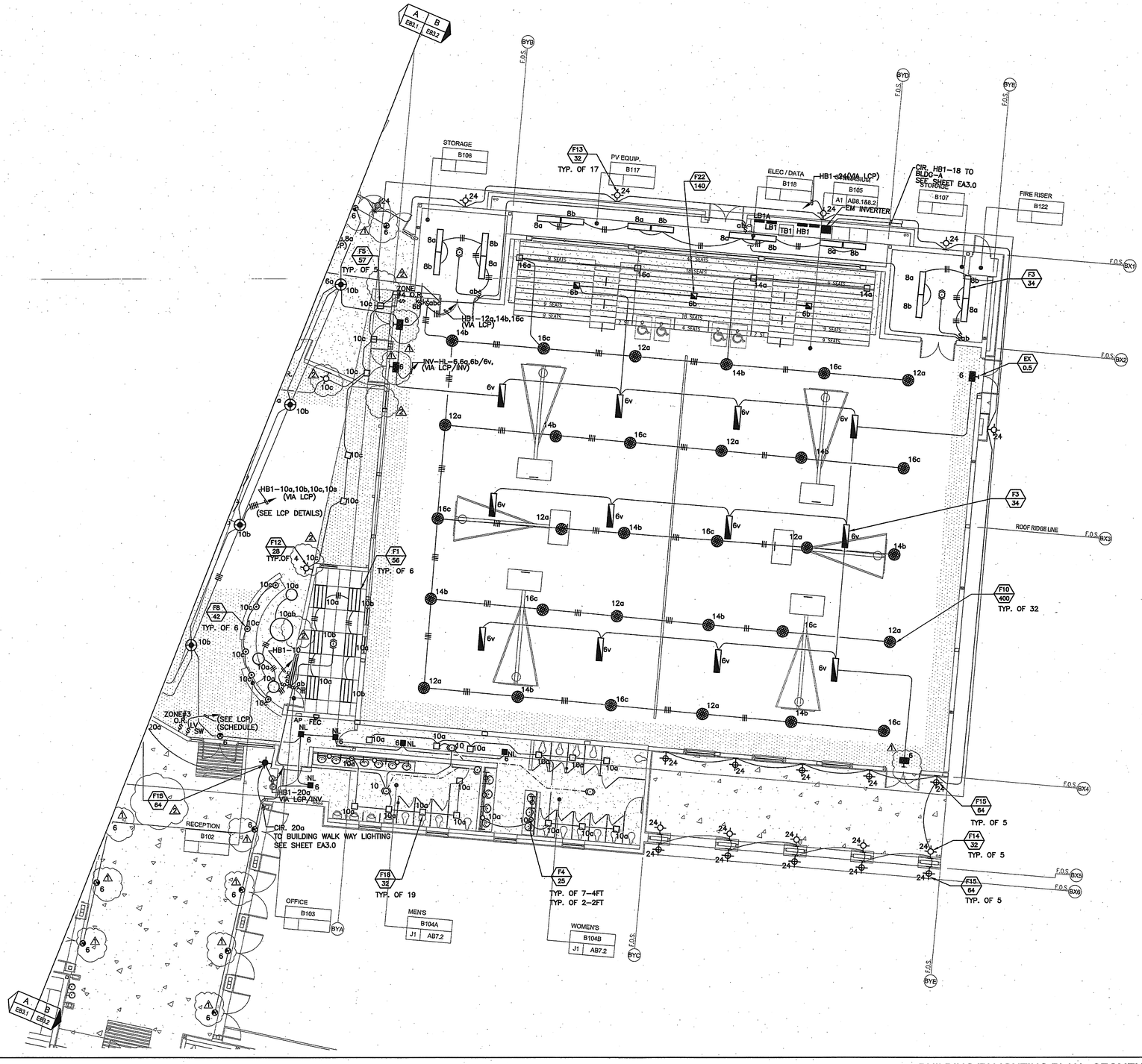
LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	EA4.0
Date: 05-17-07	Sheet 13 of 21

O:\466 Orange Terrace Library\E-DRAWINGS\E4.0 BUILDING A ROOF POWER PLAN.dwg, 5/17/2007 8:03:38 AM, alenh, ARCH expand E1 (30.00 x 42.00 Inches), Copyright (c): A.J. Kirkwood and Associates

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E4.0 BUILDING A ROOF POWER PLAN.dwg May 17,2007–8:03am

PLEASE RECYCLE E4.0 BUILDING A ROOF POWER PLAN.DWG



BUILDING 'B' LIGHTING PLAN - SEGMENT B | 1

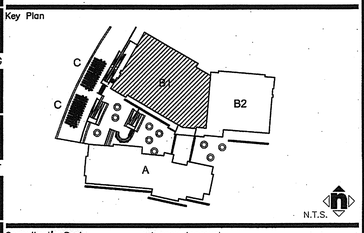
1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

ajk
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780

AS BUILT

Key Plan



Consultant's Seal

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07

Drawing Title: BUILDING 'B' LIGHTING PLAN - SEGMENT B

Architect's Seal

Designed: Stuart McKnight	Project No. 2340001
Drawn: Stuart McKnight	Scale: AS NOTED
Checked:	Drawing No. EB3.2
Reviewed: Arch KirKwood	
Date: 06-22-07	Sheet 12 of # 21

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.dwg Jun 21,2007-2:38pm

PLEASE RECYCLE E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.DWG

BUILDING 'B' LIGHTING PLAN - SEGMENT A | 1

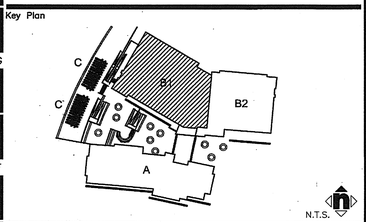
1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780

AS BUILT

Key Plan



Consultant's Seal

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07

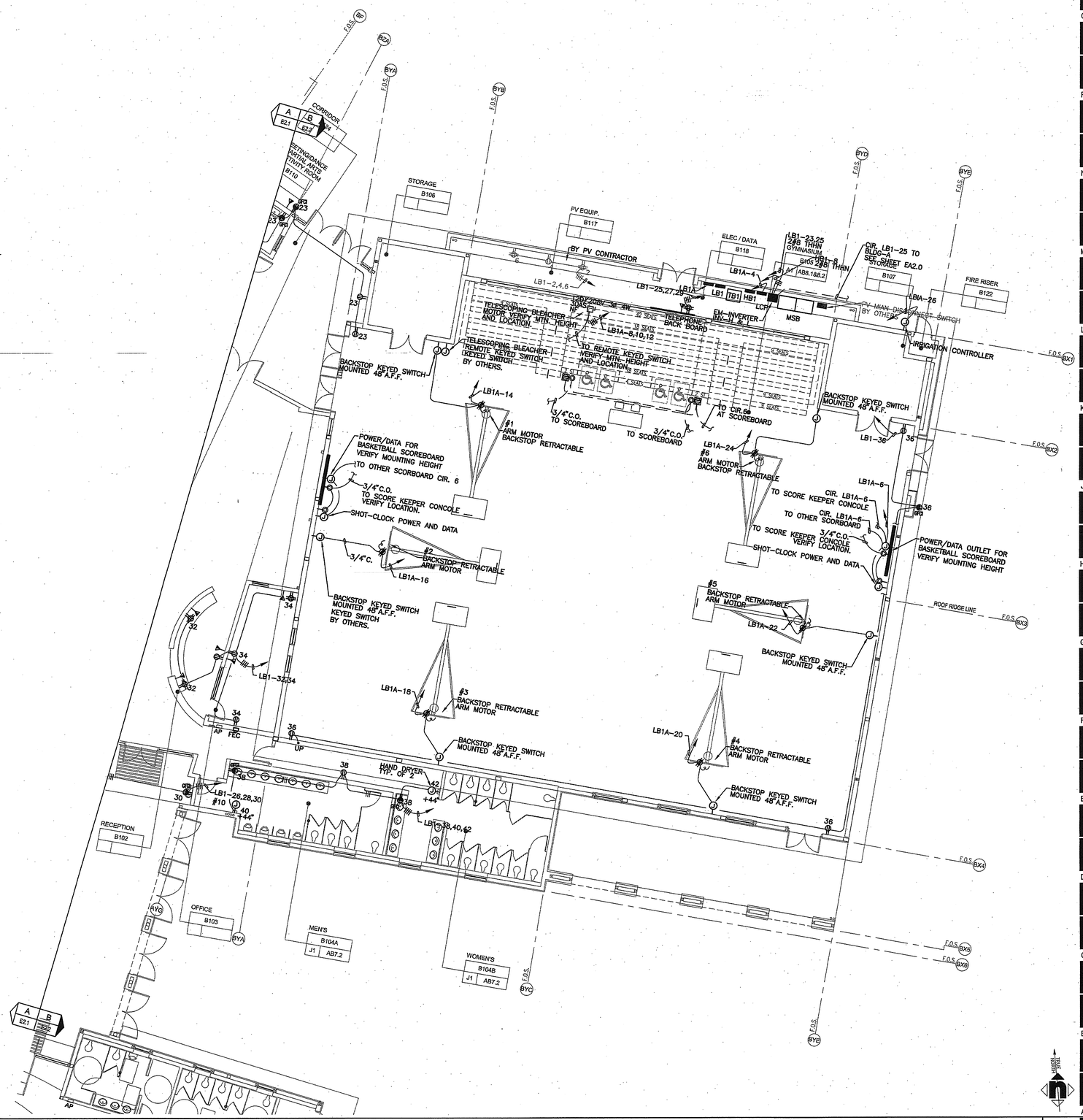
Drawing Title: BUILDING 'B' LIGHTING PLAN - SEGMENT A

Architect's Seal

Designed: Stuart McKnight	Project No. 2340001
Drawn: Stuart McKnight	Scale: AS NOTED
Checked:	Drawing No. EB3.1
Reviewed: Arch KirKwood	
Date: 06-22-07	Sheet 11 of # 21

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.dwg Jun 21,2007-2:38pm

PLEASE RECYCLE E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.DWG



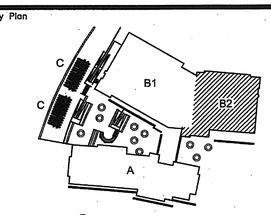
BUILDING 'B' POWER PLAN - SEGMENT B | 1 | 1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2762 WALNUT AVE. TUSTIN, CA 92780
Tel 714-832-8977 Fax 714-832-7020 License No. 724633

AS BUILT

Key Plan



Consultant Seal

LICENSED ELECTRICAL CONTRACTOR
LICENSE No. 724633
DIR-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

BUILDING 'B' POWER PLAN - SEGMENT B

Architect's Seal

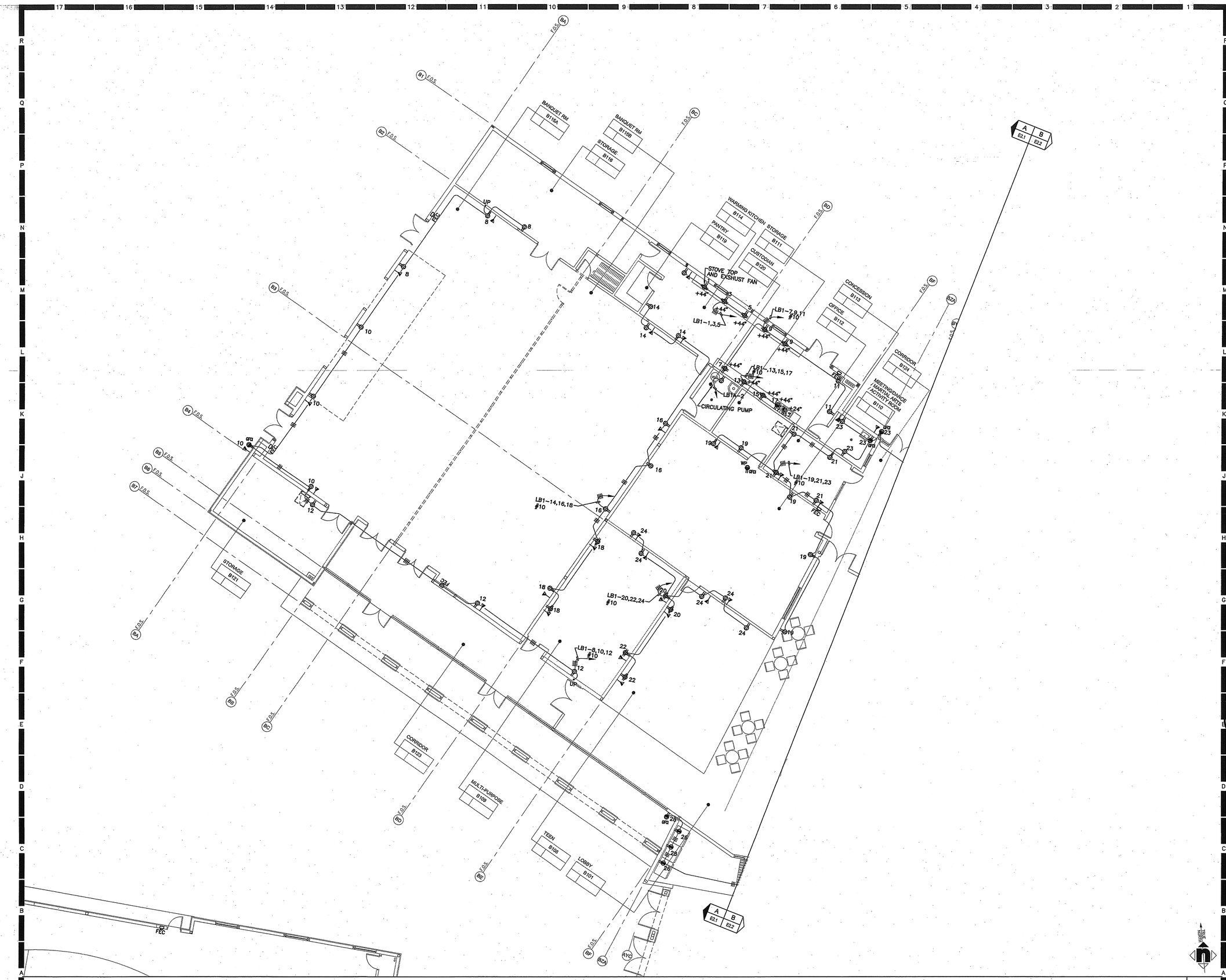
LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
REG. NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	EB2.2
Date: 05-17-07	Sheet 9 of 20

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E2.1_E2.2 BUILDING B POWER PLAN - SEGMENT A & B.dwg May 17,2007-8:02am

PLEASE RECYCLE E2.1_E2.2 BUILDING B POWER PLAN - SEGMENT A & B.DWG

O:\466 Orange Terrace Library\E-DRAWINGS\E2.1_E2.2 BUILDING B POWER PLAN - SEGMENT A & B.dwg, 5/17/2007 8:02:37 AM, alerth, ARCH expand E1 (30.00 x 42.00 Inches), Copyright (c) A.J. Kirkwood and Associates



BUILDING 'B' POWER PLAN - SEGMENT A | 1

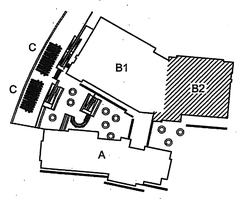
1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
27762 WALNUT AVE. VISTA, CA 92083
TEL 714-598-5977 FAX 714-598-7020 LICENSE NO. 724633

AS BUILT

Key Plan



N.T.S.

Consultant Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC., INC.
LICENSE No. 010-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE
LIBRARY /
COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

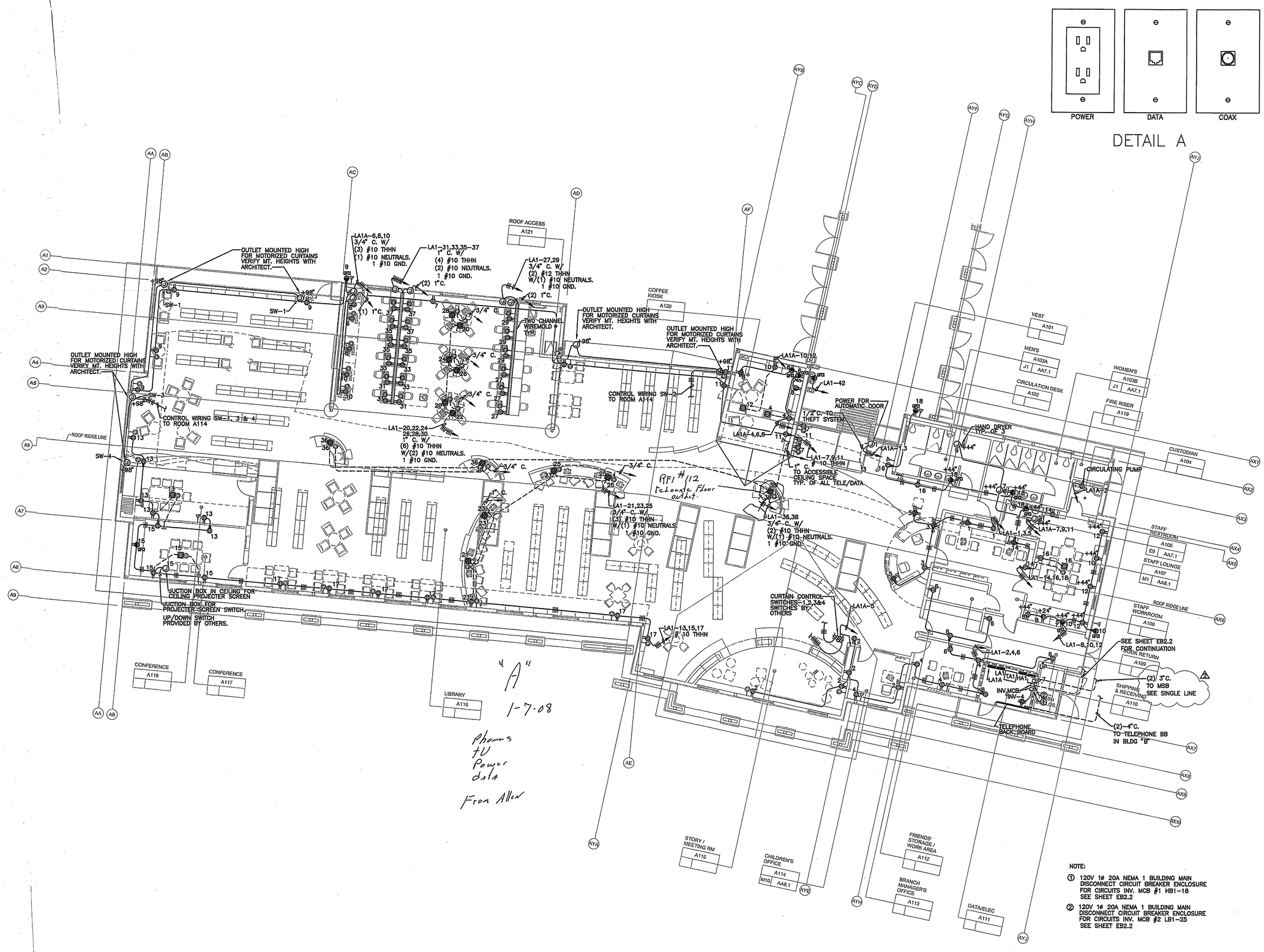
BUILDING 'B' POWER PLAN - SEGMENT A

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
REG. NO. C-19759
REN. 02-29-09
STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	EB2.1
Date: 05-17-07	Sheet 8 of 20

Copyright (c) A.J. Kirkwood and Associates



NOTE:

① 120V 1ø 20A NEMA 1 BUILDING MAIN DISCONNECT CIRCUIT BREAKER ENCLOSURE FOR CIRCUITS INV. MCB #1 HB1-18 SEE SHEET EB2.2

② 120V 1ø 20A NEMA 1 BUILDING MAIN DISCONNECT CIRCUIT BREAKER ENCLOSURE FOR CIRCUITS INV. MCB #2 LB1-25 SEE SHEET EB2.2

BUILDING 'A' POWER PLAN | A

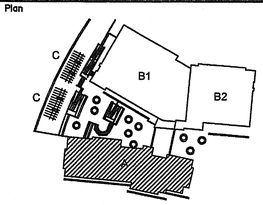
1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
27762 WALNUT AVE. TUSTIN, CA 92780
Tel 714-832-1977 FAX 714-832-7093 LICENSE NO. 724433

AS BUILT

Key Plan



N.T.S.

Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A.J. KIRKWOOD & ASSOC., INC.
LICENSE No. 690-724433
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07

Drawing Title

BUILDING 'A' POWER PLAN

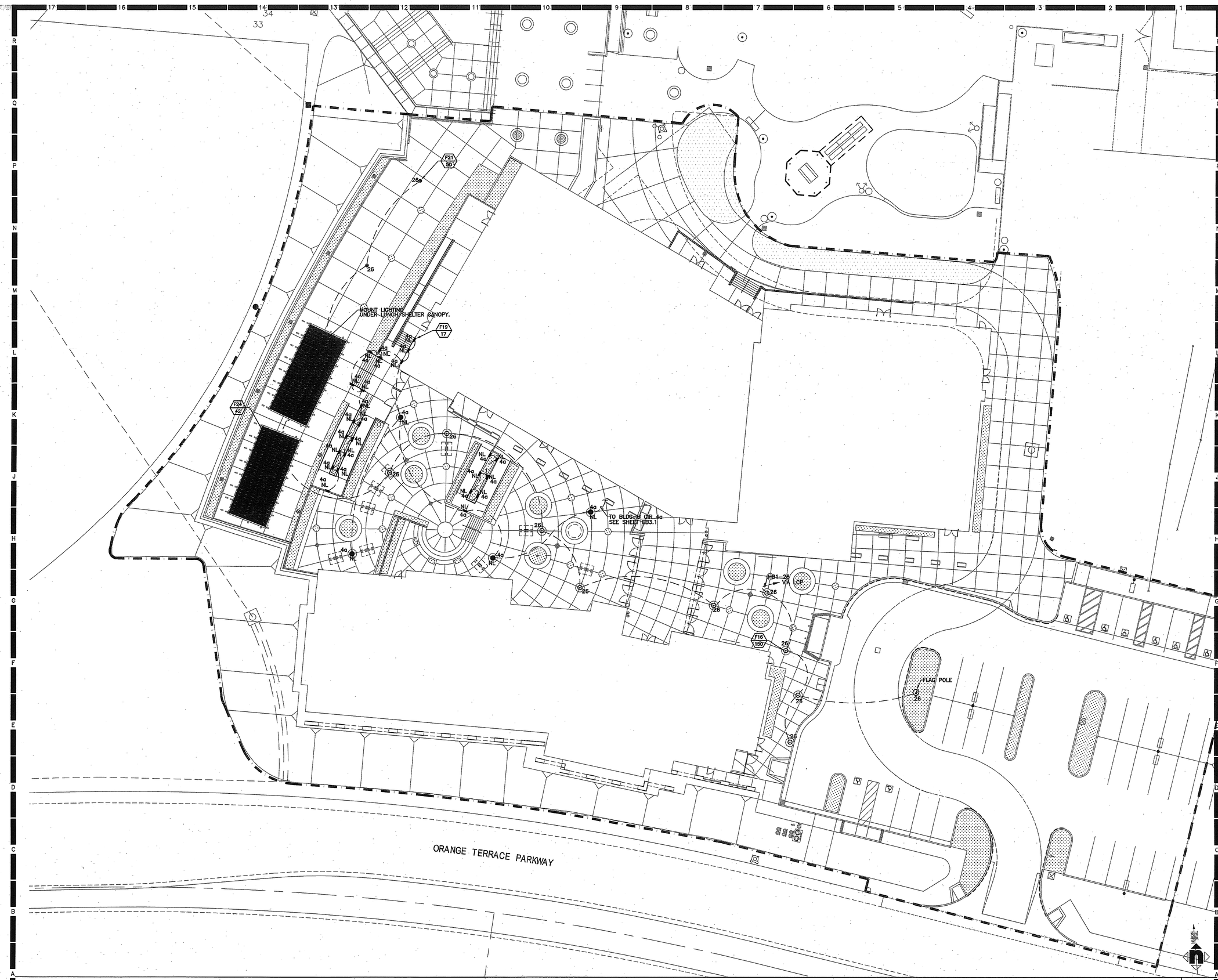
Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
REG. NO. C-19759
EXP. 02-24-09
STATE OF CALIFORNIA

Designed: Stuart McKnight	Project No. 2340001
Drawn: Stuart McKnight	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	EA2.0
Date: 06-22-07	Sheet 7 of # 20

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E2.0 BUILDING A POWER PLAN(temp).dwg Jan 04,2008-9:28am

PLEASE RECYCLE E2.0 BUILDING A POWER PLAN(TEMP).DWG



ELECTRICAL SITE PLAN 1

1/16" = 1'-0"

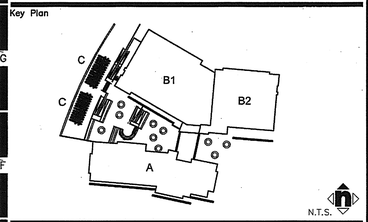
HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

ajk
FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
CONSTRUCTION • ENGINEERING

A. J. KIRKWOOD & ASSOCIATES, INC.
27762 WALNUT AVE. TUSTIN, CA 92780
Tel 714-838-1977 FAX 714-838-7050 LICENSE NO. 724633

AS BUILT

Key Plan



Consultants

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE No. C10-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

ELECTRICAL SITE LIGHTING PLAN

Architect's Seal

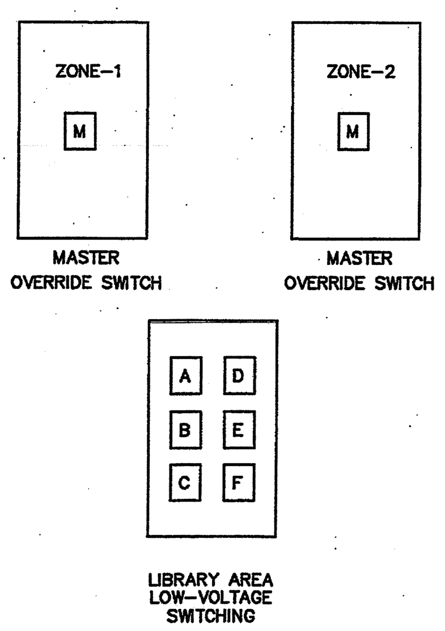
LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

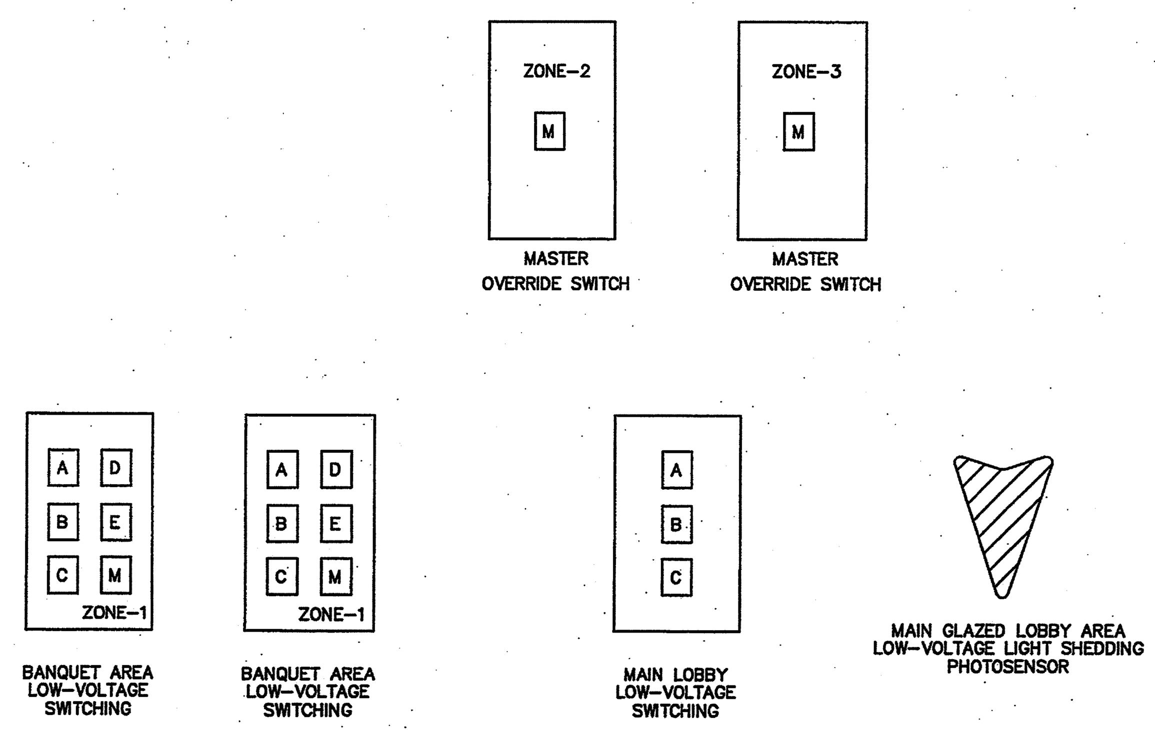
Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	E1.1
Date: 05-17-07	Sheet 6 of 20

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E1.1 LIGHTING SITE PLAN.dwg May 17,2007-8:01am

PLEASE RECYCLE E1.1 LIGHTING SITE PLAN.DWG

O:\466 Orange Terrace Library\E-DRAWINGS\E1.1 LIGHTING SITE PLAN.dwg, 5/17/2007 8:01:56 AM, ajkirk, AutoCAD Express E1 (3.00 x 4.00 inches), Copyright (c) A.J. Kirkwood and Associates





MASTER LIGHTING CONTROL PANEL BLDG-A-LCP

MOUNTING SURFACE PHOTOCELL YES COMPUTER SYSTEM NO NETWORK TYPE N/A

PANEL#	CKT#	RELAY	DESCRIPTION	LOCAL SWITCH	MASTER SWITCH	ZONE NUMBER	MISCELLANEOUS
HA1	2	1	LIBRARY ENTRY AREA	Y	Y	1	TO FIXTURE 2a VIA L.V. SW
HA1	2	2	LIBRARY ENTRY AREA	Y	Y	1	TO FIXTURE 2b VIA L.V. SW
HA1	2	3	LIBRARY ENTRY AREA	Y	Y	1	TO FIXTURE 2c VIA L.V. SW
HA1	4	4	LIBRARY ENTRY AREA	Y	Y	1	TO FIXTURE 4a VIA L.V. SW
HA1	4	5	LIBRARY CENTER AREA	Y	Y	1	TO FIXTURE 4b VIA L.V. SW
HA1	4	6	LIBRARY CENTER AREA	Y	Y	1	TO FIXTURE 4c VIA L.V. SW
HA1	6	7	LIBRARY CENTER AREA	Y	Y	2	TO FIXTURE 6a VIA L.V. SW
HA1	6	8	LIBRARY STACKED AREA	Y	Y	2	TO FIXTURE 6b VIA L.V. SW
HA1	6	9	LIBRARY STACKED AREA	Y	Y	2	TO FIXTURE 6c VIA L.V. SW
HA1	8	10	LIBRARY CONFRANCE AREA	Y	Y	2	TO LOCAL SWITCHING 8a
HA1	8	11	LIBRARY STACKED AREA	Y	Y	2	TO FIXTURE 8d VIA L.V. SW
HA1	8	12	LIBRARY STACKED AREA	Y	Y	2	TO FIXTURE 8e VIA L.V. SW
HA1	8	13	LIBRARY STACKED AREA	Y	Y	2	TO FIXTURE 8f VIA L.V. SW
INV-H	2	0	CONSTANT HOT CIRCUIT	N	N	1,2	TO EM EXIT SIGNS AS NOTED
INV-H	2	14	LIBRARY INVERTER EM LTG	Y	Y	1,2	TO ALL FIXTURE VIA L.V. SW
HA1	10	15	EXTERIOR WALL	N	N	3	TO FIXTURE 1 VIA TIME CLK.
		16					

ZONE NUMBER	TIME ON	TIME OFF	PHOTO ON	PHOTO OFF	DESCRIPTION	ZONE NUMBER	TIME ON	TIME OFF	PHOTO ON	PHOTO OFF	DESCRIPTION
1			–	–		5	–	YES	YES	–	–
2			–	–		6	–	–	–	–	–
3	N	Y	Y	N	TO FIXTURES CIR.10	7	–	–	–	–	–
4						8	–	–	–	–	–

LIGHTING OVER RIDE SWITCH SHEDULE

MOUNTING FLUSH LV. 2HR. OVER RIDE SWITCH WITH 20 MINUTE FLASH

PANEL#	CKT#	RELAY	DESCRIPTION	LOCAL SWITCH	O.R. SWITCH	ZONE NUMBER	MISCELLANEOUS
LCP	AS NOTED		LIBRARY ENTRY AREA	Y	Y	1	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		LIBRARY CENTER AREA	Y	Y	2	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		LIBRARY STACKED AREA	Y	Y	2	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		EXTERIOR WALL	N	N	3	SEE FL. PLAN FOR LOCATION

LIGHTING CONTROL SYSTEM FOR BLDG-A

MASTER LIGHTING CONTROL PANEL BLDG-B-LCP

MOUNTING SURFACE PHOTOCELL YES COMPUTER SYSTEM NO NETWORK TYPE N/A

PANEL#	CKT#	RELAY	DESCRIPTION	LOCAL SWITCH	MASTER SWITCH	ZONE NUMBER	MISCELLANEOUS
HB1	2	1	BANQUET COVE LIGHTING	Y	Y	1	TO FIXTURE 2a VIA L.V. SW
HB1	2	2	BANQUET AREA	Y	Y	1	TO FIXTURE 2b VIA L.V. SW
HB1	2	3	BANQUET AREA	Y	Y	1	TO FIXTURE 2c VIA L.V. SW
HB1	2	4	BANQUET AREA	Y	Y	1	TO FIXTURE 2d VIA L.V. SW
HB1	2	5	BANQUET AREA	Y	Y	1	TO FIXTURE 2e VIA L.V. SW
INV-H	8	0	BANQUET AREA EXIT SIGNS	N	N	1	TO EM EXIT SIGNS AS NOTED
INV-H	8	6	BANQUET INVERTER EM LTG	Y	Y	1	TO ALL FIXTURE VIA L.V. SW
HB1	4	7	BANQUET COVE LIGHTING	Y	Y	1	TO FIXTURE 4a VIA L.V. SW
HB1	4	8	BANQUET AREA	Y	Y	1	TO FIXTURE 4b VIA L.V. SW
HB1	4	9	BANQUET AREA	Y	Y	1	TO FIXTURE 4c VIA L.V. SW
HB1	4	10	BANQUET AREA	Y	Y	1	TO FIXTURE 4d VIA L.V. SW
HB1	4	11	BANQUET AREA	Y	Y	1	TO FIXTURE 4e VIA L.V. SW
INV-H	10	0	BANQUET AREA EXIT SIGNS	N	N	1	TO EM EXIT SIGNS AS NOTED
INV-H	10	13	BANQUET INVERTER EM LTG	Y	Y	1	TO ALL FIXTURE VIA L.V. SW
HB1	6	14	MULTI-PURPOSE, OFFICE	Y	Y	2	TO LOCAL SW AS NOTED
HB1	8	15	FOOD PREP.,OFFICE	Y	Y	2	TO LOCAL SW AS NOTED
HB1	10	16	RECEPTION/OFFICE	Y	Y	3	TO LOCAL SW AS NOTED
HB1	10	17	MAIN LOBBY AREA	Y	Y	3	TO FIXTURE 10a VIA L.V. SW
HB1	10	18	MAIN LOBBY AREA	Y	Y	3	TO FIXTURE 10b VIA L.V. SW
HB1	10	19	MAIN LOBBY AREA	Y	Y	4	TO FIXTURE 10c VIA L.V. SW
HB1	10	20	MAIN GLAZED LOBBY AREA	Y	Y	4	TO FIXTURE 10S VIA P. SEN.
HB1	12	21	BASKETBALL COURT	Y	Y	4	TO LOCAL SWITCHING 12a
HB1	14	22	BASKETBALL COURT	Y	Y	4	TO LOCAL SWITCHING 14b
HB1	16	23	BASKETBALL COURT	Y	Y	4	TO LOCAL SWITCHING 16c
HB1	20	24	BLDG-A&B COURTYARD LTG	N	N	5	TO ALL EM LTG AS NOTED
INV-H	4	25	COURTYARD INVERTER EM LTG	N	N	5	TO ALL EM LTG AS NOTED
HB1	24	26	BLDG-B EXTERIOR WALL LTG	N	N	5	TO LTG FIXTURE AS NOTED
HB1	26	27	BLDG-A&B COURTYARD LTG	N	N	5	TO LTG FIXTURE AS NOTED

ZONE NUMBER	TIME ON	TIME OFF	PHOTO ON	PHOTO OFF	DESCRIPTION	ZONE NUMBER	TIME ON	TIME OFF	PHOTO ON	PHOTO OFF	DESCRIPTION
1			–	–		5	–	YES	YES	–	COURTYARD/WALL LTG
2			–	–		6	–	–	–	–	–
3						7	–	–	–	–	–
4						8	–	–	–	–	–

LIGHTING OVER RIDE SWITCH SHEDULE

MOUNTING FLUSH LV. 2HR. OVER RIDE SWITCH WITH 20 MINUTE FLASH

PANEL#	CKT#	RELAY	DESCRIPTION	LOCAL SWITCH	O.R. SWITCH	ZONE NUMBER	MISCELLANEOUS
LCP	AS NOTED		BANQUET AREA	Y	Y	1	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		MULTI-PURPOSE, OFFICE	Y	Y	2	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		MAIN LOBBY AREA	Y	Y	3	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		MAIN GLAZED LOBBY AREA	N	Y	4	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		BASKETBALL COURT	Y	Y	4	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		EXTERIOR WALL	N	N	5	NO O.R. SW REQUIRED
LCP	AS NOTED		EXTERIOR WALL	N	N	5	NO O.R. SW REQUIRED

LIGHTING CONTROL SYSTEM FOR BLDG-B

LIGHTING CONTROL SYSTEM SPECIFICATIONS:

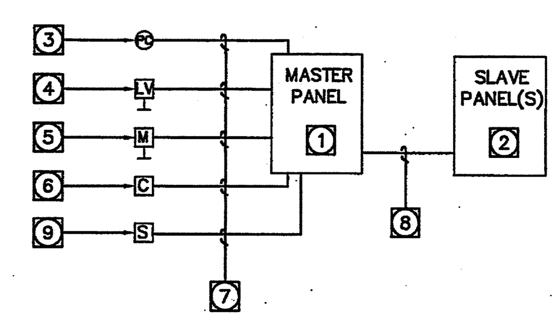
1. ALL COMPONENTS OF THE LIGHTING CONTROL SYSTEM SHALL BE MANUFACTURED BY A SINGLE MANUFACTURER. THE ENTIRE SYSTEM SHALL BE COVERED BY A ONE YEAR WARRANTY.
2. THE RELAY PANELS SHALL FACTORY PRE-ASSEMBLED AND UL LISTED. PROVIDE COMPLETE WITH ALL REQUIRED CONTROL TRANSFORMERS, AND REQUIRED VOLTAGE BARRIERS. WHEN DESIGNATED AS SURFACE MOUNTING PROVIDE A SCREW-ON COVER. WHEN DESIGNATED AS FLUSH MOUNTING PROVIDE A HINGED DOOR ASSEMBLY.
3. LIGHTING CONTROL RELAYS SHALL BE FULL LOAD RELAYS SUITABLE FOR ALL TYPES OF LAMP LOADS UP TO 20 AMPERES AT 347 VAC. LOAD CONTACTS SHALL BE ABLE TO SUSTAIN 1500 AMP FAULT CURRENTS FOR UP TO 20 MILLI-SECONDS. THE RELAY SHALL BE CONTAINED IN A MOLDED CASE CONTAINING BOTH HIGH AND LOW VOLTAGE TERMINALS AND SHALL HAVE A BUILT-IN OPERATING LEVER MARKED ON / OFF FOR MANUAL SWITCHING AT THE RELAY PANEL.

   IT SHALL BE IMPOSSIBLE TO CONTINUOUSLY ENERGIZE THE RELAY COIL BY HOLDING THE LOW VOLTAGE SWITCH IN EITHER THE ON OR OFF POSITION. RELAYS SHALL BE COMPLETE WITH CONTROL DIODES AND INTERNAL CONTROL CIRCUIT ELIMINATOR CONTACTS. ELIMINATOR CONTACTS SHALL AUTOMATICALLY CONDITION THE INPUT CONTROL CIRCUIT SO AS TO REVERSE THE COIL POLARITY REQUIREMENT IMMEDIATELY AFTER AN ON / OFF CONTROL PULSE IS RECEIVED.
4. BOTH MASTER AND LOCAL SWITCHES SHALL BE COMPLETE WITH INTEGRAL LED'S INDICATING BOTH ON AND OFF POSITIONS (RED / GREEN). SWITCHING ACTION TO BE CONTROLLED BY AN INTEGRAL SCR WHICH DETERMINES THE CURRENT FLOW. SWITCHES SHALL HAVE THE CAPABILITY FOR LABELING THE CIRCUIT NAME UNDER THE PLASTIC SURFACE.
5. THE "CONTROLLER" SHALL ALLOW FOR AUXILIARY INPUT OF A MAINTAINED OR A MOMENTARY PULSE.

   THE "CONTROLLER" SHALL PROVIDE A FLICK WARN OPTION THE VARIOUS CONTROL ZONES. A LOCAL SWITCH SHALL BE CAPABLE OF OVERRIDING AN OFF SWEEP DURING THE 5 MINUTE WARNING PERIOD.

   THE PROGRAMMING OF THE "CONTROLLER" SHALL BE USER FRIENDLY WITH ALL NECESSARY INSTRUCTIONS PRINTED ON THE "CONTROLLER" LABEL. NO AUXILIARY INSTRUCTION MANUALS SHALL BE REQUIRED.

   THE MASTER RELAY PANEL SHALL CONTAIN A TIMECLOCK WITH THE FOLLOWING FEATURES: SEVEN DAY / HOLIDAY CONTROL, 8 OUTPUT CHANNELS, FOUR EVENTS PER DAY, FIVE YEAR MEMORY FOR PROGRAMMING, 24 HOUR MEMORY FOR THE CLOCK, AND OUTPUTS RATED AT 100 MILIAMPS.
6. THE PHOTOMETRIC SENSOR SHALL BE CAPABLE OF SENSING LIGHT LEVEL CHANGES AS FOLLOWS: 1 TO 10, 1 TO 100, 1 TO 1000, AND 1 TO 10,000 FOOTCANDLES.
7. WHEN THE MASTER RELAY SCHEDULE INDICATES A COMPUTER SYSTEM PROVIDE ALL SOFTWARE AND HARDWARE COMPONENTS FOR A DESKTOP COMPUTER CONTROL.
8. WHEN THE MASTER RELAY SCHEDULE INDICATES A NETWORK TYPE OF COPPER, PROVIDE #18 COPPER WIRE OR LARGER AS RECOMMENDED BY THE MANUFACTURER. WHEN THE MASTER RELAY SCHEDULE INDICATES A NETWORK TYPE OF FIBER, PROVIDE FIBER OPTIC CABLE AS RECOMMENDED BY THE MANUFACTURER.
9. THE LOW VOLTAGE LIGHTING CONTOL SYSTEM SHALL BE PROGRAMMED / APPROVED BY A MANUFACTURERS REPRESENTATIVE.
10. THE LOW VOLTAGE LIGHTING CONTOL SYSTEM SHALL BE MANUFACTURED BY LCD, LITHONIA. orEQUAL SYSTEM



LIGHTING CONTROL SYSTEM PLAN NOTES:

1. MASTER LIGHTING CONTROL PANEL. SEE PLANS FOR EXACT LOCATION. REFER TO MASTER LIGHTING CONTROL PANEL SCHEDULE FOR MORE INFORMATION.
2. SLAVE LIGHTING CONTROL PANEL(S). SEE PLANS FOR EXACT LOCATION, AND QUANTITY. REFER TO SLAVE LIGHTING CONTROL PANEL SCHEDULE(S) IF APPLICABLE
3. PHOTOCELL MOUNTED AT EXTERIOR ROOFTOP LOCATION FACING NORTH.
4. LOCAL SWITCHE(S) UNDER A COMMON FACEPLATE. SEE RELAY SCHEDULE(S) FOR EXACT QUANTITY. SEE PLANS FOR EXACT LOCATION(S) AND CONFIGURATION(S).
5. MASTER OVERRRIDE SWITCHE(S) UNDER A COMMON FACEPLATE. SEE RELAY SCHEDULE(S) FOR EXACT QUANTITY. SEE PLANS FOR EXACT LOCATION(S) AND CONFIGURATION(S).
6. LOCAL CCCUPANT SENSOR(S) SEE RELAY SEE PLANS FOR EXACT LOCATION(S) AND CONFIGURATION(S).
7. PROVIDE 3/4"CONDUIT MINIMUM, OR LARGER AS REQUIRED WITH QUANTITY AND TYPE OF CONDUCTORS PER MANUFACTURER'S RECOMMENDATIONS.
8. PROVIDE 3/4" CONDUIT MINIMUM, OR LARGER AS REQUIRED, WITH QUANTITY AND TYPE OF CONDUCTORS PER MANUFACTURER'S RECOMMENDATIONS FOR INTERCONNECTION MASTER AND SLAVE PANELS. REFER TO MASTER RELAY SCHEDULE FOR NETWORKING TYPE.
8. PHOTOSENSERS SHALL BE MOUNTED ON AN INTERIOR WALL FACING OPEN AREA. AS INDICATED ON DRAWINGS

LIGHTING CONTROL SYSTEM REQUIREMENTS:

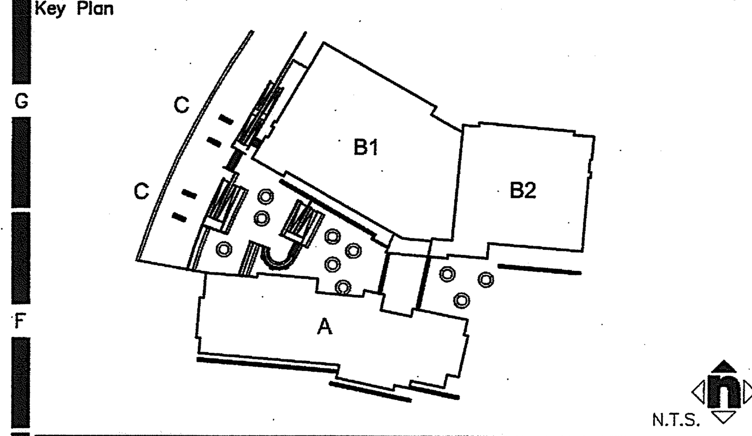
1. IT IS THE INTENT OF THE CONTRACT DOCUMENTS, WHICH ARE PRESENTED IN A DIAGRAMATIC, "DESIGN-BUILD" FORMAT, FOR THE CONTRACTOR TO DESIGN, PROVIDE AND INSTALL A COMPLETE AND FULLY FUNCTIONING, CODE APPROVED LOW VOLTAGE LIGHTING CONTROL SYSTEM.

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 FAX 714-505-7030 LICENSE NO. 724633

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR A.J. KIRKWOOD ASSOC. INC. LICENSE No. CIO-724633 EXP. 07/31/08 ELECTRICAL STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

(SM) HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

LIGHTING CONTROL PANEL DETAILS

Architect's Seal

LICENSED ARCHITECT CHRISTOPHER RICHARD TAYLOR NO. C-19759 REN. 02-24-09 STATE OF CALIFORNIA

TRUE NORTH

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	E0.5
Date: 05-17-07	Sheet 6 of 21

CERTIFICATE OF COMPLIANCE	(Part 1 of 2)		OLTG-1-C
PROJECT NAME:		DATE:	
ORANGE TERRACE LIBRARY		11/26/2006	
PROJECT ADDRESS:			
RIVERSIDE, CA			
PRINCIPAL DESIGNER - LIGHTING	TELEPHONE:	Building Permit #	
Arch Kirkwood	714-505-1977		
DOCUMENTATION AUTHOR:	TELEPHONE:	Checked By/Date	
Natalie Sandoval	714-505-1977	Enforcement Agency Use	

GENERAL INFORMATION

DATE OF PLANS: [illegible] OUTDOOR LIGHTING ZONE (✓ ONE) ☐ LZ1 ☐ LZ2 ☑ LZ3 ☐ LZ4

FUNCTION TYPE ☐ OUTDOOR LIGHTING ☐ OUTDOOR SIGNS ☐ INDOOR SIGNS

PHASE OF CONSTRUCTION ☑ NEW CONSTRUCTION ☑ ADDITIONS ☐ ALTERATIONS

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists outdoor lighting system specifications needed to comply with Title 24. Parts 1 and 6 of the California Code of Regulations. This certificate applies only to building lighting requirements.

The documentation preparer herby certifies that the documentation is accurate and complete.

DOCUMENTATION AUTHOR: Natalie Sandoval SIGNATURE: [signature] DATE: 5/17/07

The Principal Lighting Designer hereby certifies that the proposed outdoor lighting and signs design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the lighting requirements contained in the applicable parts of Sections 110, 119, 130 through 132, 146, 148 & 149 of Title 24, Part 6. **Please ✓ one:**

☐ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am licensed in the State of California as a civil engineer or electrical engineer, or I am a

☑ I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation, and that I am a licensed contractor performing this work.

☐ I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professionals Code Sections 5537, 5538 and 6737.1

(These sections of the Business and Professions code are printed in full in the Nonresidential Manual.)

PRINCIPAL LIGHTING DESIGNER - NAME	SIGNATURE	DATE:	LIC. #
Arch Kirkwood	[signature]	7/6/2006	C10-724633

INSTRUCTIONS TO APPLICANT OUTDOOR LIGHTING COMPLIANCE & WORKSHEETS (✓ box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms please refer to the Nonresidential Manual published by the California Energy Commission.

☑ OLTG-1-C	Cerificate of Compliance. Required on all plans for all submittals for outdoor lighting. Part 2 of 2 may be incorporated in schedules on the plans
	Either LTG-1-C or OLTC-1-C may be used for signs as follows:
	1. Use LTG-1-C if the project consists solely of indoor signs
	2. Use LTG-1-C if the project consists of indoor lighting, and outdoor or indoor signs, but no other outdoor lighting
	3. Use OLTG-1-C if the project consists solely of outdoor signs
	4. Use OLTG-1-C if the project consists of outdoor lighting, and indoor or outdoor signs, but no other indoor lighting
☑ OLTG-2-C	LIGHTING COMPLIANCE SUMMARY. Applicable Parts required for all outdoor lighting allowances (Except for Signs)
☑ OLTG-3-C	AREA CALCULATIONS WORKSHEETS. Applicable Parts required for all outdoor area calculations.
☐ OLTG-4-C	SIGN LIGHTING COMPLIANCE. Required for all internally and externally illuminated signs, for both indoor and outdoor signs.

2005 Nonresidential Compliance Forms *April 2005*

CERTIFICATE OF COMPLIANCE	(Part 2 of 4)	LTG-1-C
PROJECT NAME	DATE	
ORANGE TERRACE LIBRARY	11/26/2006	

Lighting Schedules on Plans Show that Outdoor Lighting Meets the Allowed Lighting Power

✓
- ☑ Lighting power allowances for general site illumination on OLTG-2-C Part 1 of 4
- ☐ Not Applicable
- ☐ Lighting power allowances for local ordinances for security multipliers on OLTG-2-C Part 1 of 4
- ☑ Not Applicable
- ☐ Lighting power allowances for specific applications, other than vehicle service stations with canopies on OLTG-2-C Part 3 of 4
- ☑ Not Applicable
- ☐ Lighting power allowances for vehicle service station canopies on OLTG-2-C Part 4 of 4
- ☑ Not Applicable
- ☐ Sign lighting compliance on OLTG-4-C
- ☑ Not Applicable

Mandatory Measures on Plans Show that Outdoor Lighting Meets Outdoor Lighting Controls and Equipme

Indicate location on plans of Note Block for Mandatory Measure

✓
- ☐ Installed lighting power has been determined in accordance with § 130(c) 1
- ☑ Not Applicable
- ☑ All permanently installed luminares with lamps rated over 100 watts either have a lamp efficacy of at least 60 lumens per watt or are controlled by a motion sensor § 132(a)
- ☐ Not Applicable
- ☐ All Luminares with lamps raged greater than 175 watts in hardscape areas, including parking lots, building entrances, canopies, and all outdoor sales areas meet the Cutoff Requirements of § 132(b)
- ☑ Not Applicable
- ☑ All permanently installed outdoor lighting meets the Control Requirements of § 132(c) 1
- ☐ Not Applicable
- ☐ Building facades, parking lots, garages, canopies, and outdoor sales areas meet the Multi-Level Lighting Requirements of § 132(c)2
- ☑ Not Applicable

MANDATORY AUTOMATIC CONTOLS

CONTROL LOCATION	CONTROL IDENTIFICATION	CONTROL TYPE (Auto Time Switch, Potosensor, etc.)	AREA CONTROLLED	NOTE TO FIELD
Outdoors	Time Clock	Time Clock w/ Photocell	All outdoor lighting	

2005 Nonresidential Compliance Forms

LIGHTING COMPLICANCE SUMMARY	(Part 1 of 4)	OLTG-2-C
Project Name	Date	
ORANGE TERRACE LIBRARY	11/26/2006	

LIGHTING POWER ALLOWANCES-GENERAL SITE ILLUMINATION-(Table 147-A)

	Alloted Watts			Luminaire			Lamps/Ballasts				Installed Watts			
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Lighting Applications Category (Table147A)	Area (ft²) or Length (LF)	Alloted LPD W/ft² or W/LF	Alloted Watts (BxC)	Code for Luminaire Type	Description	Cutoff Designation	Lamp Type	Number of Lamps per Luminaire	Watts per Lamp	Number of Ballast per Luminaire	Watts per Luminaire	✓ If CEC Default	Number of Liminaires	Installed Watts (LxN)
Hardscape for pedestrian	26760	0.17	4549.2								0	☐		0
use, including plazas,			0	E14	Wall Sconce		Incand	1	65	1	65	☑	27	1755
sidewalks, walkways			0	E15	Wall Sconce		Incand	1	65	1	65	☐	35	2275
and bikeways			0	E16	Post Top		MH	1	150	1	150	☐	2	300
			0	E19	Step Lights		FL	1	18	1	18	☑	25	450
			0	E21	Recess Bollard		MH	1	50	1	50	☐	4	200
Building B Entrance	1296	0.7	907.2	E11	Wall Sconce		FL	1	32	1	32	☐	8	256
			0	E15	Wall Sconce		Incand	1	65	1	65	☐	6	390
			0								0	☐		0
Hardscape for driveways	376	4	1504	E13	Wall Sconce		FL	1	32	1	32	☑	17	544
site roads, sidewalks			0	E26	Recessed Dnlt		FL	1	26	1	26	☐	1	26
walkways and bikeways			0								0	☑		0
			0								0	☐		0
			0								0	☐		0
			0								0	☐		0
			0								0	☐		0
		Total Allotted Watts	6960.4								Total Installed Watts			6196

2005 Nonresidential Compliance Forms *April 2005*

ILLUMINATED AREA CALCULATION WORKSHEET	(Part 1 of 5)	OLTG-3-C
Project Name	Date	
ORANGE TERRACE LIBRARY	11/26/2006	

Hardscape-Method (i)

A. Hardscape for automotive vehicular use, including parking lots, driveways and site roads

A	B	C	D	E	F	G	H
		Areas (ft²) to Subtract from within Illuminated Area					
List Specific Application (Table 147-A)	Actual Paved Area plus 5' perimeter of adjacent unpaved land. Includes planters and landscaped areas less than 10' wide that are enclosed by hardscape on at least 3 sides	Areas between poles or luminaires that are greater than 6 mounting height distance (if Applicable)	Overlapping Areas of Another Application or Luminare	Building Areas	Areas Obstructed By Sign or Other Structure	Sub Total of areas to Subtract (C+D+E+F)	Illuminated Area (B-G)
						0	0
						0	0
						0	0
						0	0
						0	0

B. Hardscape for pedestrian use, including plazas, sidewalks, walkways and bikeways

A	B	C	D	E	F	G	H
		Areas (ft²) to Subtract from within Illuminated Area					
List Specific Application (Table 147-A)	Actual Paved Area plus 5' of unpaved land on either side of path travel. Shall includes all contiguous paved area before including adjacent grounds.	Areas between poles or luminaires that are greater than 6 mounting height distance (if Applicable)	Overlapping Areas of Another Application or Luminare	Building Areas	Areas Obstructed By Sign or Other Structure	Sub Total of areas to Subtract (C+D+E+F)	Illuminated Area (B-G)
Pedestrian Use	4565					0	4565
						0	0
						0	0
						0	0
						0	0

Checklist

☐ § 147(c)1B-Each portion of all illuminated areas has been assigned only one lighting application, and the applications are consistent with the actual use of the areas.

☐ § 147(c)1A- General illumination areas include only those illuminated areas that are in the bounds of the application and are within a square pattern around a luminaire that is six times the luminaire mounting height, with the luminare in the middle of the pattern, less any areas that are within buildings, under canopies, beyond property lines, or obstructed by signs or other structures.

2005 Nonresidential Compliance Forms *April 2005*

ILLUMINATED AREA CALCULATION WORKSHEET	(Part 2 of 5)	OLTG-3-C
Project Name	Date	
ORANGE TERRACE LIBRARY	11/26/2006	

Hardscape-Method (ii)

A. Hardscape for driveways, site roads, sidewalks, walkways and bikeways-

A	B
List Specific Application (Table 147-A)	Length of 25' wide path incorporating as much of the paved area as possible.
Exterior Building Walkway	376

Checklist

☐ § 147(c)1B-Each portion of all illuminated areas has been assigned only one lighting application, and the applications are consistent with the actual use of the areas.

☐ § 147(c)1B Method ii- General illumination areas for site roadway, driveway, sidewalk, walkway, or bikeway includes only those illuminated areas that are in the bounds of the Application and includes a 25 foot wide area running along the axis of path of travel and includes as much of the paved areas as possible.

B. Building Entrances without Canopies

A	B	C
Width of Door plus 3 feet	Smaller of 18 feet of distance to the edge of the property line	Area (AxB)(ft²)
9	18	162
36	18	648
27	18	486
		0
		0
		0
		0
		0
		0

Checklist

☐ § 147(c)1B-Each portion of all illuminated areas has been assigned only one lighting application, and the applications are consistent with the actual use of the areas.

☐ § 147(c)1A- General illumination areas include only those illuminated areas that are in the bounds of the application and are within a square pattern around a luminaire that is six times the luminaire mounting height, with the luminare in the middle of the pattern, less any areas that are within buildings, under canopies, beyond property lines, or obstructed by signs or other structures.

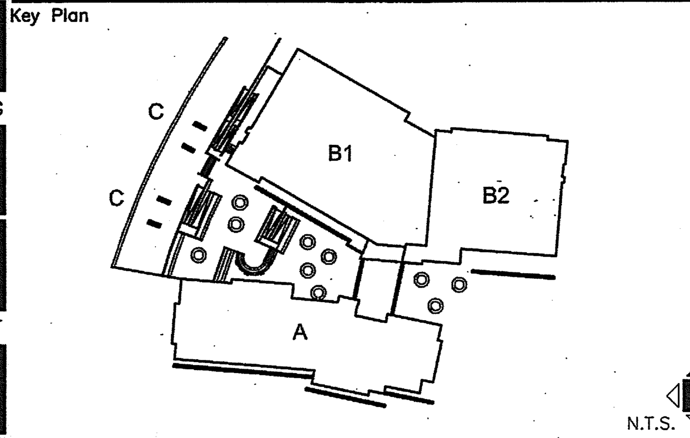
2005 Nonresidential Compliance Forms *April 2005*

HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 FAX: 714-505-7030 LICENSE NO. 724633

AS BUILT

Key Plan



Consultant's Seal: LICENSED ELECTRICAL CONTRACTOR — A. J. KIRKWOOD & ASSOC. INC. — LICENSE No. C10-724633 — EXP. 07/31/08 — ELECTRICAL — STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

(SM) HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

TITLE 24 DOCUMENTS–OUTDOOR

Architect's Seal: LICENSED ARCHITECT — CHRISTOPHER RICHARD TAYLOR — NO. C-19759 — REN. 02-24-09 — STATE OF CALIFORNIA

TRUE NORTH

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	E0.4
Date: 05-17-07	Sheet 5 of 20

CERTIFICATE OF COMPLIANCE (Part 4 of 4) — LTG-1-C

PROJECT NAME	DATE	
ORANGE TERRACE LIBRARY	2/22/2007	

Designer:

This form is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for lighting systems. The designer is required to check the boxes by all acceptance tests that apply and list all equipment that require an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems to be tested in parentheses. The NJ number designates the Section in the Appendix of the Nonresidential ACM Manual that describes the test. Also indicate the person responsible for performing the tests (i.e. the installing contractor, design professional or an agent selected by the owner). Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Building Departments:

Systems Acceptance. Before an occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all contol devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. In addition a Certificate of Acceptance, MECH-1-A, Forms shall be submitted to the building department that:

A. Certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) and Title 24 Part 6.

Test Description	Test Performed by:
✓ ☐ LTG-2-A: LIGHTING Control Acceptance Document Occupancy Sensor Acceptance Manual Daylight Controls Acceptance Automatic Time Switch Control Acceptance	
Equipment requiring acceptance testing	
✓ ☐ LTG-3-A: Automatic Daylighting Controls Acceptance Document Equipment Requiring Acceptance testing	

2005 Nonresidential Compliance Forms — April 2005

CERTIFICATE OF COMPLIANCE (Part 3 of 4) — LTG-1-C

PROJECT NAME: ORANGE TERRACE LIBRARY — DATE: 2/22/2007

CONTROLS FOR CREDIT IN CONDITIONED AND UNCONDITIONED SPACES

CONTROL LOCATION (Room # or DWA #)	CONTROL IDENTIFICATION	CONTROL TYPE (Occ Sensor, Daylight, Dimming, etc)	LUMINAIRES CONTROLLED TYPE	# OF LUMINAIRES	NOTE TO FIELD
A101	OCCS/LCP/MUTILEVEL		FLOUR	60	
A102	OCCS/LCP/MUTILEVEL		FLOUR	6	
A103	OCCS/LCP/MUTILEVEL		FLOUR	15	
A104	OCCS/LCP/MUTILEVEL		FLOUR	[illegible]	
A105	OCCS/LCP/MUTILEVEL		FLOUR	1	
A106	OCCS/LCP/MUTILEVEL		FLOUR	15	
A107	OCCS/LCP/MUTILEVEL		FLOUR	6	
A108	OCCS/LCP/MUTILEVEL		FLOUR	4	
A109	OCCS/LCP/MUTILEVEL		FLOUR	1	
A110	OCCS/LCP/MUTILEVEL		FLOUR	[illegible]	
A111	OCCS/LCP/MUTILEVEL		FLOUR	2	
A112	OCCS/LCP/MUTILEVEL		FLOUR	1	
A113	OCCS/LCP/MUTILEVEL		FLOUR	2	
A114	OCCS/LCP/MUTILEVEL		FLOUR	2	
A115	OCCS/LCP/MUTILEVEL		FLOUR	4	
A116	OCCS/LCP/MUTILEVEL		FLOUR	20	
A117	OCCS/LCP/MUTILEVEL		FLOUR	6	
A118	OCCS/LCP/MUTILEVEL		FLOUR	6	
A119	OCCS/LCP/MUTILEVEL		FLOUR	3	
B101	OCS/LCP/PHOTO SENCER		FLOUR	16	
B102	OCCS/LCP/MUTILEVEL		FLOUR	16	
B103	OCCS/LCP/MUTILEVEL		FLOUR	5	
B104	OCCS/LCP/MUTILEVEL		FLOUR	15	
B105	LCP/MULTILEVEL		M.H.	40	
B106	OCCS/LCP/MUTILEVEL		FLOUR	4	
B107	OCCS/LCP/MUTILEVEL		FLOUR	4	
B108	OCCS/LCP/MUTILEVEL		FLOUR	16	
B109	OCCS/LCP/MUTILEVEL		FLOUR	18	
B110	OCCS/LCP/MUTILEVEL		FLOUR	20	
B111	OCCS/LCP/MUTILEVEL		FLOUR	4	
B112	OCCS/LCP/MUTILEVEL		FLOUR	4	
B113	OCCS/LCP/MUTILEVEL		FLOUR	1	
B114	OCCS/LCP/MUTILEVEL		FLOUR	16	
B115	OCCS/LCP/MUTILEVEL		FLOUR	96	
B116	OCCS/LCP/MUTILEVEL		FLOUR	5	
B118	OCCS/LCP/MUTILEVEL		FLOUR	1	
B119	OCCS/LCP/MUTILEVEL		FLOUR	1	

2005 Nonresidential Compliance Forms — April 2005

INTERIOR LIGHTING POWER ALLOWANCE — LTG-5-C

PROJECT NAME: ORANGE TERRACE LIBRARY — DATE: 2/22/2007

COMPLETE BUILDING METHOD - CONDITIONED SPACES

BUILDING CATEGORY (From § 146 Table 146-C)	WATTS PER (ft²)	COMPLETE BLDG. AREA	ALLOWED WATTS
			0

AREA CATEGORY METHOD - CONDITIONED SPACES

A AREA CATEGORY (From § 146 Table 146-C)	B WATTS PER (ft²)	C AREA (ft²)	D ALLOWED WATTS
LIBRARY	1.2	10409.0	12,490.8
RESTROOM / STORAGE	0.6	717.0	430.2
OFFICE	1.2	1922.0	2,306.4
			0.0
MULTIPURPOSE / CONFERENCE	1.4	5419.0	7,586.6
OFFICE	1.2	3770.0	4,524.0
BASKETBALL COURT	1.0	8510.0	8,510.0
LOBBY	1.5	4012.0	6,018.0
KITCHEN	1.6	822.0	1,315.2
MECHANICAL	0.7	439.0	307.3
RESTROOM / STORAGE	0.6	2111.0	1,266.6
			0.0
		38131.0	44,755.1
	TOTALS	AREA	WATTS

TAILORED METHOD- CONDITIONED SPACES

TOTAL ALLOWED WATTS (From LTG-6-C(conditioned set))

UNCONDITIONED SPACES

A Complete Building and Area Category Methods Category (From § 146 Table 146-B & C)	B WATTS PER (ft²)	C AREA (ft²)	D ALLOWED WATTS
UNUSED SPACE	[illegible]	417.0	0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
		417	0.0
	TOTALS	AREA	WATTS

TAILORED METHOD- UNCONDITIONED SPACES

TOTAL UNCONDITIONED SPACES ALLOWED WATTS (From LTG-6-C(unconditioned set))

2005 Nonresidential Compliance Form — April 2005

CERTIFICATE OF COMPLIANCE (Part 1 of 4) — LTG-1-C

PROJECT NAME: ORANGE TERRACE LIBRARY		DATE: 2/22/2007	
PROJECT ADDRESS: RIVERSIDE, CA			
PRINCIPAL DESIGNER - LIGHTING: Arch Kirkwood	TELEPHONE: 714-505-1977	Building Permit #	
DOCUMENTATION AUTHOR: STUART MCKNIGHT	TELEPHONE: 714-505-1977	Checked By/Date	Enforcement Agency Use

GENERAL INFORMATION

DATE OF PLANS: [illegible] — BUILDING CONDITIONED FLOOR AREA: [illegible] — CLIMATE ZONE: [illegible]

BUILDING TYPE ☑ NONRESIDENTIAL ☐ HIGH RISE RESIDENTIAL ☐ HOTEL/MOTEL GUEST

☑ CONDITIONED SPACES ☐ UNCONDITIONED SPACES ☐ INDOOR/OUTDOOR SIGNS

PHASE OF CONSTRUCTION ☑ NEW ☐ ADDITION ☐ ALTERATION

METHOD OF COMPLIANCE

☐ PERFORMANCE ☐ COMPLETE BLDG. ☑ AREA CATEGORY ☐ TAILORED ☐ COMMON LIGHTING

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to buiding lighting requirements.

The documentation preparer herby certifies that the documentation is accurate and complete.

DOCUMENTATION AUTHOR	SIGNATURE	DATE
STUART MCKNIGHT	[signature]	2/22/2007

The Principal Lighting Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the lighting requirements contained in the applicable parts of Sections 110, 119, 130 through 132, 146, 148 & 149 of Title 24, Part 6.

- ☐ The plans & specifications meet the requirements of Part 6 (Sections 10-103 ☐ The installation certificates meet the requirements of Part 6 (10-103a 3).
- ☐ The operation & maintenance information meet the requirements of Part 6 (10-103a). Please check one: (These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)
- ☐ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am licensed in the State of California as a civil engineer or electrical engineer, or I am
- ☑ I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation, and that I am a licensed contractor performing this work.
- ☐ I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professionals Code Sections 5537, 5538 and 6737.1

PRINCIPAL LIGHTING DESIGNER - NAME	SIGNATURE	DATE	LIC. #
Arch Kirkwood	[signature]	7/6/2006	C10-724633

LIGHTING MANDATORY MEASURES

☐ Indicate location on plans of Note Block for Mandatory Measures:

LIGHTING COMPLIANCE FORMS & WORKSHEETS (check box if worksheet is included)

	Form	Description
☑	LTG-1-C, Parts 1 of 4 and 2 of 4	Cerificate of Compliance. Part 1 of 4 and 2 of 4 are required for all submittals
☑	LTG-1-C, Part 3 of 4	Cerificate of Compliance. Part 3 of 4 submittal is required only if Control Credits are claimed
☑	LTG-1-C, Part 4 of 4	Cerificate of Compliance. Part 4 of 4 submittal is required when lighting controls are installed
☑	LTG-2-C	Interior Lighting Schedule
☐	LTG-3-C	Portable Lighting Worksheet
☑	LTG-4-C	Lighting Controls Credit Worksheet
☑	LTG-5-C	Interior Lighting Power Allowance
☐	LTG-6-C	Tailored Method Worksheet
☐	LTG-7-C	Room Cavity Ratio Worksheet
☐	LTG-8-C	Common Lighting Systems Method Worksheet
☐	LTG-9-C	Line Voltage Track Lighting Worksheet
☐	OLTG-4-C	Signs(See OLTG-4-C Sign Worksheet in Chapter 6, Outdoor Lighting and Signs Chapter)

2005 Nonresidential Compliance Forms — April 2005

PORTABLE LIGHTING WORKSHEET — LTG-3-C

PROJECT NAME: ORANGE TERRACE LIBRARY — DATE: 2/22/2007

TABLE 1 - PORTABLE LIGHTING NOT SHOWN ON PLANS
FOR OFFICE AREA > 250 SQUARE FEET

A ROOM # OR ZONE ID	B DEFAULT	C AREA (ft²)	D TOTAL WATTS (B x C)
B109	0.2	764	152.8
B108	0.2	878	175.6
B110	0.2	1510	302
	0.2		0
	0.2		0
	0.2		0
	TOTAL	3152	630.4

TABLE 2 - PORTABLE LIGHTING SHOWN ON PLANS
FOR OFFICE AREA > 250 SQUARE FEET

A ROOM # OR ZONE ID	B PORTABLE LIGHTING DESCRIPTION(S) PER TASK AREA	C LUMINARIE(S) WATTS PER TASK AREA	D TASK AREA (ft²)	E NUMBER OF TASK AREAS	F TOTAL AREA (ft²) (D x E)	G TOTAL WATTS (C x E)
					0	0
					0	0
					0	0
					0	0
					0	0
				TOTAL	0	0

TABLE 3 - PLANS SHOW PORTABLE LIGHTING IS NOT REQUIRED FOR OFFICE AREAS > 250 SQUARE FEET

ROOM # OR ZONE ID	TOTAL AREA (ft²)	Designer needs to provide detailed documentation that the lighting level provided by the overhead lighting meets the needs of the space. The details include luminaire types and mounting locations relative to work areas.
TOTAL AREA	0	

BUILDING SUMMARY

BUILDING SUMMARY	TOTAL AREA (ft²)	TOTAL WATTS
BUILDING TOTAL (SUM OF TABLE 1,2,3)	3152	630.4
		ENTER IN LTG-2-C PORTABLE LIGHTING

2005 Nonresidential Compliance Form — April 2005

LIGHTING CONTROLS CREDIT WORKSHEET (PART 1 OF 2) — LTG-4-C

CONTROL CREDITS FOR CONDITIONED SPACES

PROJECT NAME: ORANGE TERRACE LIBRARY — DATE: 2/22/2007

A ROOM #, ZONE ID CONDITIONED AREAS	B LIGHTING CONTROL DESCRIPTION	C PLAN REFEFERENCE	D ROOM AREA (ft²)	E DAYLIGHTING: WINDOW WALL RATIO[1]	F DAYLIGHTING: GLAZING VLT	G DAYLIGHTING: SKYLIGHT EFFECTIVE APERTURE[1]	H WATTS OF CONTROL LIGHTING	I LIGHTING ADJUSTMENT FACTOR[2]	J CONTROL CREDIT WATTS (H x I)
BUILDING B									
ZONE 1	AUTO ON/BI-LEVEL	EB3.1	5391				5419	0.2	1083.8
ZONE 2	OCC/LCP/BI-LEVEL	EB3.1	5314				4537	0.25	1134.25
ZONE 3	OCC/LCP/BI-LEVEL	EB3.2	1155	40%	535%		1344	0.2	268.8
ZONE 4	AUTO ON/BI-LEVEL	EB3.2	8510				12980	0.2	2596
								0.2	0
									0
BUILDING A									0
ZONE 1	AUTO ON/BI-LEVEL	EA3.0	7126				6929	0.2	1385.8
ZONE 2	AUTO ON/BI-LEVEL	EA3.1	5203				7731	0.2	1546.2
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0
									0

1) FROM EQUATION 146-A — PAGE TOTAL: → 8014.85

2) FROM TABLE 146-A — BUILDING TOTAL: → 8014.85

Enter on LTG-2-C LIGHTING CONTROL CREDITS

2005 Nonresidential Compliance Form — April 2005

INTERIOR LIGHTING SCHEDULE (Part 1 of 2) — LTG-2-C

PROJECT NAME: ORANGE TERRACE LIBRARY — DATE: 2/22/2007

INSTALLED LIGHTING POWER FOR CONDITIONED SPACES

A NAME	B TYPE DESCRIPTION	C LAMP TYPE	D Number of Lamps per Luminaire	E Watts per Lamp	F Number of Ballasts per Luminaire	G Watts per Luminaire	H If CEC Default ☑	I Number of Luminaires	J Installed Watts (GxI)
F1	2x4 FIXTURE	FLUOR	2	28	1	56	☑	60	3360
F2	2x4 FIXTURE	FLUOR	2	32	1	64	☑	24	1536
F3	1X4 FIXTURE	FLUOR	2	17	1	34	☑	4	136
F4	STRIP FIXTURE	FLUOR	1	25	1	25	☑	20	500
F5	DOWN LIGHT FIXTURE	FLUOR	1	57	1	57	☑	61	3477
F6	DOWN LIGHT FIXTURE	FLUOR	1	42	1	42	☑	35	1470
F7A	ROUND DOWN LIGHT FIXTURE	FLUOR	2	39	1	78	☑	55	4290
F7B	ROUND DOWN LIGHT FIXTURE	FLUOR	4	39	2	156	☑	14	2184
F7C	ROUND DOWN LIGHT FIXTURE	FLUOR	4	39	2	156	☑	7	1092
F7D	ROUND DOWN LIGHT FIXTURE	FLUOR	6	39	3	234	☑	2	468
F8	PENDENT FIXTURE	FLUOR	1	42	1	42	☑	12	504
F9	PENDENT FIXTURE	FLUOR	6	42	3	252	☑	37	9324
F10	HI BAY FIXTURE	M.H.	1	400	1	400	☑	30	12000
F11	WALL SCONCE FIXTURE	FLUOR	1	13	1	13	☑	23	299
F12	WALL SCONCE FIXTURE	FLUOR	1	28	1	28	☑	7	196
F13	SEE EXTERIOR SHEETS					0	☐		0
F14	SEE EXTERIOR SHEETS					0	☐		0
F15	SEE EXTERIOR SHEETS					0	☐		0
F16	SEE EXTERIOR SHEETS					0	☐		0
F17	PENDENT FIXTURE	FLUOR	2	42	1	84	☑	12	1008
F18	DOWN LIGHT FIXTURE	FLUOR	1	26	1	26	☑	3	78
F19	SEE EXTERIOR SHEETS					0	☐		0
F20	COVE ROPE LIGHTING	HALOGEN	1 PER FT	10			☐		
F21	SEE EXTERIOR SHEETS					0	☐		0
F22	DOWN LIGHT FIXTURE	FLUOR	2	70	1	140	☑	7	980
							PAGE TOTAL		42,902.0
							BUILDING TOTAL		42,902.0
							PORTABLE LIGHTING (From LTG-3-C)		+630.4
							CONTROL CREDIT (From LTG-4-C)		-8014.9
							ADJUSTED ACTUAL WATTS		=35517.6

2005 Nonresidential Compliance Form — April 2005

CERTIFICATE OF COMPLIANCE (Part 2 of 4) — LTG-1-C

PROJECT NAME: ORANGE TERRACE LIBRARY — DATE: 2/22/2007

INSTALLED INTERIOR LIGHTING POWER FOR CONDITIONED AND UNCONDITIONED SPACES

		INSTALLED WATTS
INSTALLED LIGHTING, CONDITIONED SPACES (From LTG-2-C)		42,902
PORTABLE LIGHTING (From LTG-3-C)	+	630.4
LIGHTING CONTROL CREDIT, CONDITIONED SPACES (From LTG-4-C)	-	8014.85
CONDITIONED SPACE ADJUSTED INSTALLED LIGHTING POWER	=	35517.55
INSTALLED LIGHTING, UNCONDITIONED SPACES (From LTG-2-C)		
LIGHTING CONTROL CREDIT, UNCONDITIONED SPACES (From LTG-4-C)	-	0
UNCONDITIONED SPACE ADJUSTED INSTALLED LIGHTING POWER	=	0

ALLOWED INTERIOR LIGHTING POWER FOR CONDITIONED SPACES

✓
- ☐ COMPLETE BUILDING METHOD (from LTG-5-C)
- ☑ AREA CATEGORY METHOD (from LTG-5-C)
- ☐ TAILORED METHOD (from LTG-5-C)

ALLOWED LIGHTING POWER — ALLOWED WATTS: 44755.1

ALTERNATE COMPLIANCE

✓
- ☑ PERFORMANCE METHOD
- ☐ COMMON LIGHTING SYSTEM (from LTG-8-C)

ALLOWED INTERIOR LIGHTING POWER FOR UNCONDITIONED SPACES (from LTG-5-C) 0 Watts

MANDATORY LIGHTING MEASURES FOR INTERIOR LIGHTING AND DAYLIT AREAS

MANDATORY INTERIOR AND DAYLIGHTING AUTOMATIC CONTOLS

CONTROL LOCATION (Room #, Area #, or Description)	CONTROL IDENTIFICATION	CONTROL TYPE (Auto Time Switch, Dimming, Potosensor, etc.)	SPACE CONTROLLED Lists the location of controlled lights	✓ If Control is for Daylighting	NOTE TO FIELD
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	

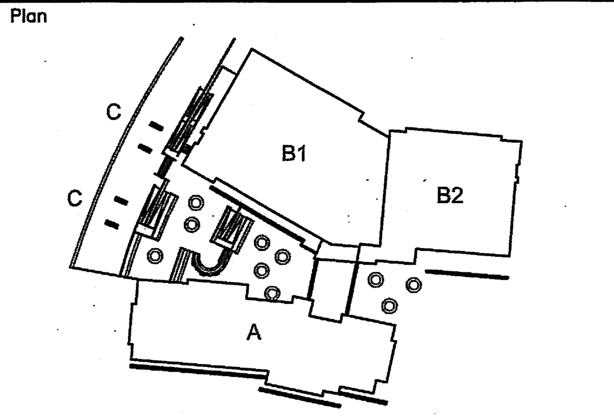
2005 Nonresidential Compliance Forms — April 2005

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 FAX: 714-505-7050 LICENSE NO. 724633

AS BUILT

Key Plan



Consultant's Seal: LICENSED ELECTRICAL CONTRACTOR A. J. KIRKWOOD & ASSOC. INC. LICENSE No. C10-724633 EXP. 07/31/08 ELECTRICAL STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

(SM) HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

TITLE 24 DOCUMENTS–INDOOR

Architect's Seal: LICENSED ARCHITECT CHRISTOPHER RICHARD TAYLOR NO. C-19759 REN. 02-24-09 STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	E0.3
Date: 05-17-07	Sheet 4 of 20

TRUE NORTH

PLEASE RECYCLE E0.3.DWG

e Terrace Library\E-DRAWINGS\E0.3.dwg May 17,2007-8:00am

07/11/2008 07:22 7145059410 PAGE 02/02

ORANGE TERRACE LIBRARY

PANEL SCHEDULE REVISION

DATE: 07/11/08 | SCALE: NTS | DRAWN BY: NS | REVIEWED BY: BS | SHEET: E1 | 1 OF X

PREPARED BY: A. J. KIRKWOOD & ASSOCIATES, INC. 2752 WALNUT AVE. TUSTIN, CA 92780 Tel: 714-505-1977 FAX: 714-505-7030 LICENSE NO. 724633

RECEIVED 8-19-08

RECEIVED 7-11-08

07/11/2008 08:40 7145059410 PAGE 02/02

ORANGE TERRACE LIBRARY

PANEL SCHEDULE REVISION

DATE: 07/11/08 | SCALE: NTS | DRAWN BY: NS | REVIEWED BY: BS | SHEET: E1 | 1 OF X

PREPARED BY: A. J. KIRKWOOD & ASSOCIATES, INC. 2752 WALNUT AVE. TUSTIN, CA 92780 Tel: 714-505-1977 FAX: 714-505-7030 LICENSE NO. 724633

RECEIVED 7-11-08

PANEL HB1

MOUNTING: SURFACE | DOUBLE LUG: NO | VOLTS: 277/480 | MAIN: M.L.O.
NEMA 3R: NO | 200% NEUTRAL: NO | PHASE: 3 | BUS: 200A
FEED THRU: NO | I/G BUS: NO | WIRE: 4 | A.I.C.: SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
PUMP 1	1330								20/3	1	2	20/1					52	2142			LTS RM 115A
"		1330							"	3	4	20/1					48		2006		LTS RM 115B
"			1330						"	5	6	20/1					44			1624	LTS RM 108, 109, 110
PUMP 2	1330								20/3	7	8	20/1					45	1518			LTS RM 111, 112, 114, 116
"		1330							"	9	10	20/1					49		4344		LTS 101, 102, 103, 104
"			1330						"	11	12	20/1					12			3360	GYM LTS
EF 2B	443								20/3	13	14	20/1					10	3276			GYM LTS
"		443							"	15	16	20/1					10		3360		GYM LTS
"			443						"	17	18	20/1					97			11691	INVERTER BLDG EM LTS
CU-B2	1940			1					20/3	19	20	20/1					42	2073			OUTSIDE WALL LTS
"		1940		1					"	21	22										
"			1940	1					"	23	24	20/1									
										25	26	20/1					44	2503			COURTYARD LTS
										27	28										
										29	30										
EF-3B	443								20/3	31	32										
-		443							-	33	34										
-			443						-	35	36										
EMON DMON METER	300								20/3	37	38	90/3						23406			PNL LB1
-		300							-	39	40	–							23406		"
-			300						-	41	42	–								23406	"

A= 40705 | B= 38903.217 | C= 45868
TOTAL VA= 125477 | W/LCL= 136406 | AMPS= 164 | TOTAL LCL= 43717 | X.25 = 10929
HIGH PHASE VA= 45868 | W/LCL= 50522 | HIGH PHASE AMPS= 182.4 | HIGH PHASE LCL= 18615 | X.25 = 4654

PANEL HA1

MOUNTING: SURFACE | DOUBLE LUG: NO | VOLTS: 277/480 | MAIN: 400A
NEMA 3R: NO | 200% NEUTRAL: NO | PHASE: 3 | BUS: 400A
FEED THRU: NO | I/G BUS: NO | WIRE: 4 | A.I.C.: SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
EF-1A	443							1	15/3	1	2	20/1					15	3040			GENERAL LTS A116
"		443							"	3	4	20/1					14		3528		"
"			443						"	5	6	20/1					14			3192	"
SPARE									20/1	7	8	20/1					26	4286			LOW LEVEL LTS A116
SPARE									20/1	9	10	20/1					40		2884		OUTSIDE COLUMNS
SPARE									20/1	11	12	20/1					15			1740	REST RM & OFFICES
SPACE										13	14	20/1					16	1218			RM A117/118/115
CU-A1		1940							15/3	15	16	20/1	1						500		LCP
–			1940						–	17	18										SPARE
–	1940								–	19	20										SPARE
SPARE									20/3	21	22										SPARE
–									–	23	24										SPARE
–									–	25	26										SPARE
SPARE									20/1	27	28										SPARE
SPARE									20/1	29	30										SPARE
SPARE									20/1	31	32										SPARE
SPARE									20/1	33	34										SPARE
SPARE									20/1	35	36										SPARE
SPACE										37	38	90/3						20855			XFRMR T1A
SPACE										39	40	-							20855		"
SPACE										41	42	-								20855	"

A= 31782.3 | B= 30150.25 | C= 28170
TOTAL VA= 90103 | W/LCL= 95075 | AMPS= 114 | TOTAL LCL= 19888 | X.25 = 4972
HIGH PHASE VA= 31782 | W/LCL= 33918 | HIGH PHASE AMPS= 122.4 | HIGH PHASE LCL= 8544 | X.25 = 2136

PANEL LB1

MOUNTING: SURFACE | DOUBLE LUG: NO | VOLTS: 120/208 | MAIN: 200A
NEMA 3R: NO | 200% NEUTRAL: NO | PHASE: 3 | BUS: 200A
FEED THRU: YES | I/G BUS: NO | WIRE: 4 | A.I.C.: SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
FREEZER, ROLL IN	2484					1			25/1	1	2	20/1		2				1200			EQUPMENT ROOM
FRIDGE, ROLL IN		1356				1			20/1	3	4	20/1		1					600		EQUPMENT ROOM
FREEZER, ROLL IN			1332			1			20/1	5	6	20/1		2						1200	EQUIPMENT ROOM
FRIDGE, ROLL IN	1092					1			20/1	7	8	20/1				4		720			B115A
WII WALL POWER		1440					6		20/1	9	10	20/1				4			720		B115A
									20/1	11	12	20/1				6				1080	B 108, 109-115B
FSD	500								20/1	13	14	20/1				3		540			B114
COMPUTER		500					1		20/1	15	16	20/1				3			540		B 110-115B
SPACE									20/1	17	18	20/1				5				900	B 109-115B
ROOM B110 & B112	1080				6				20/1	19	20	20/1				4		720			B 108, 109
OFFICE 112		900			5				20/1	21	22	20/1				4			720		B 108, 109
CONCESSION/LOBBY			1080		6				20/1	23	24	20/1				5				900	B 108, 109, 110
SPACE								1	20/1	25	26	20/1		2				1200			VENDING MACHINES
INVL		3000						1	40/1	27	28	20/1		2					880		VENDING MACHINES
GYM CURTAIN			1680					1	20/1	29	30	20/1		1						1200	DRINKING FOUNTAIN
Auto Flush/Sink	70							1	20/1	31	32	20/1				6		1080			RECEPTION DESK
SPARE								1	20/1	33	34	20/1				5			900		OFFICE
SPARE								1	20/1	35	36	20/1				6				1080	GYM
SPACE										37	38	20/1				3		540			RESTROOM RECP.
SPACE										39	40	20/1	1						1464		HAND DRYER
SPACE										41	42	20/1	1							1464	HAND DRYER

A= 11226 | B= 13020 | C= 11916
TOTAL VA= 36162 | W/LCL= 36162 | AMPS= 100 | TOTAL LCL= 0 | X.25 = 0
HIGH PHASE VA= 13020 | W/LCL= 13020 | HIGH PHASE AMPS= 109 | HIGH PHASE LCL= 0 | X.25 = 0

NOTE: THE TOTAL VA FOR THIS PANEL INCLUDES LOADS FROM OTHER PANELS DOWNSTREAM ON FEEDER. SEE SINGLELINE

CONVENIENCE RECEPTACLE DEMAND PER NEC 220-13:		
First 10 KVA at 100%	10000	VA
Remaining KVA at 50%	1750	VA
Non-receptacle load	22662	VA
Total	70219	VA = 195 A AT 120/208V-3PH-4W

PANEL LA1

MOUNTING: SURFACE | DOUBLE LUG: NO | VOLTS: 120/208 | MAIN: 200
NEMA 3R: NO | 200% NEUTRAL: NO | PHASE: 3 | BUS: 200A
FEED THRU: YES | I/G BUS: NO | WIRE: 4 | A.I.C.: SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
ROOM A 108	540				3				20/1	1	2	20/1				6		1080			ROOM A 114
ROOM A 102		540			3				20/1	3	4	20/1				6					SPARE
ROOM A 102			720		4				20/1	5	6	20/1									SPARE
ROOM A 116	540						3		20/1	7	8	20/1									SPARE
ROOM A 116		900			5				20/1	9	10	20/1									SPARE
ROOM A 120			540		3				20/1	11	12	20/1									SPARE
ROOM A 118	1080				6				20/1	13	14	20/1				4		720			ROOM A 108
ROOM A 117		1080			5			1	20/1	15	16	20/1				4			720		ROOM A 101
ROOM A 116			1080		6				20/1	17	18	20/1				4				720	ROOM A 103,105 & 106
SPARE					3				20/1	19	20	20/1				2		1500			ELEC. PORTAL RECP.
FLR BOXES CHLDRNS		540			3				20/1	21	22	20/1				2			1500		ELEC. PORTAL RECP.
FLR BOXES CHLDRNS			720		4				20/1	23	24	20/1				2				1500	ELEC. PORTAL RECP.
FLR BOXES CHLDRNS	360				2				20/1	25	26	20/1				2		1500			ELEC. PORTAL RECP.
WIREMOLD		1500			3				20/1	27	28	20/1				2			1500		ELEC. PORTAL RECP.
WIREMOLD			1500		3				20/1	29	30	20/1				2				1500	ELEC. PORTAL RECP.
WIREMOLD	1500				3				20/1	31	32										SPACE
WIREMOLD		1500			3				20/1	33	34	20/1	7						280		VAV BOXES
WIREMOLD			1500		3				20/1	35	36	20/1				3				540	HELP DESK RECP.
WIREMOLD	1500				3				20/1	37	38	20/1				3		540			HELP DESK RECP.
SPACE										39	40										SPACE
SPACE										41	42	20/1	1				1			1200	DRINKING FOUNTAIN

A= 10860 | B= 10060 | C= 11520
TOTAL VA= 32440 | W/LCL= 32740 | AMPS= 91 | TOTAL LCL= 1200 | X.25 = 300
HIGH PHASE VA= 11520 | W/LCL= 11820 | HIGH PHASE AMPS= 99 | HIGH PHASE LCL= 1200 | X.25 = 300

NOTE: THE TOTAL VA FOR THIS PANEL INCLUDES LOADS FROM OTHER PANELS DOWNSTREAM ON FEEDER. SEE SINGLELINE DIAGRAM FOR MORE INFORMATION.

CONVENIENCE RECEPTACLE DEMAND PER NEC 220-13:		
First 10 KVA at 100%	10000	VA
Remaining KVA at 50%	10210	VA
Non-receptacle load	2320	VA
Total	62565	VA = 174 A AT 120/208V-3PH-4W

42 ok for power 9-5-08

PANEL LB1A

MOUNTING: SURFACE | DOUBLE LUG: NO | VOLTS: 120/208 | MAIN: M.L.O.
NEMA 3R: NO | 200% NEUTRAL: NO | PHASE: 3 | BUS: 200A
FEED THRU: NO | I/G BUS: NO | WIRE: 4 | A.I.C.: SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
FC-B2	721			1				1	20/3	1	2	15/1	1					648			B-1
"		721		1					"	3	4	20/1	1						500		LCP
"			721	1					"	5	6	20/1	2	2						1000	SCOREBORAD
SPARE									20/1	7	8	20/3	1					264			TEL. BLEACHERS
VAV BOXES		240						1	20/1	9	10	–							264		– –
VAV BOXES			200					1	20/1	11	12	–								264	– –
CIRCULATION PUMP	1200						1		20/1	13	14	20/1	1					1656			BACKSTOP #1
DEDICATED RECEPT		180					1		20/1	15	16	20/1	1						1656		BACKSTOP #2
HTDG GRILL/BUN WRMR			1140				1		20/1	17	18	20/1	1							1656	BACKSTOP #3
POPCORN MACHINE	1200						1		20/1	19	20	20/1	1					1656			BACKSTOP #4
CASH REG/SODA DISP		1044					2		20/1	21	22	20/1	1						1656		BACKSTOP #5
MICROWAVE			1606				1		20/1	23	24	20/1	1							1656	BACKSTOP #6
BANQUET CART	1920						1		20/1	25	26	20/1	1					270			IRR CONTROLLER
BANQUET CART		1920					1		20/1	27	28	20/1			1				180		EXHAUST HOOD
KITCHEN GFI/DISPOSAL			860		1				20/1	29	30	20/1			1					1920	FIRE SUPPRESSION
ICE MAKER W/ BIN	1560								20/1	31	32	20/1			1			1920			RPLCMNT AIR SYSTM
SPACE										33	34	20/1			1				1920		EXHAUST BLOWER
CONFERENCE RM LED			615	1					20/1	35	36										SPACE
SPACE										37	38										SPACE
SPACE										39	40										SPACE
SPACE										41	42										SPACE

A= 13015 | B= 10281 | C= 11638
TOTAL VA= 34933 | W/LCL= 35627 | AMPS= 99 | TOTAL LCL= 2777 | X.25 = 694
HIGH PHASE VA= 13015 | W/LCL= 13195 | HIGH PHASE AMPS= 110 | HIGH PHASE LCL= 721 | X.25 = 180

30,34 OK for power DS 9-5-08

PANEL LA1A

MOUNTING: SURFACE | DOUBLE LUG: NO | VOLTS: 120/208 | MAIN: 200A
NEMA 3R: NO | 200% NEUTRAL: NO | PHASE: 3 | BUS: 200A
FEED THRU: NO | I/G BUS: NO | WIRE: 4 | A.I.C.: SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
ENTRY AUTO DOOR	1560							1	20/1	1	2	20/1		1				1200			CIRCULATION PUMP
BOOK THEFT DEV.		150						1	20/1	3	4	20/1		2					1020		CASH REG-BKRY CAB
CURTAIN POWER			1500					4	20/1	5	6	20/1				2				1000	PRINT EQUIP
HAND DRYERS	1464							1	20/1	7	8	20/1				3		1500			PRINT EQUIP
HAND DRYERS		1464						1	20/1	9	10	20/2			1				1664		TOASTER CONVEYOR
HAND DRYERS			1464					1	20/1	11	12	-								1664	-
COFFEE MAKER	3026						1		40/2	13	14	20/1			1			744			FRIDGE
-		3026							-	15	16	20/1		1					1608		MICROWAVE
FRIDGE-COFFEE GRNDR			1092				1		20/1	17	18	20/1		1						1440	BLENDER
DISPOSAL	500					1			20/1	19	20	20/1		1				1440			BLENDER
KIOSK GFI		540					1		20/1	21	22	40/2			1				3640		ESPRESSO MACHINE
WATER HEATER			984			1			20/1	23	24	-								3640	-
FC-A1	721			1					20/3	25	26										SPACE
-		721		1						27	28										SPACE
-			721	1						29	30										SPACE
SPACE										31	32										SPACE
SPACE										33	34										SPACE
SPACE										35	36										SPACE
SPACE										37	38										SPACE
SPACE										39	40										SPACE
SPACE										41	42										SPACE

A= 12155 | B= 13833 | C= 13505
TOTAL VA= 39494 | W/LCL= 40035 | AMPS= 111 | TOTAL LCL= 2163 | X.25 = 541
HIGH PHASE VA= 13833 | W/LCL= 14014 | HIGH PHASE AMPS= 117 | HIGH PHASE LCL= 721 | X.25 = 180

2 ok for power 9-5-08

PANEL SCHEDULE INDEX

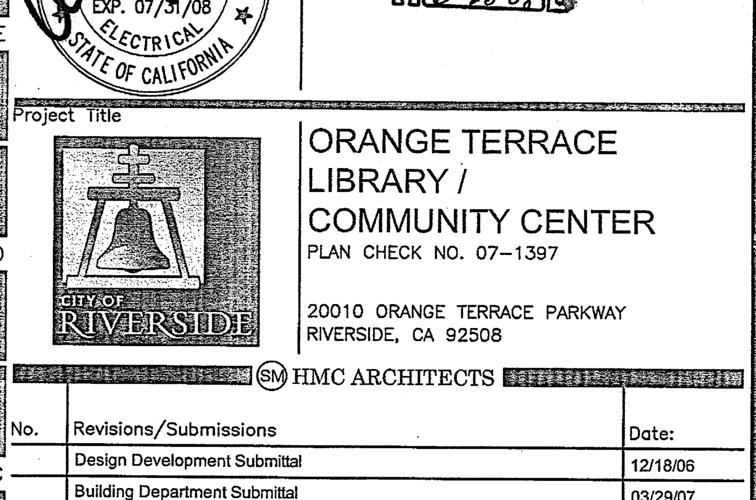
	HB1	HA1
INV-H	LB1	LA1
INV-L	LB1A	LA1A

AS BUILT

HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE · CONSTRUCTION · ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 FAX: 714-505-7030 LICENSE NO. 724633

Key Plan



Consultant's Seal — LICENSED ELECTRICAL CONTRACTOR, STATE OF CALIFORNIA, EXP. 07/31/08

Agency Approval — RECEIVED 6-26-08

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

CITY OF RIVERSIDE

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

PANEL SCHEDULES

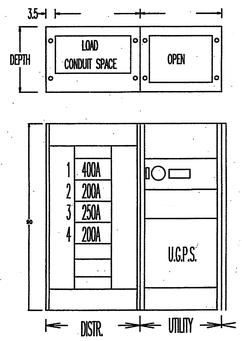
Architect's Seal — LICENSED ARCHITECT CHRISTOPHER RICHARD TAYLOR NO. C-19759 REN. 02-24-09 STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	E0.2
Date: 06-22-07	Sheet 3 of 20

PLEASE RECYCLE E0.2.DWG

TRANSFORMER SCHEDULE										DIMENSIONS			
XFRMR	KVA	VOLTAGE	IMPEDANCE	GROUND	MTD.	LET THRU	K-RATING	NOTES	H	W	D	WGT
T1A, T1B	75	480V, 3 PHASE, 3W (PRI) 120/208V, 3 PHASE, 4W (SEC)	3.7%	1/2" C., 1 #2 GND COLD WATER/B.STEEL	FLOOR	5.630	N/A	DRY TYP.	39"	26"	19"	480

2 TRANSFORMER SCHEDULE



MAIN SWITCH BOARD "B" ELEVATION NEMA 1

DEPTH CHART

400/600/800/1000 = 20D
1200/1600/2000 = 28D
2500/3000/4000 = 36D

U.G.P.S. WIDTH

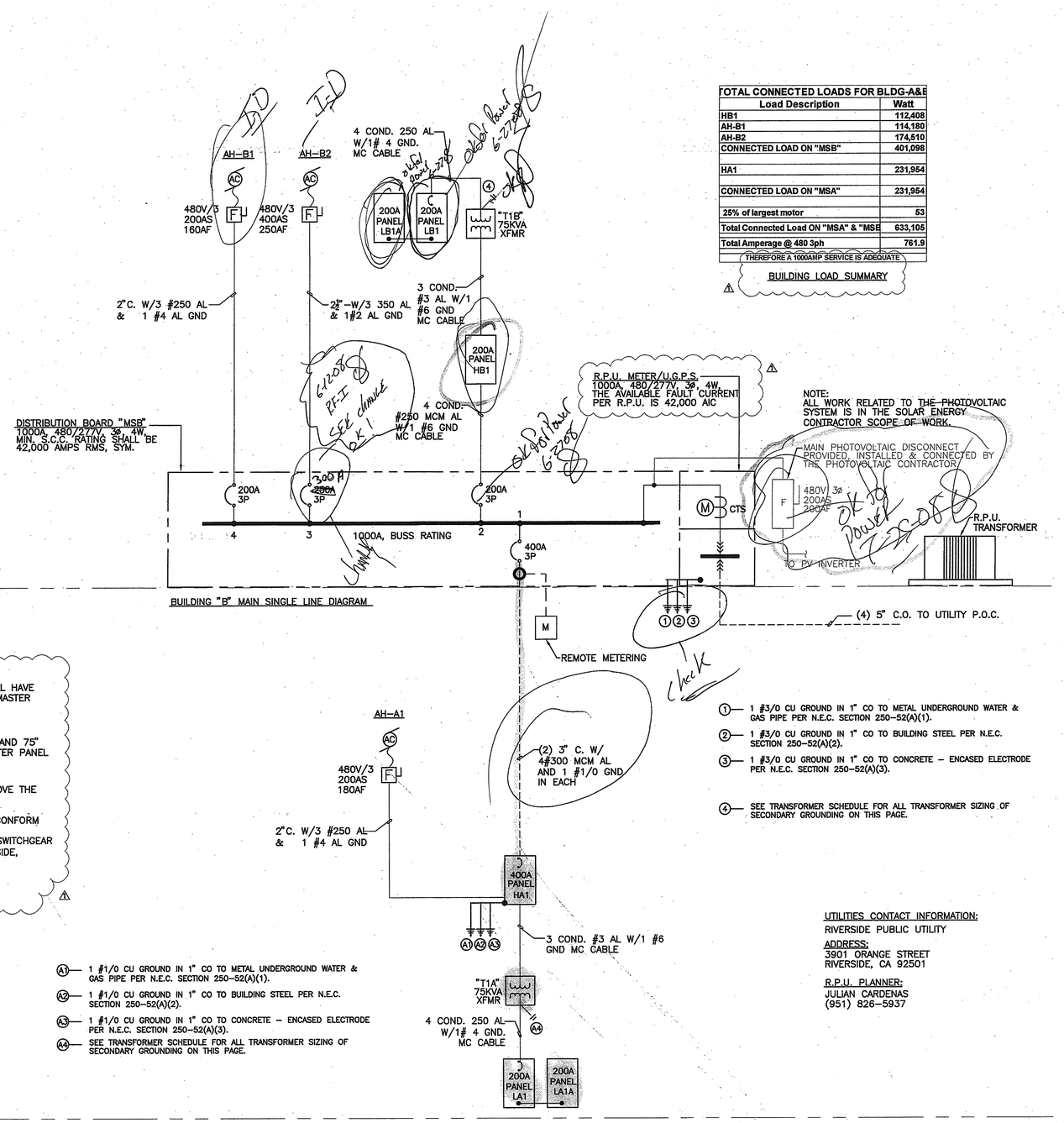
400/600/800 = 30W
1000/1200 = 38W
1600/2000/2500 = 42W
3000/4000 = 52W

C.T. SECTION WIDTH

400 THRU 3000A = 38W
3001 THRU 4000A = 52W

TOTAL CONNECTED LOADS FOR BLDG-A&E	
Load Description	Watt
HB1	112,408
AH-B1	114,180
AH-B2	174,510
CONNECTED LOAD ON "MSB"	401,098
HA1	231,954
CONNECTED LOAD ON "MSA"	231,954
25% of largest motor	53
Total Connected Load ON "MSA" & "MSB"	633,105
Total Amperage @ 480 3ph	761.9
THEREFORE A 1000AMP SERVICE IS ADEQUATE	

BUILDING LOAD SUMMARY



OR MAIN ELECTRICAL ROOM

BUILDING "B" MAIN SINGLE LINE DIAGRAM

OR MAIN ELECTRICAL ROOM

NOTES:

ELECTRICAL METER AND SWITCHGEAR ROOM DOORS SHALL HAVE SCHLAGE LOCK, KEYED TO RIVERSIDE PUBLIC UTILITIES MASTER KEY OR SHALL HAVE DOUBLE HASP.

ELECTRICAL METERS SHALL BE MOUNTED BETWEEN 48" AND 75" ABOVE FINISHED FLOOR. WORKING SPACE NEAR THE METER PANEL IS REQUIRED PER 1999 NEC 110-26.

THE ELECTRICAL ROOM DOOR SHALL EXTEND TO OR ABOVE THE FULL HEIGHT OF THE SWITCHGEAR.

THE MAIN ELECTRIC PANEL AND SWITCHBOARDS SHALL CONFORM TO THE EUSERC/OF RIVERSIDE REQUIREMENTS.
PRIOR TO MANUFACTURING, THE MAIN ELECTRIC PANEL SWITCHGEAR DRAWINGS SHALL BE APPROVED BY THE CITY OF RIVERSIDE, PUBLIC UTILITIES ELECTRIC DIVISION.
SEND SEVEN (7) ORIGINAL APPROVAL DRAWINGS TO:

UTILITY INSPECTOR, ELECTRIC ENGINEERING
3901 ORANGE STREET, RIVERSIDE CA 92522

1 #3/0 CU GROUND IN 1" CO TO METAL UNDERGROUND WATER & GAS PIPE PER N.E.C. SECTION 250-52(A)(1).

1 #3/0 CU GROUND IN 1" CO TO BUILDING STEEL PER N.E.C. SECTION 250-52(A)(2).

1 #3/0 CU GROUND IN 1" CO TO CONCRETE - ENCASED ELECTRODE PER N.E.C. SECTION 250-52(A)(3).

SEE TRANSFORMER SCHEDULE FOR ALL TRANSFORMER SIZING OF SECONDARY GROUNDING ON THIS PAGE.

A1 1 #1/0 CU GROUND IN 1" CO TO METAL UNDERGROUND WATER & GAS PIPE PER N.E.C. SECTION 250-52(A)(1).

A2 1 #1/0 CU GROUND IN 1" CO TO BUILDING STEEL PER N.E.C. SECTION 250-52(A)(2).

A3 1 #1/0 CU GROUND IN 1" CO TO CONCRETE - ENCASED ELECTRODE PER N.E.C. SECTION 250-52(A)(3).

A4 SEE TRANSFORMER SCHEDULE FOR ALL TRANSFORMER SIZING OF SECONDARY GROUNDING ON THIS PAGE.

UTILITIES CONTACT INFORMATION:
RIVERSIDE PUBLIC UTILITY
ADDRESS:
3901 ORANGE STREET
RIVERSIDE, CA 92501

R.P.U. PLANNER:
JULIAN CARDENAS
(951) 826-5937

1 SINGLE LINE DIAGRAM

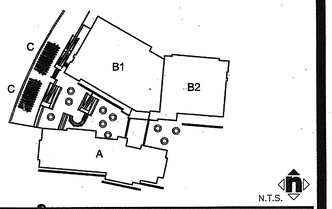
HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

A. J. KIRKWOOD & ASSOCIATES, INC.
27702 WALNUT AVE. NORTON, CA 92780
TEL 951-808-3977 FAX 951-808-7020 LICENSE NO. 751403

Inspectors NOTES
1). Temp Doc. SIGNED.
2). lock offs.
3). Power to Building
4). ADDRESS, Temp. Labels
5). TORQ letter

AS BUILT

Key Plan



Consultants

LICENSED ELECTRICAL CONTRACTOR
LICENSE No. C10-772833
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/17/07

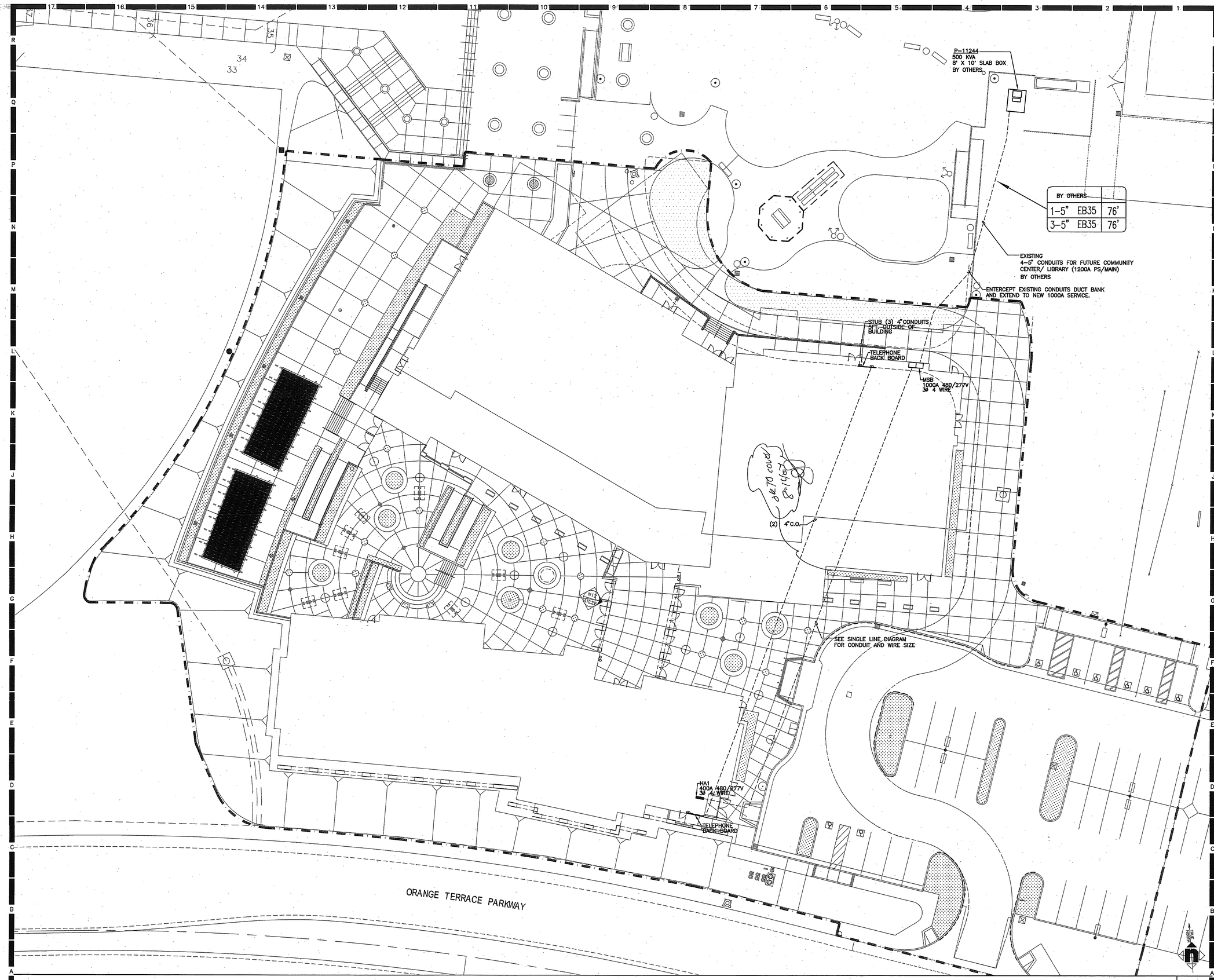
Drawing Title

ELECTRICAL SINGLE LINE DIAGRAM

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
REG. NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	E0.1
Date: 05-17-07	Sheet 2 of 20

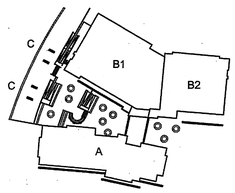


HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
27068 WALNUT AVE. TORRANCE, CA. 90505
TEL 310-326-3977 FAX 310-326-7020 LICENSE NO. 736203

AS BUILT

Key Plan



N.T.S.

Consultant:
LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE No. 736203
DIR-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE
LIBRARY /
COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

ELECTRICAL SITE PLAN

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed:	Project No. 2340001
Drawn:	Scale: AS NOTED
Checked:	Drawing No.
Reviewed:	E1.0
Date: 05-17-07	Sheet 6 of 20

ELECTRICAL SITE PLAN 1

1/16" = 1'-0"

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E1.0 OVERALL SITE PLAN.dwg May 17,2007-8:01am

PLEASE RECYCLE E1.0 OVERALL SITE PLAN.DWG

O:\466 Orange Terrace Library\e-DRAWINGS\E1.0 OVERALL SITE PLAN.dwg, 5/17/2007 8:01:37 AM, aiinh, ARCH expand E1 (30.00 x 42.00 Inches), Copyright (c) A.J. Kirkwood and Associates

GENERAL NOTES

1. ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH ALL CURRENT LOCAL CODES, NATIONAL ELECTRICAL CODE 2002 (NEC), AND UTILITY COMPANY CRITERIA.
2. ALL BRANCH CIRCUIT CONDUCTORS, WIRES AND CABLE SHALL BE COPPER TYPE THHN-90 C 600V UNLESS NOTED OTHERWISE. THE MINIMUM WIRE SHALL BE #14. CONDUCTORS #10 AND SMALLER SHALL BE SOLID AND LARGER WIRES SHALL BE STRANDED.
3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, TESTING, AND INSPECTION FEES.
4. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS, SPECIFICATIONS OR CODE REQUIREMENT, THE NOTE WHICH ESTABLISHES THE HIGHER STANDARD SHALL PREVAIL.
5. RECORD DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT BEFORE FINAL RECORD PAYMENT WILL BE ISSUED.
6. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS (EXCLUDING LAMPS) FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE BY THE ARCHITECT.
7. ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BEAR THE LABELS OF; THE UNDERWRITER'S LABORATORIES (U.L.), ETL, OR OTHER APPROVED TESTING LABORATORIES FOR THEIR SPECIFIC USES. ALL EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED.
8. LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER THOSE SHOWN ON THE ELECTRICAL DRAWINGS.
9. ANY MENTION OF SPECIFIC VOLTAGE, LOAD, MOUNTING, ARRANGEMENTS, HEIGHTS, OR LOCATIONS ON THE ELECTRICAL DRAWINGS DOES NOT RELIEVE THE ELECTRICAL CONTRACTOR OF THE RESPONSIBILITY TO VERIFY THE SPECIFIC REQUIREMENTS PRIOR TO PURCHASE OR ROUGH-IN.
10. THE ELECTRICAL CONTRACTOR SHALL BALANCE THE PHASE LEGS OF ALL PANELS OR DISTRIBUTION SECTIONS INCLUDED IN CONTRACT WITHIN +10%.
11. ALL PANELS SHALL HAVE TYPED DIRECTORIES WITH CIRCUITS LABELED AND TAGGED.
12. VERIFY ALL FUSE SIZES AND TYPES WITH THE A/C EQUIPMENT MANUFACTURER.
13. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ROOF PENETRATIONS WITH THE MECHANICAL PIPE CURBS. WHERE CONDUIT MUST BE RUN ON THE ROOF IT SHALL BE RACKED WITH OTHER TRADES WHERE POSSIBLE OR PROVIDED WITH ITS OWN ROOF RACK SUPPORT SYSTEM WITH PROPER ROOF PLATE SO AS NOT TO CAUSE DAMAGE TO THE ROOF COVERING.
14. ALL FIXTURE TRIMS SHALL BE OF THE APPROPRIATE TYPE FOR THE CEILING IN WHICH THEY ARE TO BE INSTALLED.
15. FLUORESCENT LAMP & BALLAST MANUFACTURERS SHALL BE LISTED IN THE "DIRECTORY OF CERTIFIED FLUORESCENT LAMP BALLAST AND CERTIFIED LUMINAIRE MANUFACTURERS". SEPT. 1991.
16. ALL FIXTURES IN CONDITIONED SPACES SHALL BE EQUIPPED WITH STATE LISTED ENERGY SAVING BALLAST PER C.E.C. TITLE 24.
17. ALL INSTRUMENTS, APPARATUS, AND EQUIPMENT SHALL BE TESTED AND PROVED TO BE ELECTRICALLY AND MECHANICALLY SOUND AND WITHOUT DEFECTS. THE SYSTEM SHALL BE TESTED FOR SHORTS AND FAULTS. SHORTED OR FAULTED CONDUCTORS SHALL BE REMOVED AND REPLACED. ALL METERS, CABLES, TEST EQUIPMENT, OR APPARATUS NECESSARY FOR TESTING SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.
18. ALL CONDUITS SHALL BE INSTALLED CONCEALED. ALL DEVICE OPENING COVER PLATES SHALL BE FLUSH WITH FINISHED SURFACES UNLESS OTHERWISE NOTED.
19. ALL CONDUITS SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO WALLS AND STRUCTURAL MEMBERS AND SHALL BE RACKED WITH 90 DEGREE BENDS WHERE REQUIRED.
20. CONDUITS AND ELECTRICAL RACEWAYS SHALL NOT BE SUPPORTED NOR ATTACHED TO SUSPENDED CEILING GRID T-BARS OR CEILING SUPPORT WIRES.
21. NO CONDUIT TO BE RUN THROUGH HVAC AIR HANDLING DUCTS.
22. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A GROUND WIRE IN PVC CONDUIT AS PER THE NATIONAL ELECTRICAL CODE. GROUND WIRES ARE NOT SHOWN, BUT SHALL BE INCLUDED WITHIN THE ELECTRICAL CONTRACTOR'S BASE BID.
23. ALUMINUM CONDUCTORS # 4 AND LARGER ARE APPROVED FOR USE.
24. ALL JUNCTION OR PULL BOXES EXPOSED TO WET/DAMP/OUTDOOR CONDITIONS SHALL BE LISTED FOR THIS USE.
25. ALL JUNCTION OR PULL BOXES ABOVE THE SUSPENDED LAY-IN CEILING SHALL BE MOUNTED 1'-0" ABOVE THE CEILING LINE AND IN AN ACCESSIBLE LOCATION.
26. CONDUITS AND JUNCTION BOXES IN EXPOSED AREAS SHALL BE INSTALLED IN PROTECTED AREAS, IE; COLUMN WEBS.
27. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING DELIVERY, RECEIVING, UNLOADING, UNCRATING, STORING, SETTING IN PLACE, AND PROTECTING FROM DAMAGE OR WEATHER DURING CONSTRUCTION FOR ALL NEW EQUIPMENT OR SALVAGED EXISTING EQUIPMENT STORED BETWEEN BEING RELOCATED.
28. ROOF TOP RECEPTACLES SHALL BE PROVIDED WITHIN 25'-0" OF EACH ROOF TOP UNIT. BOXES SHALL BE WEATHERPROOF AND RECEPTACLES SHALL BE G.F.I. PROTECTED. PROVIDE CIRCUITRY, CONDUIT, WIRE AND CIRCUIT BREAKERS AS REQUIRED.
29. FINAL EQUIPMENT CONNECTION TO PILOT CONTROL DEVICES SHALL BE MADE WITH 1'-0" MINIMUM LENGTH OF FLEXIBLE CONDUIT OR SEALTITE, IE; SOLENOID VALVES, MOTORIZED DAMPERS, ETC..
30. ELECTRICAL CONTRACTOR MAY ELECT TO USE ONE FEED THROUGH G.F.I. RECEPTACLE TO FEED "SLAVE" G.F.I. RECEPTACLE(S).
31. THE PLANS AND SPECIFICATIONS ARE COMPLIMENTARY TO EACH OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE BINDING AS IF CALLED FOR BY BOTH.
32. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE WEATHERPROOF. ONLY RECEPTACLES INDICATED FOR G.F.I. PROTECTION SHALL BE SO PROTECTED.
33. ALL PROTECTIVE DEVICES (INCLUDING CIRCUIT BREAKERS, FUSED SWITCHES, COMBINATION MOTOR STARTERS, ETC.) SHALL HAVE AN INTERRUPTING CAPACITY EQUAL TO OR EXCEEDING THE AVAILABLE FAULT CURRENT OR SERIES. (SEE RATING SHOWN ON SINGLE LINE AND PANEL SCHEDULES).
34. THE MAIN SWITCHBOARD WITH METERING FACILITIES SHALL BE COMPLETELY CONTAINED IN A FREESTANDING SERVICE SECTION MOUNTED WHERE SHOWN ON THE PLANS AND AS REQUIRED BY THE SERVING UTILITY. ALL FUSES SHALL BE AS PER DRAWINGS. PROVIDE UNDERGROUND PULL SECTION AS REQUIRED BY UTILITY COMPANY.
35. LIGHTING PANELS SHALL BE DEAD FRONT TYPE, INTERCHANGEABLE, "QUICK BREAK" CIRCUIT BREAKERS. CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE SERIES RATED.
36. TELEPHONE OUTLETS SHALL BE PROVIDED WITH ACCESS FOR FUTURE CABLE INSTALLATIONS.
37. ALL WORK SHALL BE PERFORMED IN A NEAT WORKMAN LIKE MANNER.
38. FIXTURES SHALL BE RATED FOR FEED THROUGH WIRING.
39. LIGHTING FIXTURE NUMBERS, VOLTAGES, AND LAMP TYPES ON THE LIGHTING FIXTURE SCHEDULE SHALL BE USED AS A CRITERIA FOR PRODUCING MINIMUM REQUIREMENTS ON THIS JOB. THE ELECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROPER VOLTAGES, NUMBERS, LAMP TYPES, AND MOUNTINGS.
40. ALL ELECTRICAL EQUIPMENT SHALL BE LISTED BY U.L. OR OTHER APPROVED LISTINGS OF TESTING LABORATORIES PER N.E.C., SECTION 110-2.
41. ALL UNDERGROUND CONDUITS SHALL BE SCH 40 PVC.
42. EXPOSED CONDUITS TO BE EMT W COMPRESSION FITTINGS.
43. A FIRE ALARM SYSTEM WILL BE PROVIDED PER DIVISION 2.1 GROUP A (1)

ELECTRICAL FIXTURE SCHEDULE

MARK	MANUFACTURER CATALOG NUMBER	VOLTS	LAMPS	TOTAL WATTS	MOUNTING	REMARKS	QTY
F1	LIGHTOLIER ALTER ELEGANCE QVE 2-G-PF-OS-2-28-277-PI	277	2/28W T5 HO	56	RECESSED	T-BAR CEILLINGS	60
F2	LIGHTOLIER LIGHTING XP-2-G-VA-2-32-277-SO	277	2/32W T8	64	RECESSED	T-BAR CEILLINGS	23
F3	LITHONIA LIGHTING CA-2-1X4 WRAPE	277	2/17W T8	34	SURFACE	PENDENT MOUNT	4
F4	LITHONIA LIGHTING S-1-STRIP	277	1/25W T8	25	SURFACE	SOFIT	15
F5	PEACHTREE LIGHTING 9" PSCFTU-9257	277	1/57W 4PIN	57	RECESSED	T-BAR CEILLINGS	61
F6	PEACHTREE LIGHTING 6" PSCFTU-6142	277	1/42W TRT	42	RECESSED	HARD LED CEILLINGS	24
F7A	PRUDENTIAL LIGHTING 2' P-8920-2BX-CWA-YGW-DC-277-X3B	277	(2) T8 BX 39W	39	RECESSED	HARD LED CEILLINGS	55
F7B	PRUDENTIAL LIGHTING 3' P-8930-2BX-CWA-YGW-DC-277-X3B	277	(4) T8 BX 39W	156	RECESSED	HARD LED CEILLINGS	14
F7C	PRUDENTIAL LIGHTING 4' P-8940-2BX-CWA-YGW-DC-277-X3B	278	(4) T8 BX 39W	156	RECESSED	HARD LED CEILLINGS	7
F7D	PRUDENTIAL LIGHTING 5' P-8940-2BX-CWA-YGW-DC-277-X3B	278	(6) T8 BX 39W	234	RECESSED	HARD LED CEILLINGS	2
F8	LIGHTOLIER 9" PENDALUM 40471U3-CFL-TT-42-277	277	1/42W CFL	42	SURFACE	AIR CRAFT CABLE PENDENT MOUNT	12
F9	COOPER LIGHTING PL-DP-PC22-277-FL-1	277	6/42W TT CFL	252	PENDENT	AIR CRAFT CABLE PENDENT MOUNT	37
F10	RUUD LIGHTING 400MP	277	1/400MH	400	SURFACE	PENDENT MOUNT	30
F11	LIGHTOLIER ADA WALL SCONCE FW202-SA-4-PIN 13W-277	277	1/13 CFL	13	WALL	WALL MOUNT	21
F12	VISTA LIGHTING MINIMALLIST VISAGE FLUSH FRAME CB6659	277	1/28W F-TUB.	28	WALL	WALL MOUNT FLUSH	4
F13	BEGA LIGHTING 22239 1-26W 4PIN TRIPLE CF	277	1/26W QUAD-4PIN	26	WALL	WALL MOUNT	17
F14	HALO SURFACE H1313-P-65W BR29	277	1/65W BR29	65	WALL	WALL MOUNT	28
F15	HALO SURFACE H1315-BZ-(2)65W BR30	277	2/65W BR30	138	WALL	WALL MOUNT	46
F16	BEGA LIGHTING POST TOP WALK WAY 8309MH	277	1/150W T6MH	150	POST TOP	WALK WAY COURT YARD	13
F17	LIGHTOLIER 40722XU3/404722X - F42TBX-2X42-277-U3	277	2/42W CFL	84	SURFACE	PENDENT MOUNT	12
F18	INTENSE FIXTURE 5X5 SQUARE	277	32W CPF	32	RECESSED	RESTROOM DOWN LIGHT	28
F19	BEGA LIGHTING 2226P 1-26W 4PIN TRIPLE CF	277	1/18TRT	18	RECESSED	STEP LIGHTS	25
F20	COOPER LIGHTING 1T8-1-T8-1-C-277-4 FT OVER ALL	277	32/T8	32	COVE	BANQUETTE COVE LIGHTING	96
F21	RUUD LIGHTING HCL405-D 1-50W	277	50W MH	50	RECESSED	LOUVERS BOLLARD LIGHT FIXTURE	2
FEX	LIGHTOLIER LIGHTING EDGE-LIT LU-W-1/2-G 277	277	LED	0.5	SURFACE	ALL CEILLINGS	30
FEX1	LIGHTOLIER LIGHTING LL LED LL-N-U-W-G W	277	LED	0.5	SURFACE	ALL CEILLINGS WITH WIRE CAGE	4
F22	PEACHTREE LIGHTING PFTU-10270	277	2/70W CPF	140	RECESSED	DOWNLIGHTS	7
F23	NOT USED						
F24	RUUD LIGHTING E8 SERIES E4242-UL 42W	277	42W FL.	42	SURFACE	LUNCH SHELTER	14

(2)

ABBREVIATIONS

A	AMPS
A.F.	AMP FRAME/FUSE
A.F.F	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
AL	ALUMINUM
ARCH.	ARCHITECT; ARCHITECTURAL
A.T.	AMP TRIP
BATT.	BATTERY
BKBD.	BACKBOARD
BLDG.	BUILDING
CAB.	CABINET
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT.	CIRCUIT
C.O.	CONDUIT ONLY WITH PULL WIRE
C.W.	COLD WATER
CU	COPPER
CLG.	CEILING
C.L.	CENTER LINE
CT	CURRENT TRANSFORMER
DB	DISTRIBUTION BOARD
D.L.	DAMP LOCATION LISTING
D.W.	DISHWASHER
DIST.	DISTRIBUTION
E.C.	ELECTRICAL CONTRACTOR
EDF	ELECTRIC DRINKING FOUNTAIN
EF	EXHAUST FAN
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EM	EMERGENCY
EQUIP.	EQUIPMENT
EXIST.	EXISTING
FA	FIRE ALARM
F.C.	FAN COIL
FIXT.	FIXTURE
FL.; FLR.	FLOOR
FLUOR.	FLUORESCENT
FTG.	FOOTING
GC	GENERAL CONTRACTOR
G.D.	GARBAGE DISPOSER
G.F.I.	GROUND FAULT INTERRUPTER
G.F.R.	GROUND FAULT RELAY
G.G.	GREEN GROUND
GRD.	GROUND
HP	HORSE POWER
H.O.A.	HAND-OFF-AUTOMATIC
INC.	INCANDESCENT
J.B.	JUNCTION BOX
L.D.	LOW DENSITY RATING
LOC.	LOCATION
LTG.	LIGHTING
M	METER
MCC	MOTOR CONTROL CENTER
MANUF.	MANUFACTURER
MECH.	MECHANICAL
MIN.	MINIMUM
MIN.	MINUTE
MTD.	MOUNTED
MTG. HT.	MOUNTING HEIGHT
N.F.	NON-FUSED
N.E.C.	NATIONAL ELECTRICAL CODE
N.I.C.	NOT IN CONTRACT
N/L	NIGHT LIGHT
P	POLE
PL	PROPERTY LINE
PNL	PANEL
PWR	POWER
RECEPT.	RECEPTACLE
REF.	REFRIGERATOR
REQ.	REQUIREMENTS
RM.	ROOM
S.C.D.	SHORT CIRCUIT DUTY
S.C.I.	SHORT CIRCUIT INTERRUPTING
SW.	SWITCH
SWGR.	SWITCHGEAR
SYM.	SYMMETRICAL
T.V.	TELEVISION
T.C.	TIME CLOCK
TEL.;TELE. BRD.	TELEPHONE BOARD
TH.	THERMOSTAT
TRANSF.	TRANSFORMER
TYP.	TYPICAL
UGPS	UNDERGROUND PULL SECTION
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLTS
V.L.	VERIFY EXACT LOCATION/MOUNTING HEIGHT PRIOR TO BASE BID (INCLUDE ALL FINDINGS WITHIN THE BASE BID)
WG	WIRING GUTTER
WP	WEATHERPROOF
W.T.	WATER TIGHT, DEVICE, EQUIPMENT, MATERIALS & INSTALLATION
WTR. HTR.	WATER HEATER

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE NECESSARY, REFERENCE WILL BE MADE TO AMERICAN STANDARDS INSTITUTE ABBREVIATIONS ANSI Y1.1 OR MILITARY STANDARD ABBREVIATIONS MIL-STANDARD, AND ANY STANDARD INDUSTRY CONVENTIONS.

ELECTRICAL SYMBOLS

LIGHTING (NOT ALL SYMBOLS USED)

- SURFACE MOUNT LIGHT FIXTURE
- SURFACE MOUNT LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- RECESSED LIGHT FIXTURE
- RECESSED LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- PARABOLIC LIGHT FIXTURE
- PARABOLIC LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- STRIP LIGHT FIXTURE
- STRIP LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- STRIP CONTINUATION
- RECESSED DOWN LIGHT FIXTURE
- RECESSED DOWN LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- SURFACE MOUNT DOWN LIGHT FIXTURE
- SURFACE MOUNT DOWN LIGHT FIXTURE ON EMERGENCY SYSTEM(EM), BATTERY BACKUP(BB), OR IS A NIGHT LIGHT(NL)
- SURFACE MOUNT LIGHT FIXTURE W/ WALL WASH TRIM
- RECESSED LIGHT FIXTURE W/ WALL WASH TRIM
- TRACK LIGHTING
- TRACK LIGHT FIXTURE
- LIGHT FIXTURE, SMALL BOX, PATIO
- 4 LAMP LIGHT BAR, BATH VANITY
- BUG-EYE WALL MOUNT EMERGENCY LIGHT
- CEILING MOUNT EXIT SIGN-SINGLE FACE. SHADING INDICATES DIRECTION OF FACE. ARROW INDICATES ORIENTATION OF FIXTURE ARROWS.
- CEILING MOUNT EXIT SIGN-DOUBLE FACE. SHADING INDICATES DIRECTION OF FACE. ARROW INDICATES ORIENTATION OF FIXTURE ARROWS.
- WALL MOUNT EXIT SIGN-SINGLE FACE. ARROW INDICATES ORIENTATION OF FIXTURE ARROWS.
- LL: LOW LEVEL WALL MOUNT EXIT SIGN-SINGLE FACE. ARROW INDICATES ORIENTATION OF FIXTURE ARROWS.
- EXIT SIGN SINGLE ARROW
- EXIT SIGN DOUBLE ARROW

SITE LIGHTING

- SITE LIGHTING BOLLARD
- SITE LIGHTING POLE MOUNT FIXTURE
- SITE LIGHTING POLE MOUNT FIXTURE
- SITE LIGHTING POST TOP FIXTURE

POWER

- NON-FUSED DISCONNECT SWITCH-HP RATED AND WEATHERPROOF AS REQUIRED
- FUSED DISCONNECT SWITCH-HP RATED WITH FUSES PER EQUIPMENT MANUFACTURER AND WEATHERPROOF AS REQUIRED
- (3) MOTOR STARTER-SUBSCRIPT INDICATES NEMA SIZE
- (3) NON-FUSED DISCONNECT W/ STARTER-HP RATED. SUBSCRIPT INDICATES NEMA SIZE.
- (3) COMBINATION FUSED DISCONNECT W/ STARTER-HP RATED WITH FUSES PER EQUIPMENT MANUFACTURER. SUBSCRIPT INDICATES NEMA SIZE.
- FLUSH MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- SURFACE MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- T: FLOOR MOUNT TRANSFORMER. REFER TO SINGLE LINE DIAGRAM FOR SIZE AND TYPE.
- DISTRIBUTION SWITCHBOARD REFER TO SINGLE LINE DIAGRAM.
- SINGLE RECEPTACLE, WALL MOUNTED @18" A.F.F. UNDER SINK SPACE. U.O.N.
- DUPLEX RECEPTACLE, WALL MOUNTED @18" A.F.F. U.O.N.
- DUPLEX RECEPTACLE W/ SWITCH CONNECTED, WALL MOUNTED @18" A.F.F. U.O.N.
- DUPLEX RECEPTACLE W/ DEDICATED CKT, WALL MOUNTED @18" A.F.F. U.O.N.
- GFCI: DUPLEX GFI RECEPTACLE, WALL MOUNTED @18" A.F.F.. U.O.N.
- TRIPLE RECEPTACLE, WALL MOUNTED @18" A.F.F. U.O.N.
- QUAD RECEPTACLE, WALL MOUNTED @18" A.F.F. U.O.N.
- DUPLEX RECEPTACLE IN FLOOR MOUNT BOX WITH SERVICE FITTING.
- QUADPLEX RECEPTACLE IN FLOOR MOUNT BOX WITH SERVICE FITTING.
- RECEPTACLE, 20A, 250V, WALL MOUNTED @18" A.F.F. U.O.N.
- SPECIAL RECEPTACLE, SIZE AND NEMA CONFIGURATION AS INDICATED ON DRAWING
- EXHAUST FAN, OR MOTOR LOAD. REFER TO MECHANICAL DRAWINGS FOR SPECIFIC LOAD REQUIREMENTS OR AS NOTED. NUMBER INDICATES HORSEPOWER.
- MULTI OUTLET WIREMOLD. SEE FLOOR PLANS FOR ADDITIONAL INFO.

SWITCHING/DIMMING

- a,b: * WALL MOUNT ROOM OCCUPANCY SENSOR/AUTOMATIC LIGHTING CONTROL SWITCH @48" A.F.F. U.O.N.
- CEILING MOUNT ROOM OCCUPANCY SENSOR/AUTOMATIC LIGHTING CONTROL
- $M: * WALL MOUNT SINGLE POLE SWITCH @48" A.F.F. U.O.N. (POWER)
- $a,b: * WALL MOUNT SINGLE POLE SWITCH @48" A.F.F. U.O.N. (LIGHTING)

* SUBSCRIPTS AT SYMBOL INDICATE THE FOLLOWING.

2 - DOUBLE POLE	P - PILOT LIGHT
3 - THREE WAY	R - REMOTE CONTROL SWITCH
4 - FOUR WAY	M - MOTOR STARTING SWITCH
K - KEY OPERATED	RL - ROTARY LOCK KEY TYPE SWITCH
D - DIMMER	PB - PUSHBUTTON

a,b,c,etc.- INDICATES SWITCHING OF CONNECTED DEVICES W/ COINCIDING SUBSCRIPTS AND NUMBER OF SWITCHES AT LOCATION.

NOTE: ALL WALL SWITCHES CONTROLLING EMERGENCY CIRCUITS SHALL BE ENGRAVED WITH "EMERGENCY"

- DIMMING SYSTEM RECALL STATION
- DIMMING SYSTEM ENTRY STATION WITH PRE SET BUTTONS
- DIMMING MASTER ENTRY STATION WITH PRE SET BUTTONS
- DIMMING SYSTEM CONTROL CONSOLE

CONDUIT/BOXES/MISC.

- JUNCTION BOX, CEILING MOUNTED/ IN ACCESSIBLE CEILING. SIZED PER N.E.C.
- JUNCTION BOX, WALL MOUNTED. FIELD VERIFY MOUNTING HEIGHT PRIOR TO ROUGH-IN. SIZED PER N.E.C.
- THERMOSTAT OUTLET BOX. WALL MTD. @48" A.F.F. PROVIDE 1/2" C.O. TO RESPECTIVE EQUIPMENT.
- AMBIENT LIGHT SENSOR.
- MAGNETIC DOOR HOLDER
- PULLBOX, SIZED PER N.E.C. OR AS NOTED. CONCRETE WITH BOLT DOWN COVER.
- PLYWOOD BACKBOARD FOR TERMINATIONS. SEE PLANS FOR SIZE.
- INDICATES FLEXIBLE CONNECTION TO EQUIPMENT.
- H1B-1(#12): CONDUIT, HOME RUN TO PANEL BOARD H1B, CIRCUIT 1 WITH 12 GAUGE WIRES.
- CONDUIT RUN CONCEALED, IN WALLS, FLOOR, OR ABOVE CEILING.
- CONDUIT RUN CONCEALED BELOW GRADE, 3/4"C MINIMUM.
- —X—: CONDUIT RUN EXPOSED
- —FA—: 3/4" CONDUIT WITH FIRE ALARM CONDUCTORS. SEE FIRE ALARM PLANS.
- CONDUIT STUB OUT, CAP & MARK.
- —I—: 3/4" C. WITH INTERCOMMUNICATION SYSTEM CABLE. U.O.N.
- —C—: 3/4" C. WITH CLOCK SYSTEM CABLE. U.O.N.
- —A—: 3/4" C. WITH AUTONOMOUS SOUND SYSTEM CABLE. U.O.N.
- —TV—: 3/4" C. WITH TELEVISION DISTRIBUTION CABLE. U.O.N.
- —C,I—: 3/4" C. WITH COMBINATION OF CABLES NOTED ABOVE. U.O.N.
- —S—: 3/4" C. WITH INTRUSION ALARM CABLE. U.O.N.
- —D—: 3/4" C. WITH DATA CABLE.

SEE SPECIFICATIONS AND/OR SIGNAL PLANS FOR ALL CABLE REQUIREMENTS.

- BRANCH CIRCUIT WIRING, 2 #12 IN 1/2" CONDUIT OR AS NOTED OR SYMBOLIZED

1/2"C-3 #12	1/2"C-6 #12
1/2"C-4 #12	3/4"C-7 #12
1/2"C-5 #12	3/4"C-8 #12

NOTES:
ALL MOUNTING HEIGHTS ARE ON CENTER. REFER TO FIXTURE SCHEDULE FOR MORE INFORMATION.

PLAN CALL OUT SYMBOLS

(NOT ALL SYMBOLS USED)

- 1A / 100 / 2: LIGHT FIXTURE CALL OUT, "1A" INDICATES FIXTURE TYPE (REFER TO FIXTURE SCHEDULE), "100" INDICATES TOTAL FIXTURE WATTAGE. NUMBER ADJACENT INDICATES QUANTITIES. (NUMBER IS SHOWN FOR BRANCH CIRCUIT PURPOSE ONLY, NOT FOR MATERIAL TAKE-OFF).
- AH / 2: MECHANICAL EQUIPMENT CALLOUT, "AH" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND FULL RATING.
- 3 / E-1: DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.
- (2) PLAN NOTE REFERENCE.
- (4) REVISION REFERENCE.

COMMUNICATIONS SYMBOLS

(NOT ALL SYMBOLS USED)

- DATA OUTLET BOX, ℄ + 18" A.F.F., 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET WITHOUT INSTRUMENT, ℄ +18" A.F.F., 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- DATA OUTLET IN FLOOR BOX WITH SERVICE FITTING. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET IN FLOOR BOX WITH SERVICE FITTING. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- COMBINATION TELEPHONE AND DATA OUTLET IN FLOOR WITH SERVICE FITTING WITH ADMINISTRATIVE TELEPHONE PER SPECS. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET +18" A.F.F. OR AS NOTED WITH ADMINISTRATIVE TELEPHONE, PER SPECIFICATIONS. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET MOUNTED FLUSH IN FLOOR BOX WITH ADMINISTRATIVE TELEPHONE, PER SPECIFICATIONS. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TELEPHONE OUTLET +48" OR AS NOTED WITH STAFF STATION HANDSET, PER SPECIFICATIONS. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- DUPLEX VOICE/DATA TELEPHONE OUTLET WITH STAFF STATION HANDSET PER SPECIFICATIONS AT ℄ 18" A.F.F. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- DUPLEX VOICE/DATA TELEPHONE OUTLET WITH ADMINISTRATIVE STATION HANDSET PER SPECIFICATIONS AT ℄ 18" A.F.F. 4S BOX W/P.R. STUBBED UP TO ACCESSIBLE CEILING SPACE.
- TWO VOICE/DATA OUTLETS WITH RECEPTION TELEPHONE STATION PER SPECIFICATIONS. MOUNT IN CASEWORK PER ARCHITECT.
- B: SURFACE WALL MOUNTED CLOCK, FIELD VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION. "B" INDICATES BATTERY OPERATED ANALOG CLOCK. "D" INDICATES DIGITAL SECONDARY CLOCK REFER TO SPECIFICATIONS. PROVIDE 4/S DP BOX FOR DIGITAL CLOCK
- C D: RECESSED DIGITAL CLOCK PER SPECIFICATIONS
- TV: TELEVISION OUTLET.
- S: SURFACE WALL MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
- S: SURFACE MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
- WEATHERPROOF, VANDALPROOF FLUSH MOUNTED P.A. SPEAKER, WALL MOUNTED +8'-0" A.F.F. "ET" INDICATES EXTENDED THROW TYPE PER SPECS.
- M: MICROPHONE OUTLET MOUNTED FLUSH IN FLOOR.
- M: MICROPHONE OUTLET WALL MOUNTED +18" A.F.F. OR AS NOTED.
- S: CEILING FLUSH MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
- FLUSH MOUNTED CLOCK, SPEAKER COMBINATION PER SPECIFICATIONS.
- V: WALL MOUNTED VOLUME CONTROL.
- FLUSH MOUNTED LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- SURFACE MOUNTED LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
- TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED

DRAWING LIST

E0.0	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
E0.1	SINGLE LINE DIAGRAM
E0.2	PANEL SCHEDULES
E0.3	TITLE 24 DOCUMENTS-INDOOR
E0.4	TITLE 24 DOCUMENTS-OUTDOOR
E0.5	LIGHTING CONTROL PANEL (LCP) SCHEDULE
E1.0	ELECTRICAL SITE PLAN
E1.1	LIGHTING SITE PLAN
EA2.0	BUILDING A POWER PLAN
EB2.1	BUILDING B SEGMENT A POWER PLAN
EB2.2	BUILDING B SEGMENT B POWER PLAN
EA3.0	BUILDING A LIGHTING PLAN
EB3.1	BUILDING B SEGMENT A LIGHTING PLAN
EB3.2	BUILDING B SEGMENT B LIGHTING PLAN
EA4.0	BUILDING A ROOF POWER PLAN
EB4.1	BUILDING B SEGMENT A ROOF POWER PLAN
EB4.2	BUILDING B SEGMENT B ROOF POWER PLAN
EA5.1	BUILDING A SEGMENT A PHOTOMETRIC STUDY
EA5.2	BUILDING A SEGMENT B PHOTOMETRIC STUDY
EB5.3	BUILDING B SEGMENT A-1&2 PHOTOMETRIC STUDY
EB5.4	BUILDING B SEGMENT PHOTOMETRIC STUDY
E5.5	BUILDING A & B COURTYARD PHOTOMETRIC STUDY

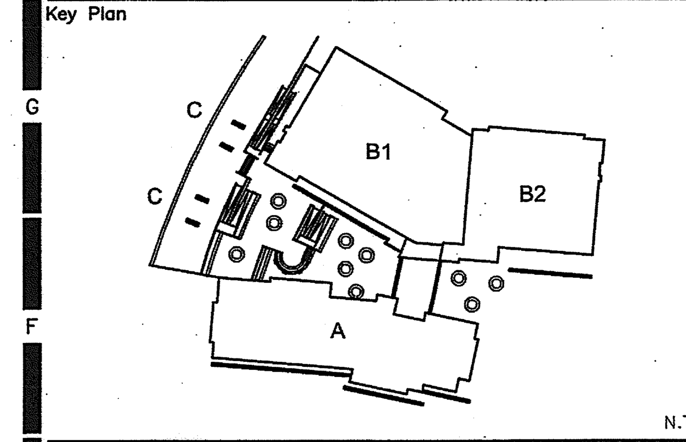
TRUE NORTH

HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 FAX: 714-505-7050 LICENSE NO. 724633

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A.J. KIRKWOOD & ASSOC. INC.
LICENSE No. C10-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

(SM) HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07

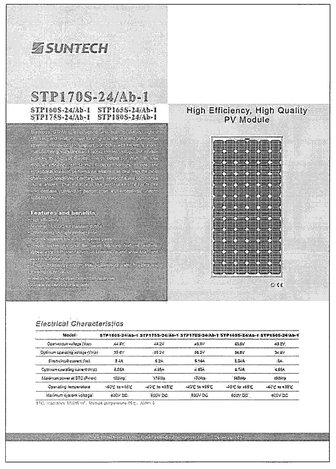
Drawing Title
GENERAL NOTES, ABBREVIATIONS AND SYMBOLS

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Stuart McKnight	Project No. 2340001
Drawn: Stuart McKnight	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	E0.0
Date: 06-22-07	Sheet 1 of ## 21

SOLAR MODULE



SUNTECH

STP170S-24/Ab-1

STP165S-24/Ab-1 STP165S-24/Ab-1
STP175S-24/Ab-1 STP180S-24/Ab-1

High Efficiency, High Quality PV Module

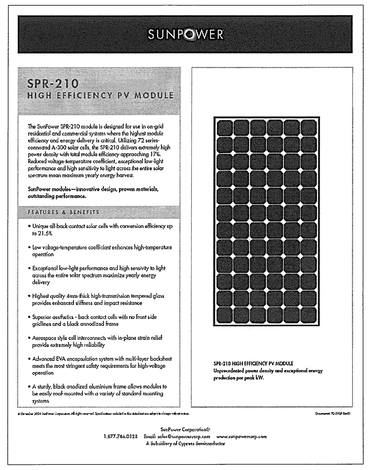
Features and benefits

Electrical Characteristics

Model	STP165S-24/Ab-1	STP175S-24/Ab-1	STP175S-24/Ab-1	STP180S-24/Ab-1	STP180S-24/Ab-1
Open-circuit voltage (Voc)	44.8V	44.2V	45.8V	45.6V	46.0V
Optimum operating voltage (Vmp)	37.6V	37.2V	38.2V	38.0V	38.4V
Short circuit current (Isc)	5.1A	5.2A	5.14A	5.3A	5A
Optimum operating current (Imp)	4.85A	4.95A	4.85A	4.75A	4.85A
Maximum power at STC (Pmax)	165W	175W	175W	180W	180W
Operating temperature	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Maximum system voltage	600V DC	600V DC	600V DC	600V DC	600V DC

STC: Irradiance 1000W/m², Module temperature 25°C, AM=1.5

SOLAR MODULE



SUNPOWER

SPR-210
HIGH EFFICIENCY PV MODULE

The SunPower SPR-210 module is designed for use in on-grid residential and commercial systems where the highest module efficiency and energy delivery is critical. Utilizing 72 series connected A-300 solar cells, the SPR-210 delivers extremely high power density with total module efficiency approaching 17%. Reduced voltage temperature coefficient, exceptional low-light performance and high sensitivity to light across the entire solar spectrum mean maximum yearly energy harvest.

SunPower modules—innovative design, proven materials, outstanding performance.

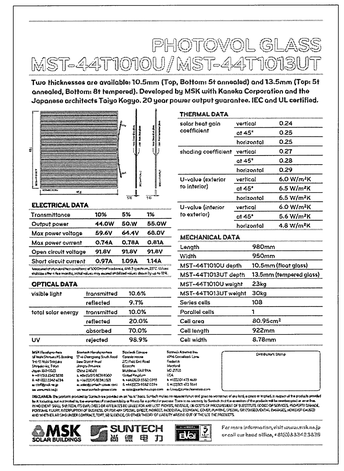
FEATURES & BENEFITS

- Unique all-back contact solar cells with conversion efficiency up to 21.5%
- Low voltage-temperature coefficient enhances high-temperature operation
- Exceptional low-light performance and high sensitivity to light across the entire solar spectrum maximize yearly energy delivery
- Highest quality: dense-thick high-transmission tempered glass provides enhanced stiffness and impact resistance
- Superior aesthetics - back contact cells with no front side gridlines and a black anodized frame
- Aerospace style cell interconnects with in-plane strain relief provide extremely high reliability
- Advanced EVA encapsulation system with multi-layer backsheet meets the most stringent safety requirements for high-voltage operation
- A sturdy black anodized aluminum frame allows modules to be easily mod-mounted with a variety of standard mounting systems

SPR-210 HIGH EFFICIENCY PV MODULE
Unprecedented power density and exceptional energy production per peak kW.

SunPower Corporation®
1.877.786.0123 Email: sales@sunpowercorp.com www.sunpowercorp.com
A Subsidiary of Cypress Semiconductor

BUILDING INTERGRATED PHOTOVOLTAIC



PHOTOVOL GLASS
MST-44T1010U/MST-44T1013UT

Two thicknesses are available: 10.5mm (Top, Bottom: 5t annealed) and 13.5mm (Top: 5t annealed, Bottom: 8t tempered). Developed by MSK with Kaneka Corporation and the Japanese architects Taiyo Kogyo. 20 year power output guarantee. IEC and UL certified.

ELECTRICAL DATA

Transmittance	10%	5%	1%
Output power	44.0W	50.W	55.0W
Max power voltage	59.6V	64.4V	68.0V
Max power current	0.74A	0.78A	0.81A
Open circuit voltage	91.8V	91.8V	91.8V
Short circuit current	0.97A	1.09A	1.14A

Measurement under conditions of 1000w/m² radiation, AM 1.5 spectrum, 25°C cell temperature. Pmax tolerance +/-5%. Voc, Isc, Vmp, Imp values are typical values. Short Circuit at 0.75 Isc

OPTICAL DATA

visible light	transmitted	10.6%
	reflected	9.7%
total solar energy	transmitted	10.0%
	reflected	20.0%
	absorbed	70.0%
UV	rejected	98.9%

THERMAL DATA

solar heat gain coefficient	vertical	0.24
	at 45°	0.25
	horizontal	0.25
shading coefficient	vertical	0.27
	at 45°	0.28
	horizontal	0.29
U-value (exterior to interior)	vertical	6.0 W/m²K
	at 45°	6.5 W/m²K
	horizontal	6.5 W/m²K
U-value (interior to exterior)	vertical	6.0 W/m²K
	at 45°	5.6 W/m²K
	horizontal	4.8 W/m²K

MECHANICAL DATA

Length	980mm
Width	950mm
MST-44T1010U depth	10.5mm (float glass)
MST-44T1013UT depth	13.5mm (tempered glass)
MST-44T1010U weight	23kg
MST-44T1013UT weight	30kg
Series cells	108
Parallel cells	1
Cell area	80.95cm²
Cell length	922mm
Cell width	8.78mm

MSK (Headquarters)
4F Nihonbashi-Hakozaki Building
14-10 Hori-Dorigawa
Chuo-ku, Tokyo
Japan 103-0027
T +81-(0)3-5642-5818
F +81-(0)3-5642-5819
E info@msk-sb.co.jp
W www.msk-sb.co.jp

Kaneka Corporation
Shinsen Building
Sakai-Dori 2-1-17
Kita-ku, Osaka
Japan 530-0003
T +81-(0)6-6226-5000
F +81-(0)6-6226-5009
E kaneka@kanekaglass.com

Kaneka Europe
Kaneka Europe
Gulledelle 100
B-1200 Brussel
Belgium
T +32-(0)2-772-9960
F +32-(0)2-772-9961
E info@kanekaeurope.com

Kaneka America Inc.
4950 Varsity Drive
Pleasanton
Ca
T +1-(925)-475-9600
F +1-(925)-475-9601
E info@kanekaamerica.com

Dimension Stone

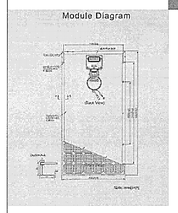
DISCLAIMER: The contents provided by Kaneka are provided on an "as is" basis. Kaneka makes no representations and gives no warranties of any kind, express or implied, in respect of the products provided by Kaneka, nor is Kaneka to be construed to be warranties of merchantability or fitness for a particular purpose. There is no warranty by Kaneka that the exercise of the products will be exercised or free of any third party patent, copyright, trademark or other intellectual property rights. Kaneka shall not be liable for any loss or damage (including, without limitation, any loss of profits, loss of business, loss of data, loss of goodwill, business interruption, loss of anticipated savings, loss of opportunity, loss of revenue, or any interruption of business, or for any other special, direct, indirect, incidental, economic, exempt, punitive, penal, or consequential damages) arising out of, or in connection with, the use of the products.

MSK SOLAR BUILDINGS | SUNTECH 尚德电力 | ELS

For more information, visit www.msk-sb.co.jp or call our head office, +81(0)3-5642-5818

SUNTECH

Module Diagram



Specifications

Cell	156mm×156mm Solar cells Crystalline silicon
No. of cells and connections	72(6×12)
Dimension of module	1580mm×808mm×35mm
Weight	15.0kg

Temperature Coefficients

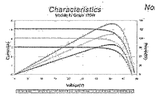
NOCT	45±2°C
Short-circuit current temperature coefficient	0.07%/K
Open-circuit output temperature coefficient	-0.34~ 5/K
Peak power temperature coefficient	-0.45 %/K
Power tolerance	±5%

NOCT: Nominal Operating Cell temperature (with 1kW/m² irradiation)

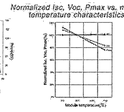
Output

Cable	AWG12(2MM)
Length	1200mm(+)and 900mm(-)
Connector	MC Plug Type IV

Characteristics
Module Ri Group 170W



Normalized Isc, Voc, Pmax vs. module temperature characteristics

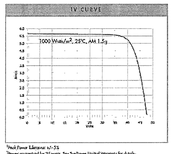


SUNPOWER

ELECTRICAL CHARACTERISTICS AT STANDARD TEST CONDITIONS (STC)
STC is defined as: irradiance of 1000W/m², spectrum AM 1.5g, and cell temperature of 25°C

Peak Power [1]	P_{max}	210W
Rated Voltage	V_{mp}	40.0V
Rated Current	I_{mp}	5.25A
Open Circuit Voltage	V_{oc}	47.8V
Short Circuit Current	I_{sc}	5.65A
Series Fuse Rating		15A
Maximum System Voltage		600V (UL)
		1000V (IEC)
Temperature Co-efficients	Power	-0.38%/°C
	Voltage	-136.8mV/°C
	Current	2.2mA/°C
Module Efficiency		16.7%
PTC Rating		190.0W

IV CURVE

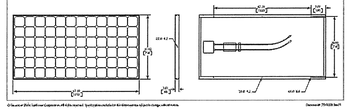


[1] Peak Power Tolerance +/-5%
[2] Power guaranteed for 20 years. See SunPower Limited Warranty for details.

MECHANICAL SPECIFICATIONS

Length (mm) x Width (mm)	1559 x 798
Thickness, including junction box (mm)	46
Weight (kg)	16

DIMENSIONS



SunPower Corporation®
1.877.786.0123 Email: sales@sunpowercorp.com www.sunpowercorp.com
A Subsidiary of Cypress Semiconductor

NOTES:

1. NONE.

AS BUILT

REV. NO.	DESCRIPTION	DATE	BY
D	AS BUILT	09.02.08	JCN
A	FOR SUBMITTAL	02.29.08	JTG

EI Solutions™
an Energy Innovations Company
2171 Francisco Blvd. Suite H, San Rafael, CA 94901
www.eispv.com

Orange Terrace Library

PROJECT: SOLAR PHOTOVOLTAIC SYSTEM

DRAWING: EQUIPMENT SPECIFICATIONS

PROJ. MGR. --
PROJ. ENGR. --
SCALE: AS NOTED

DRAWING NO. E-301

THIS PRINT IS NOT TO BE USED FOR CONSTRUCTION UNLESS NOTED AND SIGNED OK FOR CONSTRUCTION ABOVE LAST REVISION.

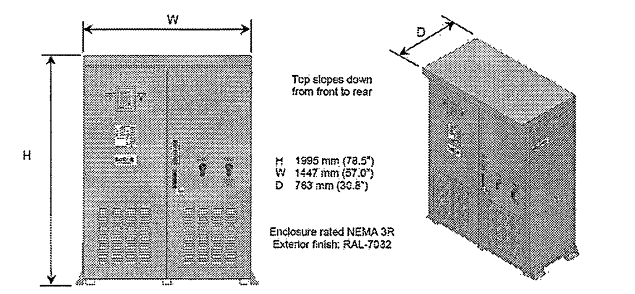
ANSI D SIZE - 34"x22"

INVERTER

SatCon Power Systems

POWERGATE® PLUS
North American 75kW Photovoltaic Inverter

PowerGate® Plus Inverters are the next generation of PowerGate® Inverters for commercial and large-scale grid connected photovoltaic power systems that have become recognized for their reliability, energy efficiency and ease-of-use. The 75kW PowerGate Plus Inverter incorporates many of the features of the original PowerGate Inverter **plus** several improvements that add further value to photovoltaic power systems.



Extended Energy Harvesting
High efficiency (low energy loss) inverter design • Both AC and DC switchgear to disconnect the inverter at night, minimizing standby (tare) losses • State of the art maximum power point tracking (MPPT) algorithm • Wide input voltage range • Intelligent wake-up routine.

Durability
Liberally rated for full power over MPPT voltage range • Proprietary NEMA 3R enclosure design constructed from long-life G-90 galvanized steel • Sloped roof to direct rain water to the rear of the enclosure • Industrial grade design including conformal coated, IPC Class III electronic printed circuit boards with components rated - 40° C to plus 85° C • Inverter film capacitors with a 25-year design life • Power magnetic components with a low temperature rise for long-life operation with continual cycling by the photovoltaic power plant • Desert, cold weather, coastal (mild salt humidity) and harsh environment options • Soft start feature to minimize AC in-rush current and potentially harmful grid disturbances.

Easy Installation and Use
Single-enclosure solution with multiple cable access locations to minimize field wiring • Enclosure designed for handling by pallet jack, fork lift or sling/crane • Optional PV Zone™ integrated sub-array combiner with current monitoring • Advanced human machine interface (HMI) with display visible in sunlight and membrane keypad for easy identification of power system status and inverter setup • Optional electronic ground fault detector/interrupter (EGFDI) eliminating the need to replace fuses in the event of nuisance ground faults in the photovoltaic power system; the EGFDI also has a tighter trip curve further limiting current in the event of a ground fault • Insensitive to AC phase rotation • DC polarity detection and protection • 208/240VAC version connectable in field to either voltage.

Safety and Standards
Integrated DC two-pole disconnect switch to isolate the inverter (other than GFDI circuit) from the photovoltaic power system during inverter inspection or maintenance • Protective cover over exposed power connections • Certified to UL1741 and CSA 107.1-01 • Tested according to IEEE 1547 including IEEE C62.41.2

Grid Interface
Output transformer for galvanic isolation and to match the inverter output voltage to the grid • High-speed anti-islanding algorithm.

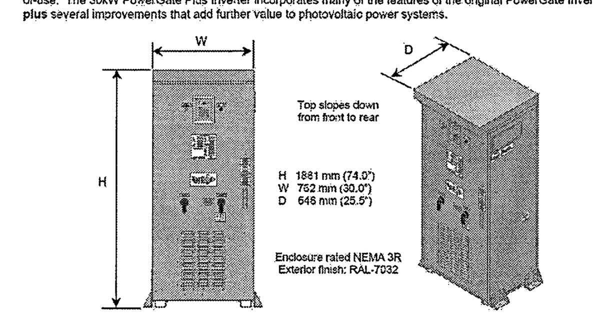
Copyright © 2008 by SatCon Power Systems, All rights reserved

INVERTER

SatCon Power Systems

POWERGATE® PLUS
North American 30kW Photovoltaic Inverter

PowerGate® Plus Inverters are the next generation of PowerGate® Inverters for commercial and large-scale grid connected photovoltaic power systems that have become recognized for their reliability, energy efficiency and ease-of-use. The 30kW PowerGate Plus Inverter incorporates many of the features of the original PowerGate Inverter **plus** several improvements that add further value to photovoltaic power systems.



Extended Energy Harvesting
High efficiency (low energy loss) inverter design • Both AC and DC switchgear to disconnect the inverter at night, minimizing standby (tare) losses • State of the art maximum power point tracking (MPPT) algorithm • Wide input voltage range • Intelligent wake-up routine.

Durability
Liberally rated for full power over MPPT voltage range • Proprietary NEMA 3R enclosure design constructed from long-life G-90 galvanized steel • Sloped roof to direct rain water to the rear of the enclosure • Industrial grade design including conformal coated, IPC Class III electronic printed circuit boards with components rated - 40° C to plus 85° C • Inverter film capacitors with a 25-year design life • Power magnetic components with a low temperature rise for long-life operation with continual cycling by the photovoltaic power plant • Desert, cold weather, coastal (mild salt humidity) and harsh environment options • Soft start feature to minimize AC in-rush current and potentially harmful grid disturbances.

Easy Installation and Use
Single-enclosure solution with multiple cable access locations to minimize field wiring • Enclosure designed for handling by pallet jack, fork lift or sling/crane • Optional PV Zone™ integrated sub-array combiner with current monitoring • Advanced human machine interface (HMI) with display visible in sunlight and membrane keypad for easy identification of power system status and inverter setup • Optional electronic ground fault detector/interrupter (EGFDI) eliminating the need to replace fuses in the event of nuisance ground faults in the photovoltaic power system; the EGFDI also has a tighter trip curve further limiting current in the event of a ground fault • Insensitive to AC phase rotation • DC polarity detection and protection • 208/240VAC version connectable in field to either voltage.

Safety and Standards
Integrated DC two-pole disconnect switch to isolate the inverter (other than GFDI circuit) from the photovoltaic power system during inverter inspection or maintenance • Protective cover over exposed power connections • Certified to UL1741 and CSA 107.1-01 • Tested according to IEEE 1547 including IEEE C62.41.2

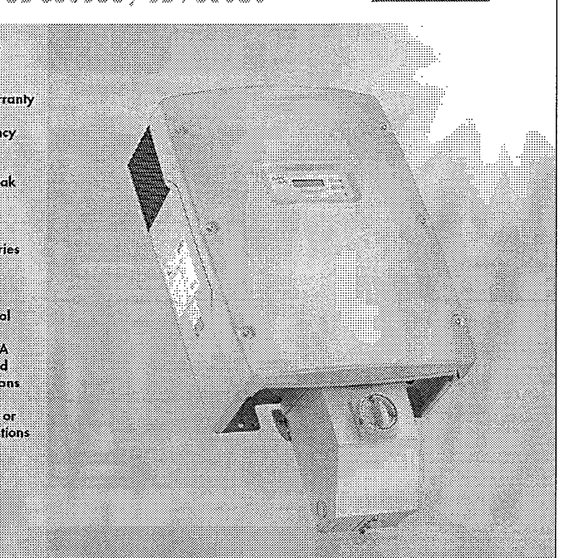
Grid Interface
Output transformer for galvanic isolation and to match the inverter output voltage to the grid • High-speed anti-islanding algorithm.

Copyright © 2008 by SatCon Power Systems, All rights reserved

INVERTER

SB 5000US / SB 6000US / SB 7000US

SMA



> Certified to the new UL 1741/IEEE 1547
> 10 yr. standard warranty
> Highest CEC efficiency in its class
> Integrated load-break rated AC and DC disconnect switch
> Integrated fused series string combiner
> Sealed electronics enclosure & Opticool
> Comprehensive SMA communications and data collection options
> Ideal for residential or commercial applications
> Sunny Tower compatible

Sunny Boy 5000 / 6000 / 7000
The best in their class

SMA is proud to introduce our new line of inverters updated with our latest technology and designed specifically to meet the new IEEE 1547 requirements. The SB6000U and SB7000U are also compatible with SMA's new Sunny Tower. Increased efficiency means better performance and shorter payback periods. All three models are field-configurable for positive ground systems making them more versatile than ever. With over 500,000 fielded units, Sunny Boy has become the benchmark for PV inverter performance and reliability throughout the world.

c UL us

SatCon Power Systems

POWERGATE® PLUS
North American 75kW Photovoltaic Inverter

Monitoring
Extensive monitoring when supplied with SatCon's proprietary PV View™ Plus monitoring system (details supplied in separate bulletin) • Compatible with third party monitoring systems (consult factory for details).

Specifications:

75kW PVS-75	208/240V	480V
Output Parameter		
Nominal Continuous Power	75kW	75kW
Nominal Voltage	208/240VAC	480VAC
Voltage Range	+10%/-12%	+10%/-12%
Nominal Current	208/180A	90A
Maximum Electronic Overcurrent Protection	250/218A	108A
Nominal Frequency	60Hz	60Hz
Number of Phases	3	3
Power Factor, at Full Load	> 0.99	> 0.99
Power Factor, Adj Range	0.8 lag to 0.8 lead	0.8 lag to 0.8 lead
Maximum Efficiency	96.5% Design Target	96.5% Design Target
CEC Weighted Efficiency	96% Design Target	96% Design Target
Current Harmonics	<3%	<3%
Input Parameter		
Nominal MPPT Voltage Range	305 - 600VDC	305 - 600VDC
Maximum MPPT Voltage Range on Optional Lower Transformer Tap (full power at nominal grid voltage)	275 – 600VDC	275 – 600VDC
Current Range	0 – 259A	0 – 259A
Options (Consult Factory)	600 VAC	

FEATURES	Standard	Options
Combiner Parameter		
Number Inputs & Fuse Rating	Not Included	5 x 100ADC or 6 x 80ADC
Zone Monitoring	Not Included	PV Zone™
Enclosure Parameter		
Outdoor - Degree of Protection	NEMA 3R	Extreme Env. Package - NEMA 4X (refer to factory)
Indoor - Degree of Protection	NEMA 1	
Mounting	Vertical	
Finish	Powder Coat: RAL-7032	
Material	G90 Steel	Refer to Env. Package Bulletin
Dimensions: H	1995 mm (78.5 inch)	Refer to Env. Package Bulletin
W	1447 mm (57.0 inch)	Refer to Env. Package Bulletin
D	783 mm (30.8 inch)	Refer to Env. Package Bulletin
Weight	Approx. 2600 lbs	
Environment Parameter		
Operating Temp. Range	-20°C to 50°C	
Cooling Method	Forced Air	Forced Air or Closed Loop dependent on Env. Package
Storage Temp. Range	-30°C to 70°C	
Outdoor Environmental Packages (refer to separate product bulletin for details)	Temperate Package	Desert Package Cold Weather Package Coastal Package Extreme Env. Package (refer to factory)
Other		
Seismic Rating	Zone 4	
120V Courtesy Power	Not Included	
DC Ground Fault Detector/Interrupter	3 A Fuse	Electronic Design (EGFDI)
Monitoring		
SatCon Proprietary Package	Not Included	PV View™ Plus (see separate bulletin for details)
3rd Party	Not Included	Installation of 3rd Party Gateway

Specifications are subject to change without notice. Contact SatCon Power Systems for complete details.

SatCon Power Systems

POWERGATE® PLUS
North American 30kW Photovoltaic Inverter

Monitoring
Extensive monitoring when supplied with SatCon's proprietary PV View™ Plus monitoring system (details supplied in separate bulletin) • Compatible with third party monitoring systems (consult factory for details).

Specifications:

30kW PVS-30	208/240V	480V
Output Parameter		
Nominal Continuous Power	30kW	30kW
Nominal Voltage	208/240VAC	480VAC
Voltage Range	+10%/-12%	+10%/-12%
Nominal Current	83/72 A	36A
Maximum Electronic Overcurrent Protection	100/85A	44A
Nominal Frequency	60Hz	60Hz
Number of Phases	3	3
Power Factor, at Full Load	> 0.99	> 0.99
Power Factor, Adj Range	0.8 lag to 0.8 lead	0.8 lag to 0.8 lead
Maximum Efficiency	95.7%	95.6%
CEC Weighted Efficiency	95.0%	95.0%
Current Harmonics	<3%	<3%
Input Parameter		
Nominal MPP Voltage Range	305 - 600VDC	305 - 600VDC
Maximum MPPT Voltage Range on Optional Lower Transformer Tap (full power at nominal grid voltage)	275 – 600VDC	275 – 600VDC
Current Range	0 - 104A	0 - 104A
Options (Consult Factory)	600 VAC	

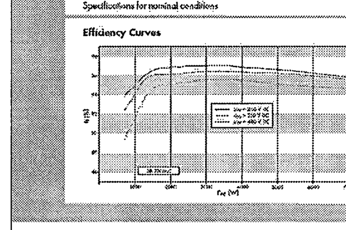
FEATURES	Standard	Options
Combiner Parameter		
Number Inputs & Fuse Rating	Not Included	4 x 50ADC or 5 x 40ADC
Zone Monitoring	Not Included	PV Zone™
Enclosure Parameter		
Outdoor - Degree of Protection	NEMA 3R	Extreme Env. Package - NEMA 4X (refer to factory)
Indoor - Degree of Protection	NEMA 1	
Mounting	Vertical	
Finish	Powder Coat: RAL-7032	
Material	G90 Steel	Refer to Env. Package Bulletin
Dimensions: H	1881 mm (74.0 inch)	Refer to Env. Package Bulletin
W	762 mm (30.0 inch)	Refer to Env. Package Bulletin
D	646 mm (25.5 inch)	Refer to Env. Package Bulletin
Weight	Approx. 1204 lbs	
Environment Parameter		
Operating Temp. Range	-20°C to 50°C	
Cooling Method	Forced Air	Forced Air or Closed Loop dependent on Env. Package
Storage Temp. Range	-30°C to 70°C	
Outdoor Environmental Packages (refer to separate product bulletin for details)	Temperate Package	Desert Package Cold Weather Package Coastal Package Extreme Env. Package (refer to factory)
Other		
DC Ground Fault Detector/Interrupter	2 A Fuse	Electronic Design (EGFDI)
Monitoring		
SatCon Proprietary Package	Not Included	PV View™ Plus (see separate bulletin for details)
3rd Party	Not Included	Installation of 3rd Party Gateway

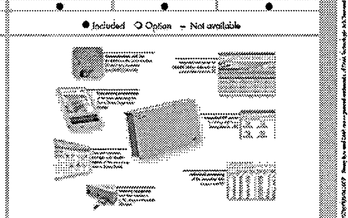
Specifications are subject to change without notice. Contact SatCon Power Systems for complete details.

Technical Data
Sunny Boy 5000 / 6000 / 7000

	SB 5000US	SB 6000US	SB 7000US
Input Data (DC)			
Max. Recommended Array Input Power (DC @ STC)	6250 W	7500 W	8750 W
Max. DC Voltage	600 V	600 V	600 V
Peak Power Tracking Voltage	250 - 480 V	250 - 480 V	250 - 480 V
DC Max. Input Current	21 A	25 A	30 A
DC Voltage Ripple	< 5%	< 5%	< 5%
Number of Fused String Inputs	4	4	4
PV Start Voltage (adjustable)	300 V	300 V	300 V
Output Data (AC)			
AC Nominal Power	5000 W	6000 W	7000 W
AC Maximum Output Power	5000 W	6000 W	7000 W
AC Maximum Output Current (@ 208, 240, 277 V)	24 A, 20.8 A, 18 A	29 A, 25 A, 21.6 A	34 A, 29 A, 25.3 A
AC Nominal Voltage / Range	183 - 229 V @ 208 V 211 - 264 V @ 240 V 244 - 305 V @ 277 V	183 - 229 V @ 208 V 211 - 264 V @ 240 V 244 - 305 V @ 277 V	183 - 229 V @ 208 V 211 - 264 V @ 240 V 244 - 305 V @ 277 V
AC Frequency / Range	60 Hz / 59.3 Hz - 60.5 Hz	60 Hz / 59.3 Hz - 60.5 Hz	60 Hz / 59.3 Hz - 60.5 Hz
Power Factor	1	1	1
Efficiency			
Peak Inverter Efficiency	96.8 %	97.0 %	97.1 %
CEC weighted Efficiency	95.5 % @ 208 V 95.5 % @ 240 V 95.5 % @ 277 V	95.5 % @ 208 V 95.5 % @ 240 V 96.0 % @ 277 V	95.5 % @ 208 V 96.0 % @ 240 V 96.0 % @ 277 V
Mechanical Data			
Dimensions W x H x D in inches	18.4 x 24.1 x 9.5	18.4 x 24.1 x 9.5	18.4 x 24.1 x 9.5
Weight / Shipping Weight	143 lbs / 154 lbs	143 lbs / 154 lbs	143 lbs / 154 lbs
Ambient temperature range	-13 to +113 °F	-13 to +113 °F	-13 to +113 °F
Power Consumption: standby / nighttime	< 7 W / 0.25 W	< 7 W / 0.25 W	< 7 W / 0.25 W
Topology	PWM, true sinewave, current source	PWM, true sinewave, current source	PWM, true sinewave, current source
Cooling Concept	Convection with regulated fan cooling	Convection with regulated fan cooling	Convection with regulated fan cooling
Mounting Location Indoor / Outdoor (NEMA 3R)	●/●	●/●	●/●
Features			
LCD Display	●	●	●
Lid Color: aluminum / red / blue / yellow	●/○/○/○	●/○/○/○	●/○/○/○
Communication: RS485 / Wireless	○/○	○/○	○/○
Warranty: 10-year	●	●	●
Compliance: IEEE-929, IEEE-1547, UL 1741, UL 1998, FCC Part 15 A & B	●	●	●
Specifications for nominal conditions	● Included ○ Option – Not available		

Efficiency Curves





www.sma-america.com
Phone 530-273-4895
Toll Free 888-4SMAUSA

SMA America, Inc.

ANSI D SIZE - 34"x22"

AS BUILT

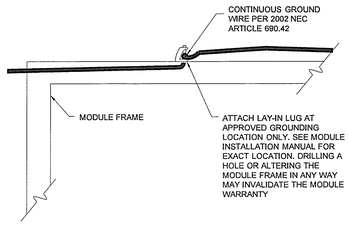
REV. NO.	DESCRIPTION	DATE	BY
D	AS BUILT	09.02.08	JCN
A	FOR SUBMITTAL	02.29.08	JTG

EI Solutions™
an Energy Innovations Company
2171 Francisco Blvd. Suite H, San Rafael, CA 94901
www.eispv.com

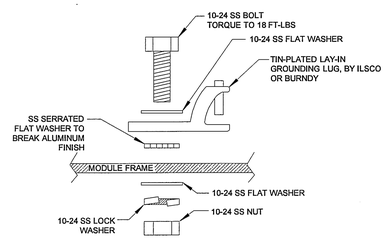
Orange Terrace Library

PROJECT: SOLAR PHOTOVOLTAIC SYSTEM
DRAWING: EQUIPMENT SPECIFICATIONS
PROJ. MGR.: –
PROJ. ENGR.: –
SCALE: AS NOTED
DRAWING NO. **E-300**

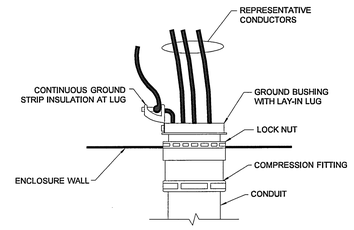
THIS PRINT IS NOT TO BE USED FOR CONSTRUCTION UNLESS NOTED AND SIGNED OK FOR CONSTRUCTION ABOVE LAST REVISION.



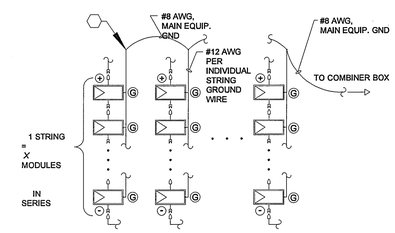
A GROUNDING DETAIL: MODULE FRAME
SCALE:NTS



B GROUNDING DETAIL: LAY-IN LUG
SCALE:NTS



C GROUNDING DETAIL: CONDUIT BODY
SCALE:NTS



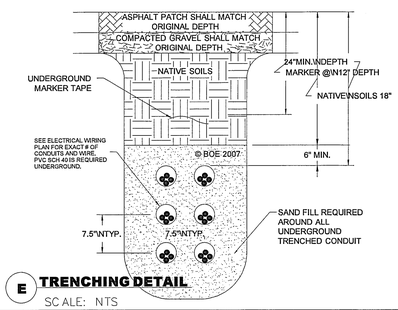
D ARRAY/COMBINER BOX GROUNDING
SCALE:NTS

NOTES:

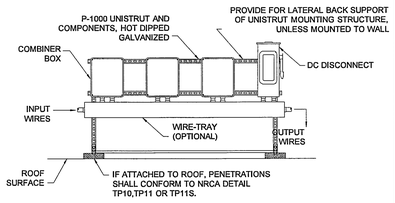
1. SEE GENERAL NOTES ON DRAWING T-101.

KEYED NOTES:

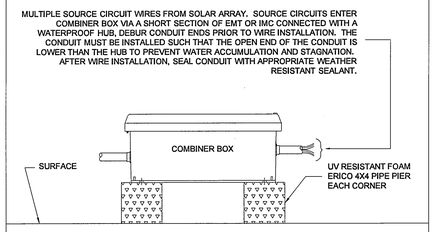
1. A MAXIMUM OF 11 SOURCE CIRCUITS MAY CONNECT TO A MAIN EQUIPMENT GROUND CONDUCTOR, AS SHOWN. THE INDIVIDUAL STRINGS MAY CONNECT TO THE MAIN #8AWG GROUND VIA A #12AWG GROUND OR DIRECTLY VIA THE #8AWG GROUND WITH A DAISY CHAIN TYPE ROUTING. ALL EQUIPMENT GROUNDING CONNECTIONS SHALL BE MADE IN COMPLIANCE WITH NEC ARTICLE 250.
2. EQUIPMENT PAD: USE STRUCTURAL CONCRETE, MINIMUM 3000 PSI COMPRESSIVE STRENGTH. THE CONCRETE PAD SHALL BE 4"X66"X36" (MIN.). THE PAD SHALL BE POURED DIRECTLY ON TOP OF THE EXISTING CONCRETE SURFACE. VERTICAL REBAR SHALL BE DREIVEN A MINIMUM OF 12" INTO THE EXISTING SURFACE AT PAD EDGES. REINFORCING BAR SHALL BE #4 EVERY 12" O.C. IN EACH DIRECTION. TIE ALL CROSSING REBAR WITH STEEL TIE WIRE. ANCHOR INVERTER PER PRODUCT SPECIFICATIONS.
3. EQUIPMENT PAD: USE STRUCTURAL CONCRETE, MINIMUM 3000 PSI COMPRESSIVE STRENGTH. THE CONCRETE PAD SHALL BE 4"X34"X30" (MIN.). THE PAD SHALL BE POURED DIRECTLY ON TOP OF THE EXISTING CONCRETE SURFACE. VERTICAL REBAR SHALL BE DREIVEN A MINIMUM OF 12" INTO THE EXISTING SURFACE AT PAD EDGES. REINFORCING BAR SHALL BE #4 EVERY 12" O.C. IN EACH DIRECTION. TIE ALL CROSSING REBAR WITH STEEL TIE WIRE. ANCHOR INVERTER PER PRODUCT SPECIFICATIONS.
4. THE PV SYSTEM MAIN AC DISCONNECT SHALL BE LOCATED SO THE TAP CONDUCTORS CONNECTING TO THE BUILDING EXISTING ELECTRICAL SWITCHGEAR SHALL BE 10' OR LESS, PER NEC 240.21(B)(1).



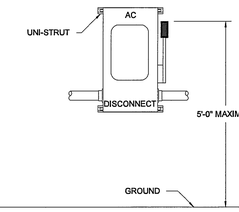
E TRENCHING DETAIL
SCALE: NTS



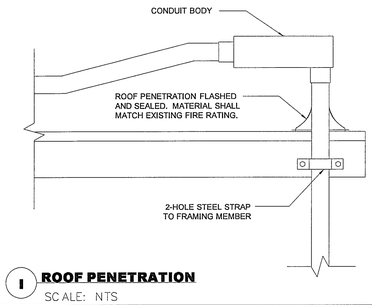
F DC EQUIPMENT MOUNTING DETAIL - OPTION
SCALE: NTS



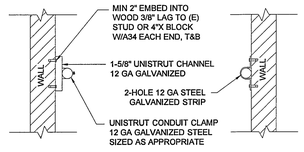
G COMBINER BOX MOUNTING
SCALE: NTS



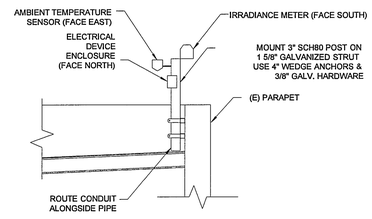
H AC DISCONNECT MOUNTING
SCALE: NTS



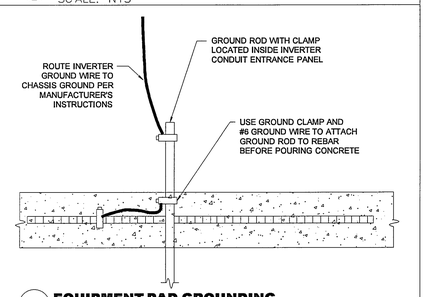
I ROOF PENETRATION
SCALE: NTS



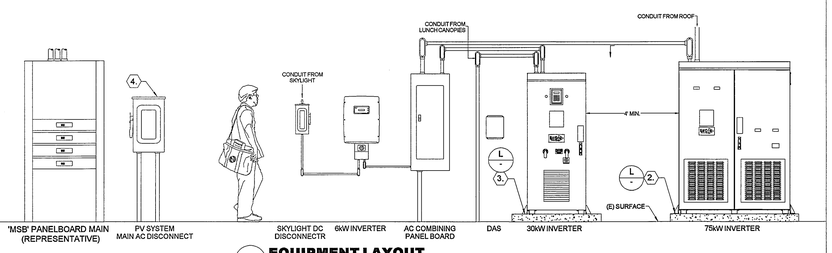
J CONDUIT MOUNTING
SCALE: NTS



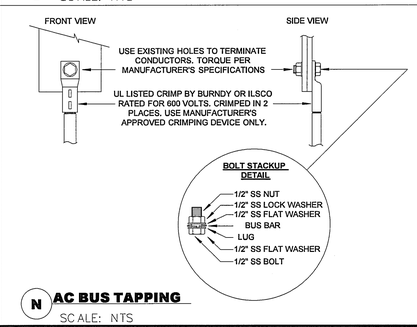
K WEATHER MONITORING EQUIPMENT
SCALE: NTS



L EQUIPMENT PAD GROUNDING
SCALE: NTS



M EQUIPMENT LAYOUT
SCALE: NTS



N AC BUS TAPPING
SCALE: NTS

AS BUILT

REV. NO.	DESCRIPTION	DATE	BY
D	AS BUILT	09.02.08	JCN
A	FOR SUBMITTAL	02.29.08	JTG

EI Solutions™
an Energy Innovations Company
2171 Francisco Blvd. Suite H, San Rafael, CA 94901
www.eispv.com

Orange Terrace Library

PROJECT: SOLAR PHOTOVOLTAIC SYSTEM

DRAWING: ELECTRICAL DETAILS

PROJ. MGR. – | PROJ. ENGR. – | SCALE: AS NOTED

DRAWING NO. E-200

THIS PRINT IS NOT TO BE USED FOR CONSTRUCTION UNLESS NOTED AND SIGNED OK FOR CONSTRUCTION ABOVE LAST REVISION.

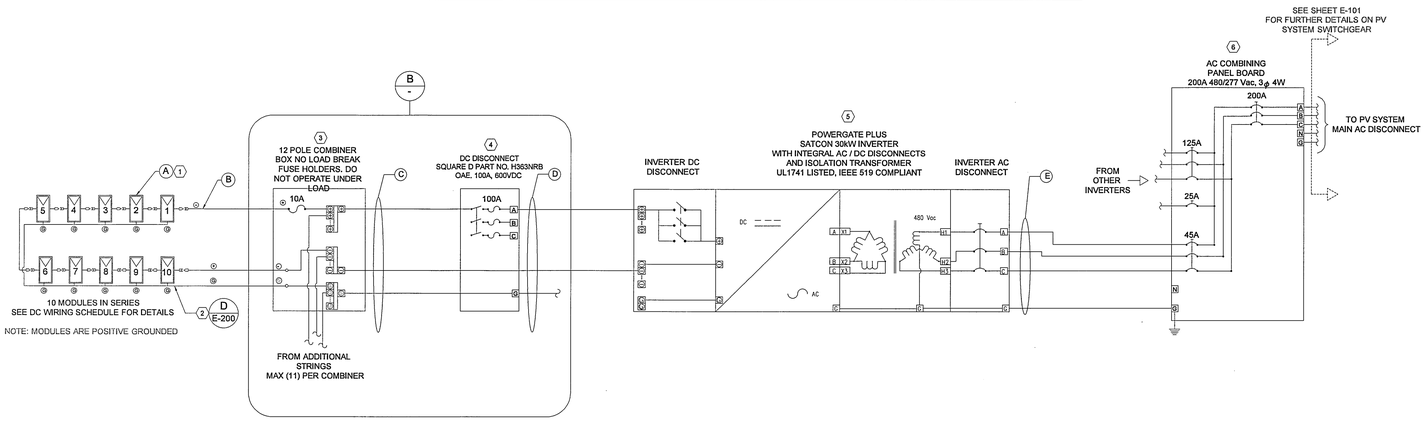
ANSI D SIZE - 34"x22"

DC WIRE AND CONDUIT SCHEDULE

	DESCRIPTION		LOCATION ID	OPEN CIRCUIT VOLTAGE (VOC)	MAX POWER VOLTAGE (VMP)	SHORT CIRCUIT CURRENT (ISC)	MAX POWER CURRENT (IMP)	NOMINAL POWER RATING (W)	FUSE SIZE	MIN. DC WIRE SIZE AND TYPE	MIN. GROUND WIRE	MINIMUM CONDUIT SIZE AND TYPE	MAX ONE-WAY DISTANCE (FT)	MAX VOLTAGE DROP (%)	NOTES
PV MODULE: SUNPOWER SPR210	TOTAL NUMBER OF MODULES	90	A	47.8	40.0	5.65	5.25	210	N/A	#12 AWG, USE-2	#12 AWG	N/A	N/A	N/A	MODULE INTERCONNECTS PROVIDED WITH SOLAR MODULE. HOMERUN WIRES TO BE MADE ON SITE OR BY SUPPLIER WITH MC CONNECTORS. TEMP. DERATE FOR 55°C. WIRE UPSIZED DUE TO VOLTAGE DROP. FIGURES SHOWN ARE PER WIRE.
SOURCE CIRCUIT	MODULES IN SERIES	10	B	478	400	5.65	5.25	2,100	10	#10 AWG, USE-2	#10 AWG	SEE DETAIL B	150	0.51%	
COMBINER BOX	STRINGS PER COMBINER	9	C	478	400	50.85	47.25	18,900	100	#1 AWG, THWN-2	#6 AWG	SEE DETAIL B	20	0.08%	
DC DISCONNECT	COMBINER BOXES PER DISCONNECT	1	D	478	400	50.85	47.25	18,900	N/A	#1 AWG, THWN-2	#6 AWG	SEE DETAIL B	300	1.13%	

AC WIRE AND CONDUIT SCHEDULE

	DESCRIPTION	LOCATION ID	MAXIMUM CURRENT PER WIRE (A)	NOMINAL VOLTAGE (VAC)	MINIMUM AC WIRE SIZE AND TYPE	CONDUCTORS PER PHASE	MINIMUM GROUND WIRE SIZE AND TYPE	MINIMUM CONDUIT SIZE AND TYPE	SO, WHAT'S IN THE CONDUIT?	MAX ONE-WAY DISTANCE (FT)	VOLTAGE DROP AT MAX DISTANCE (%)	NOTES
INVERTER	SATCON 30kW INVERTER	E	36	480 3ϕ3W	#8 AWG, THWN-2	1	#10 AWG THWN-2	¾" EMT	3 AC WIRES AND 1 GND WIRE	40	0.40%	TEMP. DERATED FOR 45°C MAX.



A THREE-LINE DIAGRAM - LUNCH CANOPIES

SCALE: NTS

NOTES:

1. SEE GENERAL NOTES ON DRAWING T-101.
2. 30kW SATCON INVERTER MODEL #: PVS-30-480; DIMENSIONS AND WEIGHT: (HxWxD) 74"x30"x25.5", 1204 lbs.
3. CONDUCTORS RUN OUTDOORS AND NOT WITHIN CONDUIT SHALL BE LISTED AS UV RESISTANT.

KEYED NOTES:

1. SUNPOWER SPR210 MODULES. 10 EACH PANELS WIRED IN SERIES. EACH MODULE INCLUDES #12 AWG OUTDOOR RATED QUICK CONNECTS FOR MODULE INTERCONNECTION. DO NOT REMOVE THE QUICK CONNECTS, OTHERWISE THE MODULE WARRANTY AND THE UL LISTING MAY BE INVALIDATED. NOTE: THESE MODULES ARE POSITIVE GROUNDED.
2. BARE COPPER GROUND WILL BE USED AS AN EQUIPMENT GROUND TO CONNECT THE MODULE FRAMES. USE THE MODULE INDICATED LOCATION ONLY OTHERWISE WARRANTY MAY BE INVALIDATED. SPECIFIC MODULE MOUNTING RACKS MAY BE PROVIDED WITH SIMPLIFIED GROUNDING ALTERNATIVES. PLEASE FOLLOW THE RACK MANUFACTURER'S INSTRUCTIONS ON GROUNDING.
3. HOMERUN COMBINER BOX, SEE DETAIL B, THIS SHEET, FOR DETAILS. NEMA 3R OR NEMA 4X ENCLOSURE. RATED @ 600 VDC. COMBINER BOX SHALL BE MOUNTED TO PREVENT SHADING OF THE SOLAR ARRAY ALL YEAR. THIS PRODUCT MUST BE UL LISTED FOR SAFETY. CONTRACTOR SHALL SELECT THE EXACT MAKE AND MODEL.
4. DC DISCONNECT, 100 AMP, 600 VDC, FUSED. SQUARE D MODEL H363NRB OR APPROVED EQUAL. THE 100 AMP SQUARE D DISCONNECT IS UL LISTED FOR BREAKING 600 VDC WITH A SINGLE POLE.
5. INVERTER: POWERGATE PLUS 30KW SATCON POWER CONVERSION UNIT. UL1741 LISTED WITH INTEGRAL ANTI-ISLANDING AND GROUND FAULT PROTECTION. UL1741 LISTING INCLUDES COMPLIANCE WITH IEEE519 FOR POWER QUALITY, IEEE929 FOR INTERCONNECTION SAFETY AND THE NATIONAL ELECTRICAL CODE. THIS INVERTER IS PACKAGED IN A SINGLE ENCLOSURE WITH AC AND DC DISCONNECTS AND THE UTILITY REQUIRED ISOLATION TRANSFORMER.
6. SEE SHEET E-101 FOR FURTHER INFORMATION ON THIS PANELBOARD.

AS BUILT

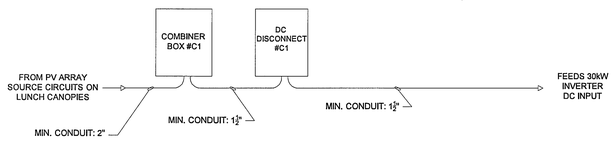
REV. NO.	DESCRIPTION	DATE	BY
D	AS BUILT	09.02.08	JCN
A	FOR SUBMITTAL	02.29.08	JTG

DISCONNECT AND COMBINER SCHEDULE

DC DISCONNECT	DCD-C1
SWITCHED COMBINER BOXES	CB-C1
NUMBER OF STRINGS IN COMBINER	9
STRING NUMBERING	1 - 9

NOTES:

1. ALL CONDUIT AT GROUND LEVEL AND/OR ROUTED WITHIN BUILDING: IMC
2. CONDUIT IN THE GROUND: PVC SCH40



B CONDUIT DETAIL

SCALE: NTS

C NOT USED

SCALE: NTS

EI Solutions™
an Energy Innovations Company
2171 Francisco Blvd. Suite H, San Rafael, CA 94901
www.eispv.com

Orange Terrace Library

PROJECT: SOLAR PHOTOVOLTAIC SYSTEM

DRAWING: WIRING DIAGRAM LUNCH CANOPIES

PROJ. MGR. -- | PROJ. ENGR. -- | SCALE: AS NOTED

DRAWING NO. E-103

THIS PRINT IS NOT TO BE USED FOR CONSTRUCTION UNLESS NOTED AND SIGNED OK FOR CONSTRUCTION ABOVE LAST REVISION.

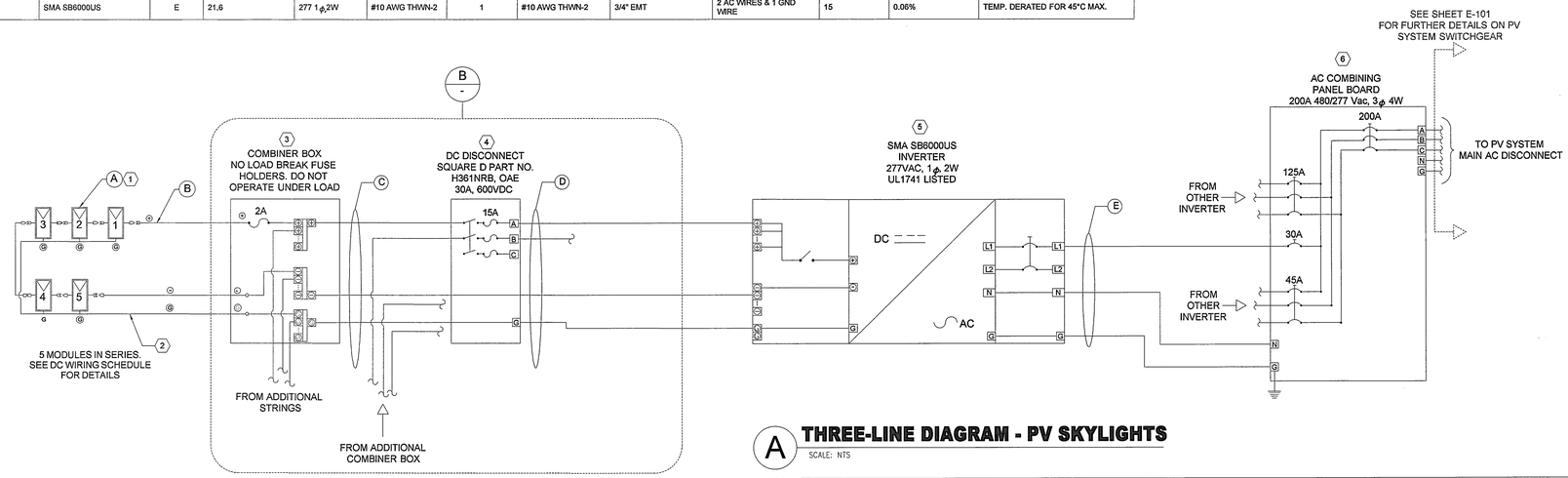
ANSI D SIZE - 34"x22"

DC WIRE AND CONDUIT SCHEDULE

	DESCRIPTION		LOCATION ID	OPEN CIRCUIT VOLTAGE (VOC)	MAX POWER VOLTAGE (VMP)	SHORT CIRCUIT CURRENT (ISC)	MAX POWER CURRENT (IMP)	NOMINAL POWER RATING (W)	FUSE SIZE	MIN. DC WIRE SIZE AND TYPE	MIN. GROUND WIRE	MINIMUM CONDUIT SIZE AND TYPE	MAX ONE-WAY DISTANCE (FT)	MAX VOLTAGE DROP (%)	NOTES
PV MODULE: MSK PHOTOVOL GLASS 10% TRANSMITTANCE	TOTAL NUMBER OF MODULES	126	A	91.8	59.6	0.97	0.74	44	N/A	#12 AWG, USE-2	#12 AWG	N/A	N/A	N/A	MODULE INTERCONNECTS PROVIDED WITH SOLAR MODULE. HOMERUN WIRES TO BE MADE ON SITE OR BY SUPPLIER WITH MC CONNECTORS. TEMP. DERATE FOR 55°C. WIRES UPSIZED FOR CONDUIT FILL. FIGURES SHOWN ARE PER WIRE.
SOURCE CIRCUIT	MODULES IN SERIES	5	B	459	298	0.97	0.74	220	2	#10 AWG, THWN-2	#12 AWG	SEE DETAIL B	200	0.16%	
12-POLE COMBINER BOX (TYP OF 2)	MAX. STRINGS PER COMBINER	8	C	459	357.6	7.76	5.92	1,760	15	#10 AWG, THWN-2	#10 AWG	SEE DETAIL B	200	0.96%	
12-POLE COMBINER BOX (TYP OF 1)	MAX. STRINGS PER COMBINER	9	C	459	357.6	8.73	6.66	1,980	15	#10 AWG, THWN-2	#10 AWG	SEE DETAIL B	200	0.96%	
DC DISCONNECT	COMBINER BOXES PER DISCONNECT	3	D	550.8	357.6	8.73	6.66	1,980	N/A	#10 AWG, THWN-2	#10 AWG	SEE DETAIL B	15	0.14%	

AC WIRE AND CONDUIT SCHEDULE

	DESCRIPTION	LOCATION ID	MAXIMUM CURRENT PER WIRE (A)	NOMINAL VOLTAGE (VAC)	MINIMUM AC WIRE SIZE AND TYPE	CONDUCTORS PER PHASE	MINIMUM GROUND WIRE SIZE AND TYPE	MINIMUM CONDUIT SIZE AND TYPE	SO, WHAT'S IN THE CONDUIT?	MAX ONE-WAY DISTANCE (FT)	VOLTAGE DROP AT MAX DISTANCE (%)	NOTES
INVERTER	SMA SB6000US	E	21.6	277 1_{ϕ}2W	#10 AWG THWN-2	1	#10 AWG THWN-2	3/4" EMT	2 AC WIRES & 1 GND WIRE	15	0.06%	TEMP. DERATED FOR 45°C MAX.



A THREE-LINE DIAGRAM - PV SKYLIGHTS

SCALE: NTS

NOTES:

1. SEE GENERAL NOTES ON DRAWING T-101.
2. 6kW SMA INVERTER MODEL #:SB6000US; DIMENSIONS AND WEIGHT: (HxWxD) 24.1"x18.4"x9.5", 143 lbs.

KEYED NOTES:

1. MSK PHOTOVOL GLASS, 10% TRANSMITTANCE. 6 EACH PANELS WIRED IN SERIES. EACH MODULE INCLUDES QUICK CONNECTS FOR MODULE INTERCONNECTION. DO NOT REMOVE THE QUICK CONNECTS, OTHERWISE THE MODULE WARRANTY AND THE UL LISTING MAY BE INVALIDATED.
2. BARE COPPER GROUND WILL BE USED AS AN EQUIPMENT GROUND TO CONNECT THE MODULE FRAMES. USE THE MODULE INDICATED LOCATION ONLY OTHERWISE WARRANTY MAY BE INVALIDATED. SPECIFIC MODULE MOUNTING RACKS MAY BE PROVIDED WITH SIMPLIFIED GROUNDING ALTERNATIVES. PLEASE FOLLOW THE RACK MANUFACTURER'S INSTRUCTIONS ON GROUNDING.
3. HOMERUN COMBINER BOX, SEE DETAIL B, THIS SHEET, FOR DETAILS. NEMA 3R OR NEMA 4X ENCLOSURE. RATED @ 600 VDC. COMBINER BOX SHALL BE MOUNTED TO PREVENT SHADING OF THE SOLAR ARRAY ALL YEAR. THIS PRODUCT MUST BE UL LISTED FOR SAFETY. CONTRACTOR SHALL SELECT THE EXACT MAKE AND MODEL.
4. DC DISCONNECT, 30 AMP, 600 VDC, FUSED. SQUARE D MODEL H361NRB OR APPROVED EQUAL. THE 30 AMP SQUARE D DISCONNECT IS UL LISTED FOR BREAKING 600 VDC WITH A SINGLE POLE.
5. INVERTER: SMA SB6000US POWER CONVERSION UNIT. UL1741 LISTED WITH INTEGRAL ANTI-ISLANDING AND GROUND FAULT PROTECTION. UL1741 LISTING INCLUDES COMPLIANCE WITH IEEE519 FOR POWER QUALITY, IEEE929 FOR INTERCONNECTION SAFETY AND THE NATIONAL ELECTRICAL CODE. THIS INVERTER IS PACKAGED IN A SINGLE ENCLOSURE WITH AC AND DC DISCONNECTS AND THE UTILITY REQUIRED ISOLATION TRANSFORMER.
6. SEE SHEET E-101 FOR FURTHER INFORMATION ON THIS PANELBOARD.

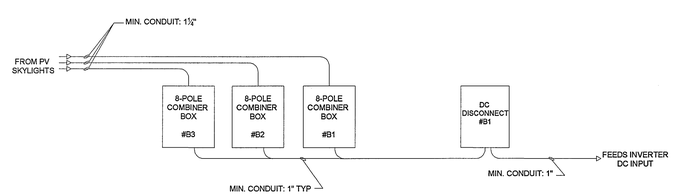
AS BUILT

DISCONNECT AND COMBINER SCHEDULE

DC DISCONNECT	DCD B1		
SWITCHED COMBINER BOXES	CB-B1	CB-B2	CB-B3
NUMBER OF POLES PER COMBINER	12	12	12
NUMBER OF STRINGS IN COMBINER	8	8	9
STRING NUMBERING	B1 - B8	B9 - B16	B17 - B25

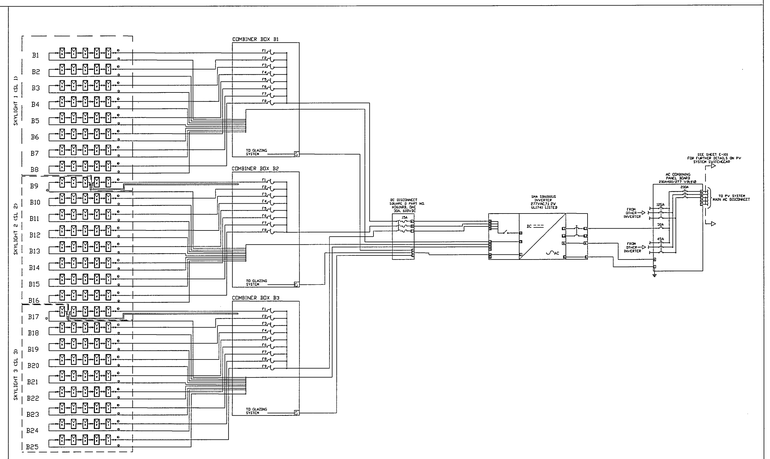
NOTES:

1. ALL CONDUIT ROUTED WITHIN BUILDING: IMC
2. CONDUIT ON ROOF: EMT
3. ALL WIRE IS THWN-2



B CONDUIT DETAIL

SCALE: NTS



C ARRAY WIRING

REV. NO.	DESCRIPTION	DATE	BY
D	AS BUILT	09.02.08	JCN
A	FOR SUBMITTAL	02.29.08	JTG

EI Solutions™
an Energy Innovations Company
2171 Francisco Blvd. Suite H, San Rafael, CA 94901
www.eispv.com

Orange Terrace Library

PROJECT: SOLAR PHOTOVOLTAIC SYSTEM

DRAWING: WIRING DIAGRAM PV SKYLIGHTS

PROJ. MGR. –

PROJ. ENGR. –

SCALE: AS NOTED

DRAWING NO. E-102

THIS PRINT IS NOT TO BE USED FOR CONSTRUCTION UNLESS NOTED AND SIGNED OK FOR CONSTRUCTION ABOVE LAST REVISION.

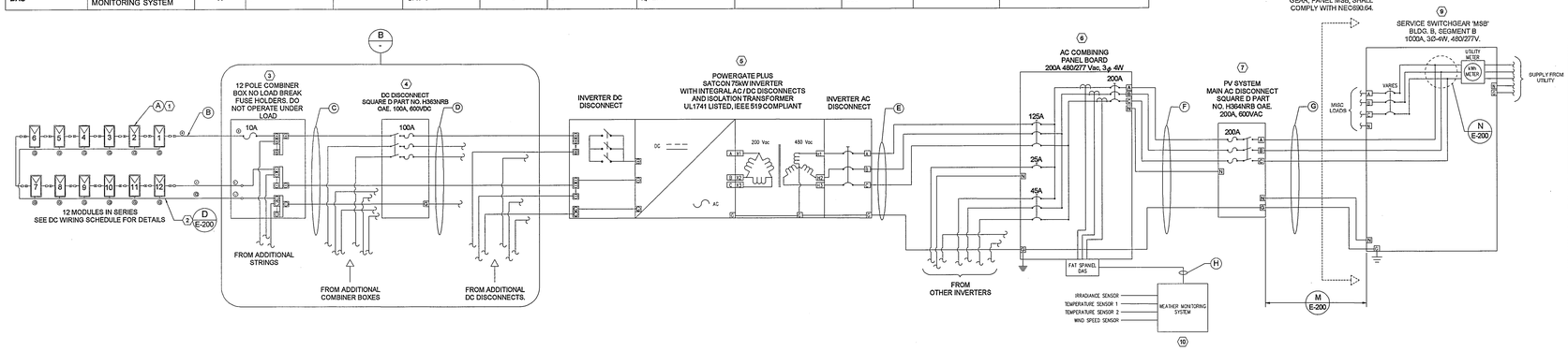
ANSI D SIZE - 34"x22"

DC WIRE AND CONDUIT SCHEDULE

	DESCRIPTION		LOCATION ID	OPEN CIRCUIT VOLTAGE (VOC)	MAX POWER VOLTAGE (VMP)	SHORT CIRCUIT CURRENT (ISC)	MAX POWER CURRENT (IMP)	NOMINAL POWER RATING (W)	FUSE SIZE	MIN. DC WIRE SIZE AND TYPE	MIN. GROUND WIRE	MINIMUM CONDUIT SIZE AND TYPE	MAX ONE-WAY DISTANCE (FT)	MAX VOLTAGE DROP (%)	NOTES
PV MODULE: SUNTECH STP170S-24/Ab-1	TOTAL NUMBER OF MODULES	384	A	43.8	35.2	5.14	4.83	170	N/A	#12 AWG, USE-2	#12 AWG	N/A	N/A	N/A	MODULE INTERCONNECTS PROVIDED WITH SOLAR MODULE. HOMERUN WIRES TO BE MADE ON SITE OR BY SUPPLIER WITH MC CONNECTORS. TEMP. DERATE FOR 55°C. WIRES UPSIZED FOR CONDUIT FILL. FIGURES SHOWN ARE PER WIRE.
SOURCE CIRCUIT	MODULES IN SERIES	12	B	525.6	422.4	5.14	4.83	2,040	10	#10 AWG, USE-2	#10 AWG	SEE DETAIL B	160	0.47%	
12 POLE COMBINER BOX - CB-A1 TO -A3	MAX. STRINGS PER COMBINER	12	C	525.6	422.4	61.68	57.96	24,480	100	#1/0 AWG, THWN-2	#4 AWG	SEE DETAIL B	20	0.07%	
DC DISCONNECT - DC A1	MAX NO. COMBINER BOXES PER DISCONNECT	3	D	525.6	422.4	61.68	57.96	24,480	N/A	#1/0 AWG, THWN-2	#4 AWG	SEE DETAIL B	100	0.35%	

AC WIRE AND CONDUIT SCHEDULE

	DESCRIPTION	LOCATION ID	MAXIMUM CURRENT PER WIRE (A)	NOMINAL VOLTAGE (VAC)	MINIMUM AC WIRE SIZE AND TYPE	CONDUCTORS PER PHASE	MINIMUM GROUND WIRE SIZE AND TYPE	MINIMUM CONDUIT SIZE AND TYPE	SO, WHAT'S IN THE CONDUIT?	MAX ONE-WAY DISTANCE (FT)	VOLTAGE DROP AT MAX DISTANCE (%)	NOTES
INVERTER	SATCON 75kW INVERTER	E	90	480 3φ3W	#2 AWG, THWN-2	1	#6 AWG THWN-2	1¼" EMT	3 AC WIRES AND 1 GND WIRE	40	0.25%	
AC COMBINER	FROM AC COMBINER "A" TO MAIN AC DISCONNECT	F	90 + 21.6 + 36 = 147.6	480 3φ4W	#3/0 AWG, THWN-2	1	#4 AWG THWN-2	2½" EMT	3 AC WIRES, 1 NEUTRAL & 1 GND WIRE	100	0.40%	TEMP. DERATED FOR 45°C MAX. USE AC WIRE SIZE FOR NEUTRAL WIRE
INTERCONNECTION	FROM AC DISCONNECT TO INTERCONNECTION	G	147.6	480 3φ4W	#3/0 AWG, THWN-2	1	#4 AWG THWN-2	2½" EMT	3 AC WIRES, 1 NEUTRAL & 1 GND WIRE	10	0.04%	
DAS	INV. DAS TO WEATHER MONITORING SYSTEM	H	-	-	CAT V	-	-	¾" EMT	-	250	-	-



A THREE-LINE DIAGRAM - ROOFTOP

SCALE: NTS

NOTES:

1. SEE GENERAL NOTES ON DRAWING T-101.
2. 75kW SATCON INVERTER MODEL #: PVS-75-480; DIMENSIONS AND WEIGHT: (HxWxD) 78.5"x57"x30.8", 2,600 lbs.
3. CONDUCTORS RUN OUTDOORS AND NOT WITHIN CONDUIT SHALL BE LISTED AS UV RESISTANT.

KEYED NOTES:

1. SUNTECH STP170S-24/Ab-1 MODULES. 12 EACH PANELS WIRED IN SERIES. EACH MODULE INCLUDES #12 AWG OUTDOOR RATED QUICK CONNECTS FOR MODULE INTERCONNECTION. DO NOT REMOVE THE QUICK CONNECTS, OTHERWISE THE MODULE WARRANTY AND THE UL LISTING MAY BE INVALIDATED.
2. BARE COPPER GROUND WILL BE USED AS AN EQUIPMENT GROUND TO CONNECT THE MODULE FRAMES. USE THE MODULE INDICATED LOCATION ONLY OTHERWISE WARRANTY MAY BE INVALIDATED. SPECIFIC MODULE MOUNTING RACKS MAY BE PROVIDED WITH SIMPLIFIED GROUNDING ALTERNATIVES. PLEASE FOLLOW THE RACK MANUFACTURER'S INSTRUCTIONS ON GROUNDING.
3. HOMERUN COMBINER BOX, SEE DETAIL B, THIS SHEET, FOR DETAILS. NEMA 3R OR NEMA 4X ENCLOSURE. RATED @ 600 VDC. COMBINER BOX SHALL BE MOUNTED TO PREVENT SHADING OF THE SOLAR ARRAY ALL YEAR. THIS PRODUCT MUST BE UL LISTED FOR SAFETY. CONTRACTOR SHALL SELECT THE EXACT MAKE AND MODEL.
4. DC DISCONNECT. 100 AMP, 600 VDC, FUSED. SQUARE D MODEL H363NRB OR APPROVED EQUAL. THE 100 AMP SQUARE D DISCONNECT IS UL LISTED FOR BREAKING 600 VDC WITH A SINGLE POLE.
5. INVERTER: POWERGATE PLUS 75kW SATCON POWER CONVERSION UNIT. UL1741 LISTED WITH INTEGRAL ANTI-ISLANDING AND GROUND FAULT PROTECTION. UL1741 LISTING INCLUDES COMPLIANCE WITH IEEE519 FOR POWER QUALITY, IEEE929 FOR INTERCONNECTION SAFETY AND THE NATIONAL ELECTRICAL CODE. THIS INVERTER IS PACKAGED IN A SINGLE ENCLOSURE WITH AC AND DC DISCONNECTS AND THE UTILITY REQUIRED ISOLATION TRANSFORMER.
6. AC COMBINING PANEL BOARD: 200A, 480/277 VAC, 3 PHASE, 4 WIRE, 35kAIC, NF PANELBOARD, NEMA 1.
7. A LOCKABLE, FUSED INVERTER AC DISCONNECT SHALL BE PROVIDED NEAR THE POINT OF COMMON COUPLING WITH THE ELECTRICAL SYSTEM.
8. ALL EQUIPMENT BEYOND THE INVERTER AC DISCONNECT IS CUSTOMER INSTALLED, OWNED AND MAINTAINED. IT IS RECOMMENDED THAT THE CUSTOMER REVIEW EXISTING ELECTRICAL EQUIPMENT FOR BREAKER COORDINATION, LOAD SAFETY AND CODE COMPLIANCE.
9. THE CONDUCTORS AND CONDUIT(S) THAT CONNECT THE MAIN AC DISCONNECT TO THE ELECTRICAL SYSTEM, VIA A BUS TAP, OR OTHER APPROVED METHOD, SHALL BE INSTALLED BY QUALIFIED PERSONNEL.
10. FAT SPANIEL DAS SYSTEM WITH CT'S AND PT'S SHALL BE CONNECTED TO THE AC COMBINING PANELBOARD. A WEATHER STATION AND MODEM WILL BE CONNECTED TO THE DAS VIA A CAT V CABLE.

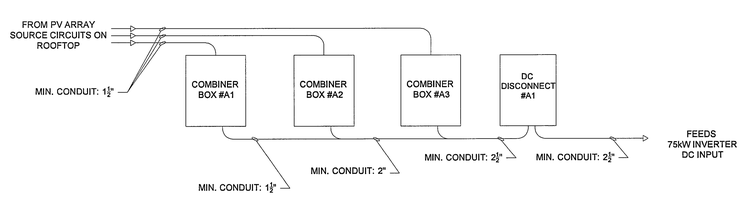
REV. NO.	DESCRIPTION	DATE	BY
D	AS BUILT	09.02.08	JCN
A	FOR SUBMITTAL	02.29.08	JTG

DISCONNECT AND COMBINER SCHEDULE

DC DISCONNECT	CB-A1		
SWITCHED COMBINER BOXES	CB-A1	CB-A2	CB-A3
NUMBER OF STRINGS IN COMBINER	11	11	10
STRING NUMBERING	1 - 11	12 - 22	23 - 32

NOTES:

1. ALL CONDUIT AT GROUND LEVEL AND/OR ROUTED WITHIN BUILDING: IMC
2. CONDUIT IN THE GROUND: PVC SCH40
3. CONDUIT ON ROOF: EMT
4. ALL WIRE IS THWN-2



B CONDUIT DETAIL

SCALE: NTS

C NOT USED

SCALE: NTS

AS BUILT

EI Solutions™
an Energy Innovations Company
2171 Francisco Blvd. Suite H, San Rafael, CA 94901
www.eispv.com

Orange Terrace Library

PROJECT: SOLAR PHOTOVOLTAIC SYSTEM

DRAWING: WIRING DIAGRAM ROOFTOP

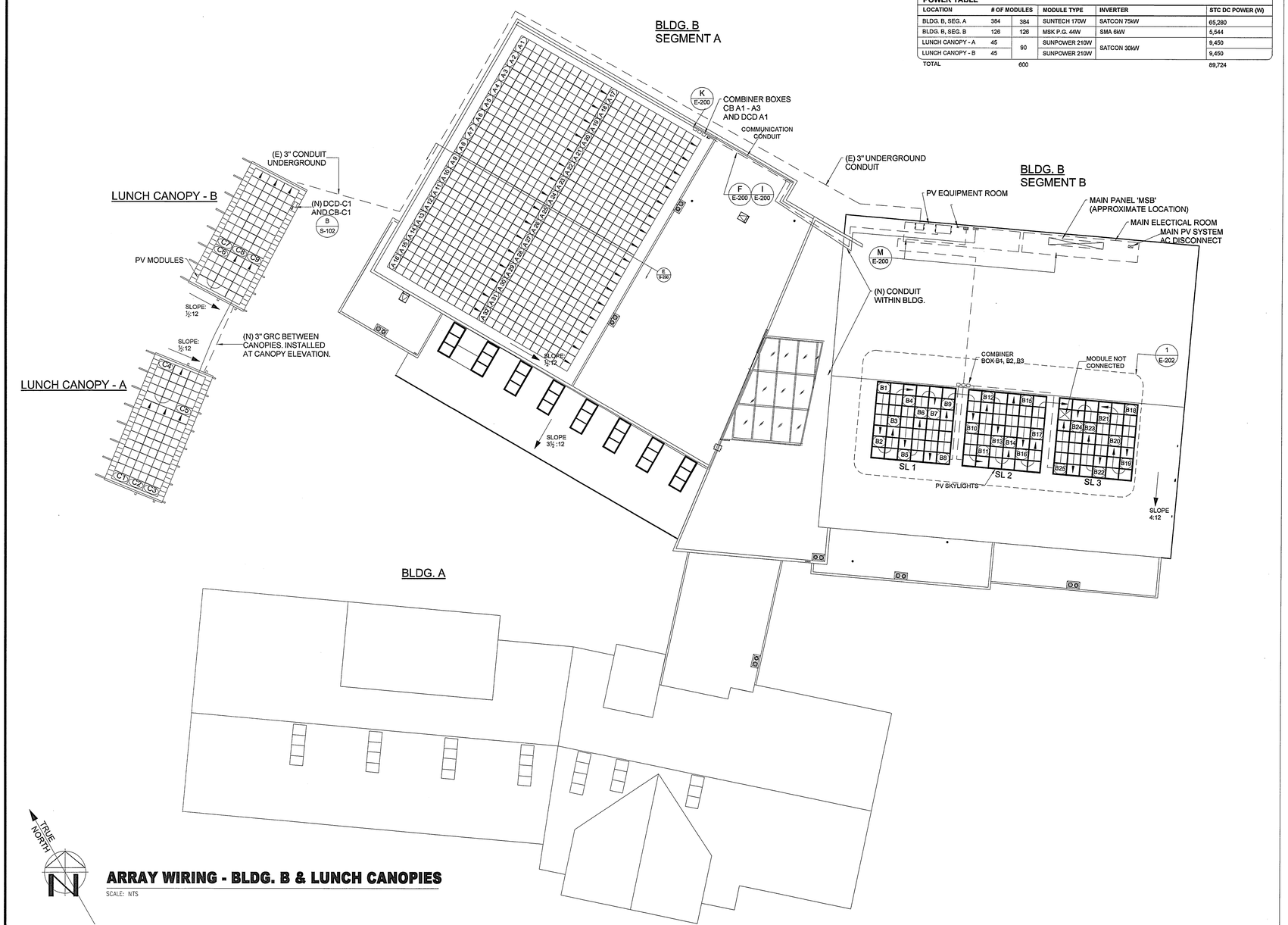
PROJ. MGR. -- | PROJ. ENGR. -- | SCALE: AS NOTED

DRAWING NO. E-101

THIS PRINT IS NOT TO BE USED FOR CONSTRUCTION UNLESS NOTED AND SIGNED OK FOR CONSTRUCTION ABOVE LAST REVISION.

ANSI D SIZE - 34"x22"

POWER TABLE					
LOCATION	# OF MODULES		MODULE TYPE	INVERTER	STC DC POWER (W)
BLDG. B, SEG. A	384	384	SUNTECH 170W	SATCON 75kW	65,280
BLDG. B, SEG. B	126	126	MSK P.G. 44W	SMA 6kW	5,544
LUNCH CANOPY - A	45	90	SUNPOWER 210W	SATCON 30kW	9,450
LUNCH CANOPY - B	45		SUNPOWER 210W		9,450
TOTAL		600			89,724



ARRAY WIRING - BLDG. B & LUNCH CANOPIES

SCALE: NTS

NOTES:

1. ALL CONDUIT, COMBINER BOX & DC DISCONNECT LOCATIONS ARE APPROXIMATE. THE FINAL LOCATIONS SHALL BE SELECTED BY THE INSTALLING CONTRACTOR.

KEYED NOTES:

1. NONE.

AS BUILT

REV. NO.	DESCRIPTION	DATE	BY
D	AS BUILT	09.02.08	JCN
A	FOR SUBMITTAL	02.29.08	JTG

EI Solutions™
an Energy Innovations Company
2171 Francisco Blvd. Suite H, San Rafael, CA 94901
www.eispv.com

Orange Terrace Library

PROJECT: SOLAR PHOTOVOLTAIC SYSTEM

DRAWING: ELECTRICAL WIRING

PROJ. MGR. – | PROJ. ENGR. – | SCALE: AS NOTED

DRAWING NO. E-100

THIS PRINT IS NOT TO BE USED FOR CONSTRUCTION UNLESS NOTED AND SIGNED OK FOR CONSTRUCTION ABOVE LAST REVISION.

ANSI D SIZE - 34"x22"

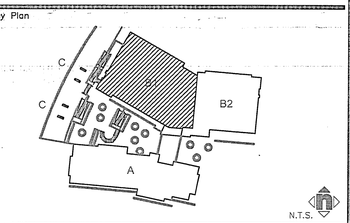
HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Architecture Interiors Planning
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
aik
CONSTRUCTION • ENGINEERING

A. J. KIRKWOOD & ASSOCIATES, INC.
27787 WALNUT AVE. TUSTIN, CA 92780
TA 714-838-4377 FAX 714-838-7238 LICENSE NO. 736268

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE No. 736268
EXP. 01/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

SITE PHOTOMETRIC STUDY

Architect's Seal

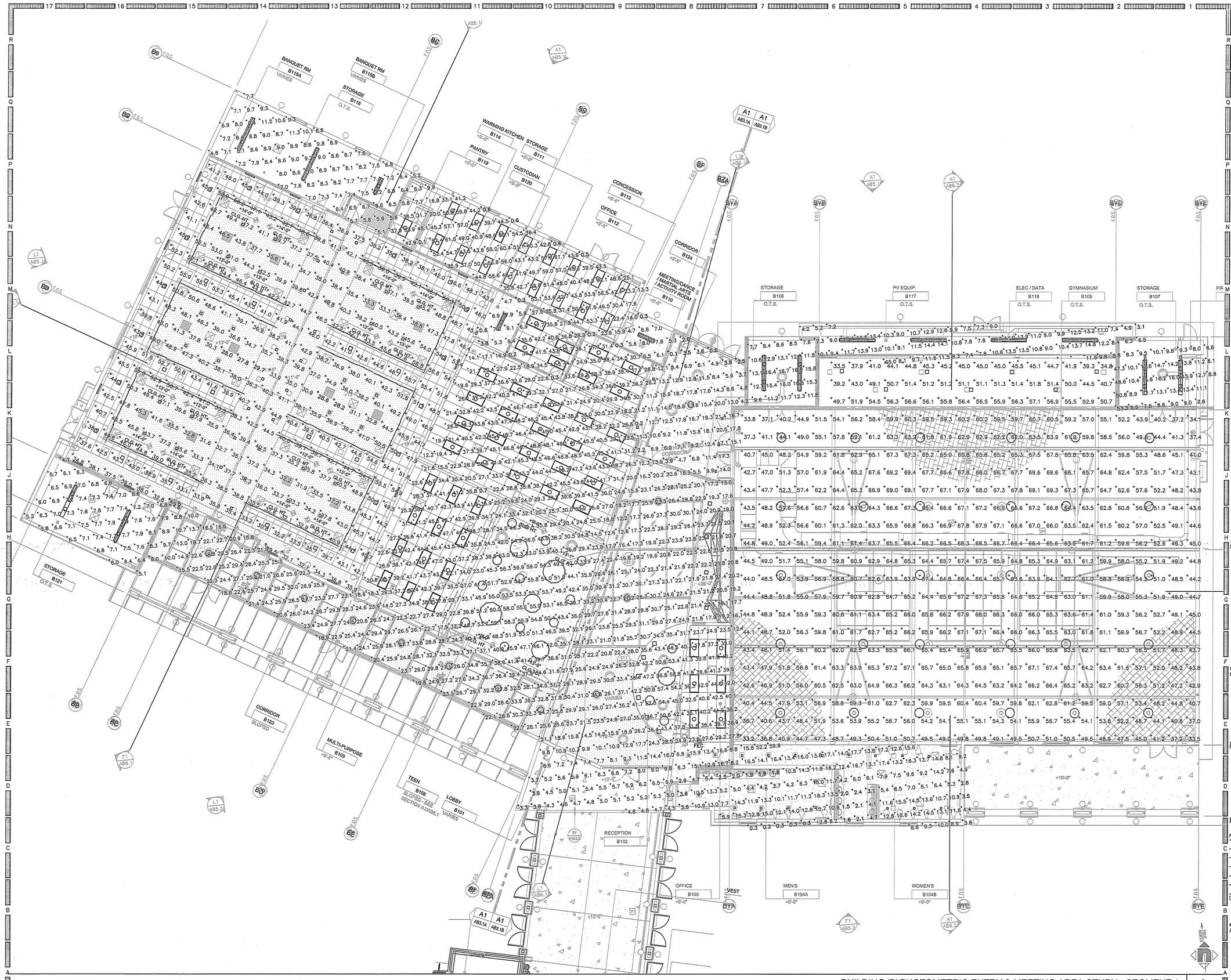
LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch Kirkwood	EB5.3
Date: 06-22-07	Sheet 19 of 21

O:\466 Orange Terrace Library\E-DRAWINGS\E5.3 SITE PHOTOMETRIC STUDY.dwg, 7/23/2008 12:20:32 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E5.3 SITE PHOTOMETRIC STUDY.dwg Jul 23,2008-12:20pm

PLEASE RECYCLE E5.3 SITE PHOTOMETRIC STUDY.DWG



BUILDING 'B' PHOTOMETRIC BANQUET RM STUDY - SEGMENT A 1

1/8" = 1'-0"

BUILDING 'B' PHOTOMETRIC ENTRY & MEETING AREA STUDY - SEGMENT A 2

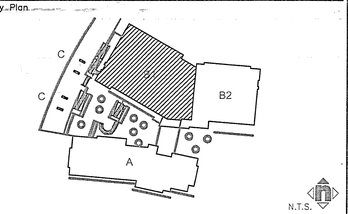
1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
aJK
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
9780 MAGNOLIA AVE. RIVERSIDE, CA 92503
TEL 951-353-2117 FAX 951-353-7202 LICENSE NO. 728253

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE NO. CIC-728253
EXP. 01/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

BUILDING 'B' PHOTOMETRIC STUDY

Architect's Seal

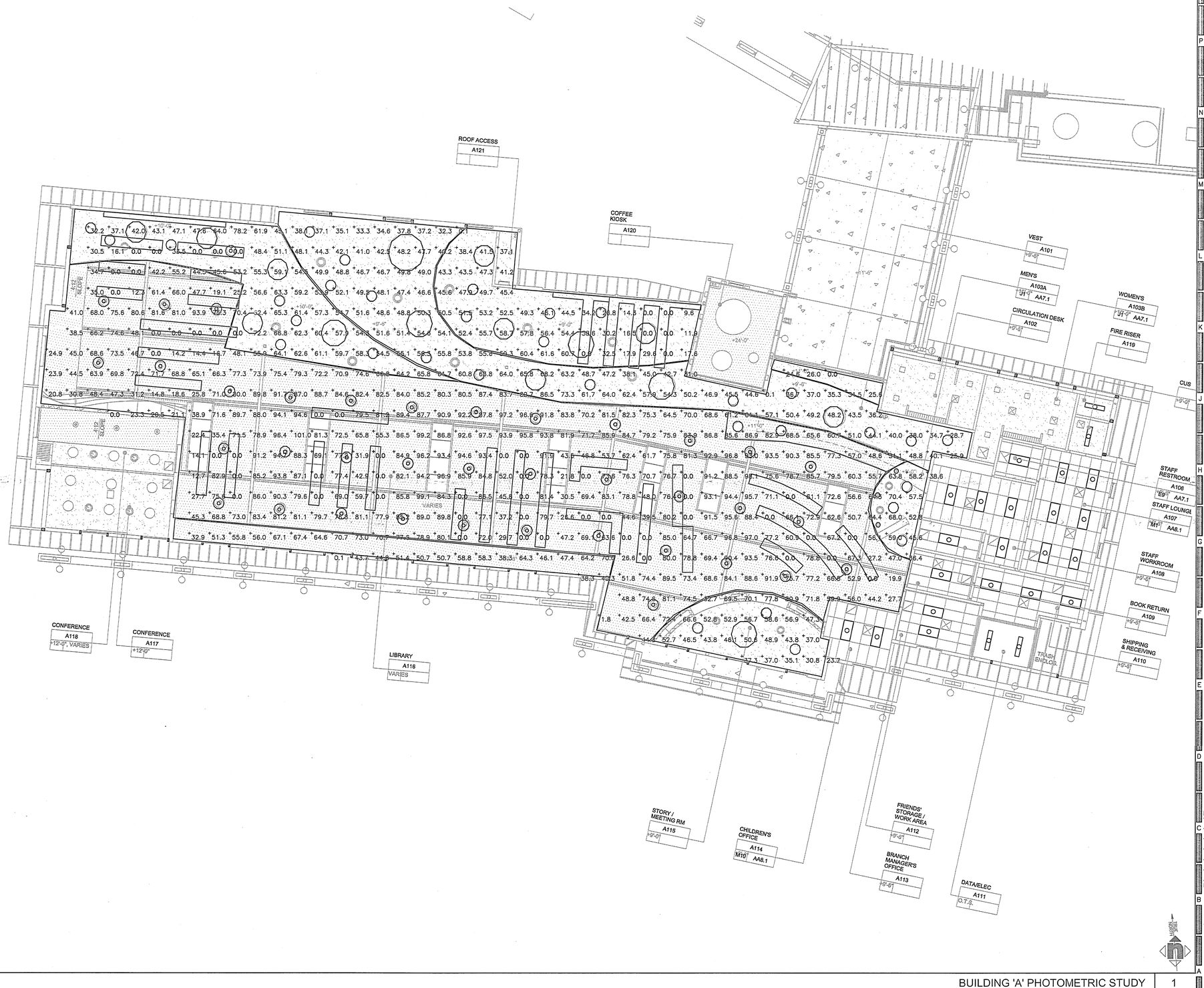
LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
LICENSE NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	EB5.2
Date: 06-22-07	Sheet 19 of 21

PLEASE RECYCLE E5.2 BUILDING B PHOTOMETRIC STUDY.DWG

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E5.2 BUILDING B PHOTOMETRIC STUDY.dwg Jul 23,2008-12:19pm

O:\466 Orange Terrace Library\E-DRAWINGS\E5.2 BUILDING B PHOTOMETRIC STUDY.dwg, 7/23/2008 12:19:49 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates

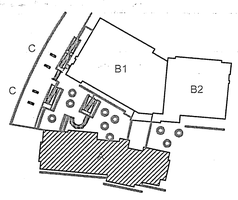


HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
aik
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
27762 WALNUT AVE. TUSTIN, CA 92780
TEL 714-832-5777 FAX 714-832-7323 CSLB LIC. 736323

AS BUILT

Key Plan



N.T.S.

Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE NO. 20-176459
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

BUILDING A' PHOTOMETRIC

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No. EA5.1
Reviewed: Arch KirKwood	
Date: 06-22-07	Sheet 17 of 21

BUILDING 'A' PHOTOMETRIC STUDY | 1 | 1/8" = 1'-0"

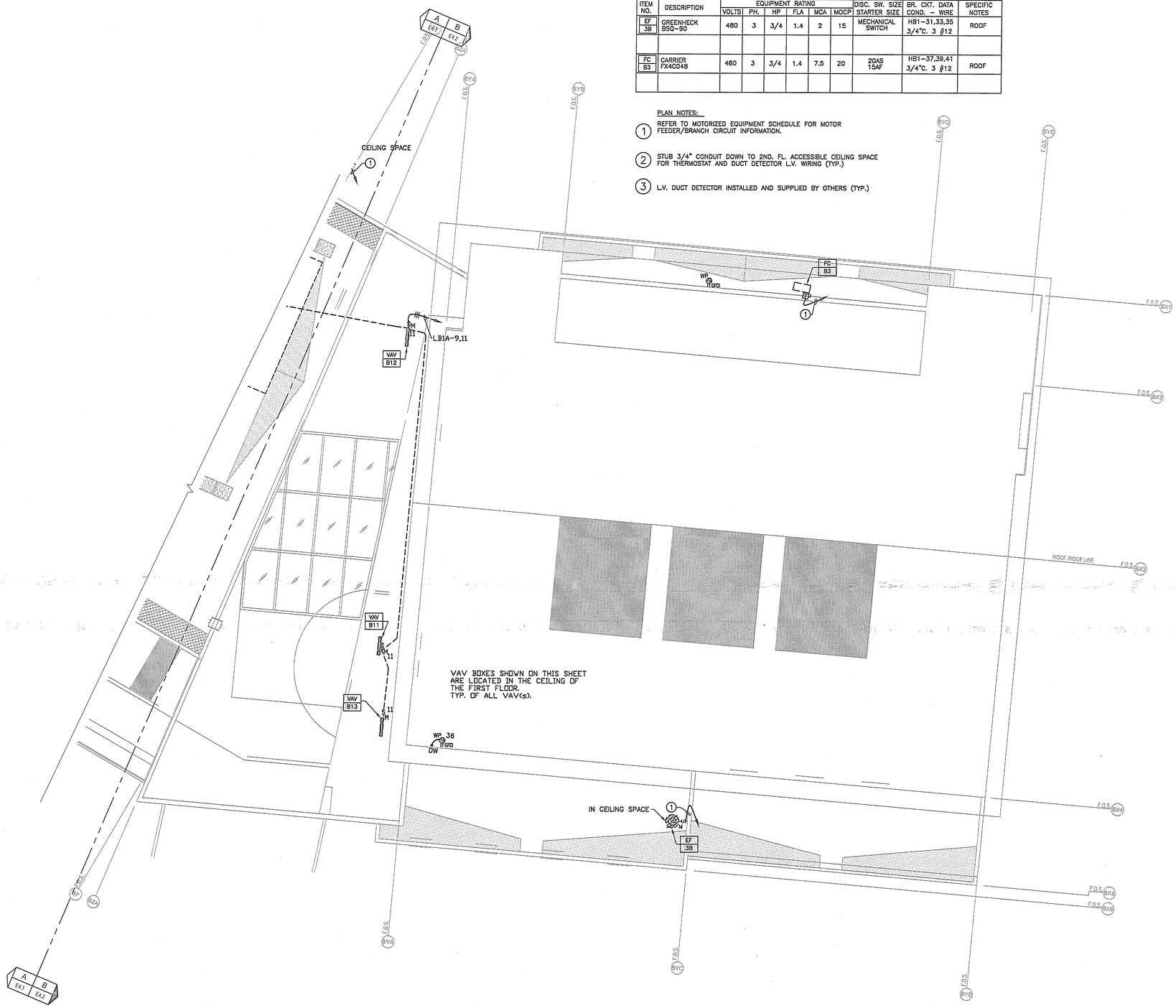
O:\466 Orange Terrace Library\E-DRAWINGS\E5.1 BUILDING A PHOTOMETRIC STUDY.dwg, 7/23/2008 12:19:09 PM, tvint, 30x42, Copyright (c): A.J. Kirkwood and Associates

MOTORIZED EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	EQUIPMENT RATING VOLTS	PH.	HP	FLA	MCA	MOCP	DISC. SW. SIZE / STARTER SIZE	BR. CKT. DATA COND. – WIRE	SPECIFIC NOTES
EF / 3B	GREENHECK BSQ–90	480	3	3/4	1.4	2	15	MECHANICAL SWITCH	HB1–31,33,35 3/4"C. 3 #12	ROOF
FC / B3	CARRIER FX4C048	480	3	3/4	1.4	7.5	20	20AS 15AF	HB1–37,39,41 3/4"C. 3 #12	ROOF

PLAN NOTES:

1. REFER TO MOTORIZED EQUIPMENT SCHEDULE FOR MOTOR FEEDER/BRANCH CIRCUIT INFORMATION.
2. STUB 3/4" CONDUIT DOWN TO 2ND. FL. ACCESSIBLE CEILING SPACE FOR THERMOSTAT AND DUCT DETECTOR L.V. WIRING (TYP.)
3. L.V. DUCT DETECTOR INSTALLED AND SUPPLIED BY OTHERS (TYP.)



BUILDING 'B' ROOF POWER PLAN - SEGMENT B | 1 | 1/8" = 1'-0"

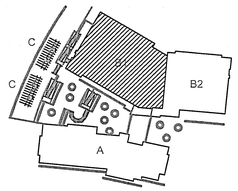
HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Architecture Interiors Planning
Telephone: 909.989.9979
Fax: 909.483.1400
www.hmcarchitects.com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk CONSTRUCTION • ENGINEERING

A. J. KIRKWOOD & ASSOCIATES, INC.
8768 HALIBUT AVE. FONTANA, CA 92760
TEL 714-625-2977 FAX 714-625-7252 LICENSE CA 736253

AS BUILT

Key Plan



N.T.S.

Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR — A. J. KIRKWOOD & ASSOC. INC. — LICENSE No. 736253 — EXP. 07/31/08 — ELECTRICAL — STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07–1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

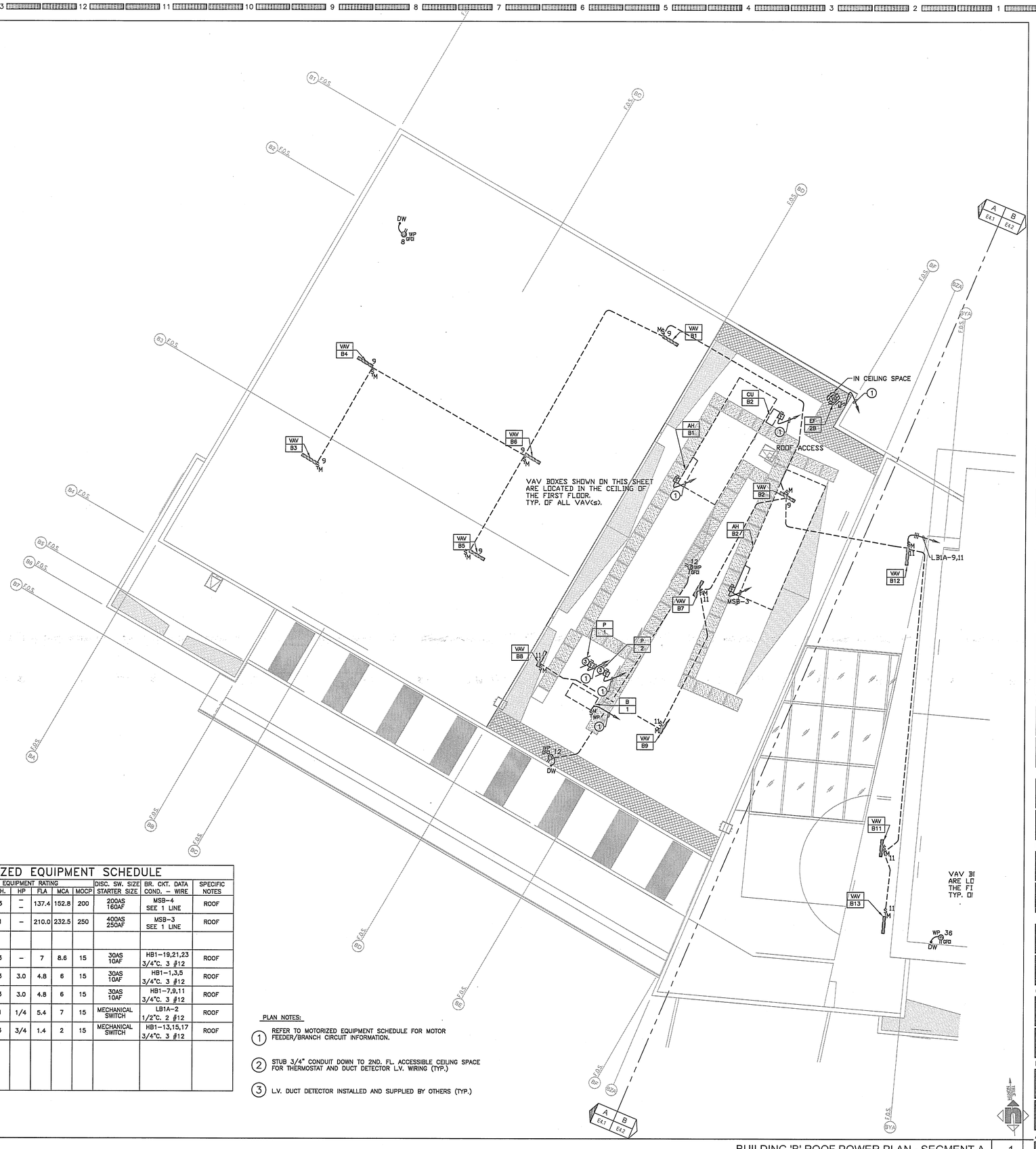
Drawing Title: BUILDING 'B' ROOF POWER PLAN- SEGMENT B

Architect's Seal

LICENSED ARCHITECT — CHRISTOPHER RICHARD TAYLOR — LICENSE NO. C–19759 — REN. 02–24–08 — STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	EB4.2
Date: 06-22-07	Sheet 15 of 21

O:\466 Orange Terrace Library\E-DRAWINGS\E4.1_E4.2 BUILDING B ROOF POWER PLAN - SEGMENT A & B.dwg, 7/23/2008 12:18:41 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates



MOTORIZED EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	EQUIPMENT RATING VOLTS	PH.	HP	FLA	MCA	MOCP	DISC. SW. SIZE STARTER SIZE	BR. CKT. DATA COND. – WIRE	SPECIFIC NOTES
AH B1	CLDHBEFP-604 –	480	3	– –	137.4	152.8	200	200AS 160AF	MSB-4 SEE 1 LINE	ROOF
AH B2	CLDHBEFP-853 –	480	1	–	210.0	232.5	250	400AS 250AF	MSB-3 SEE 1 LINE	ROOF
CU B2	CARRIER 38HDR018	480	3	–	7	8.6	15	30AS 10AF	HB1-19,21,23 3/4"C. 3 #12	ROOF
P 1	BELL & GOSSETT SERIES 60	480	3	3.0	4.8	6	15	30AS 10AF	HB1-1,3,5 3/4"C. 3 #12	ROOF
P 2	BELL & GOSSETT SERIES 60	480	3	3.0	4.8	6	15	30AS 10AF	HB1-7,9,11 3/4"C. 3 #12	ROOF
B 1	RAYPACK H-1287	120	1	1/4	5.4	7	15	MECHANICAL SWITCH	LB1A-2 1/2"C. 2 #12	ROOF
EF 2B	GREENHECK BSQ-90	480	3	3/4	1.4	2	15	MECHANICAL SWITCH	HB1-13,15,17 3/4"C. 3 #12	ROOF

PLAN NOTES:

1. REFER TO MOTORIZED EQUIPMENT SCHEDULE FOR MOTOR FEEDER/BRANCH CIRCUIT INFORMATION.
2. STUB 3/4" CONDUIT DOWN TO 2ND. FL. ACCESSIBLE CEILING SPACE FOR THERMOSTAT AND DUCT DETECTOR L.V. WIRING (TYP.)
3. L.V. DUCT DETECTOR INSTALLED AND SUPPLIED BY OTHERS (TYP.)

BUILDING 'B' ROOF POWER PLAN - SEGMENT A | 1

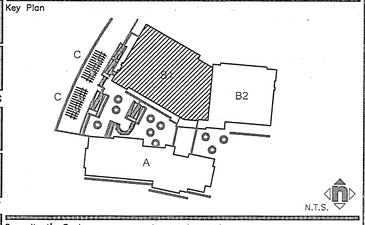
1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
8762 WALNUT AVE. FUSTER, CA 92780
Tel 714-523-1977 FAX 714-428-1028 LICENSE CA 736628

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A.J. KIRKWOOD & ASSOC. INC.
LICENSE No. CO. 736633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

BUILDING 'B' ROOF POWER PLAN- SEGMENT A

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	EB4.1
Date: 06-22-07	Sheet 14 of 21

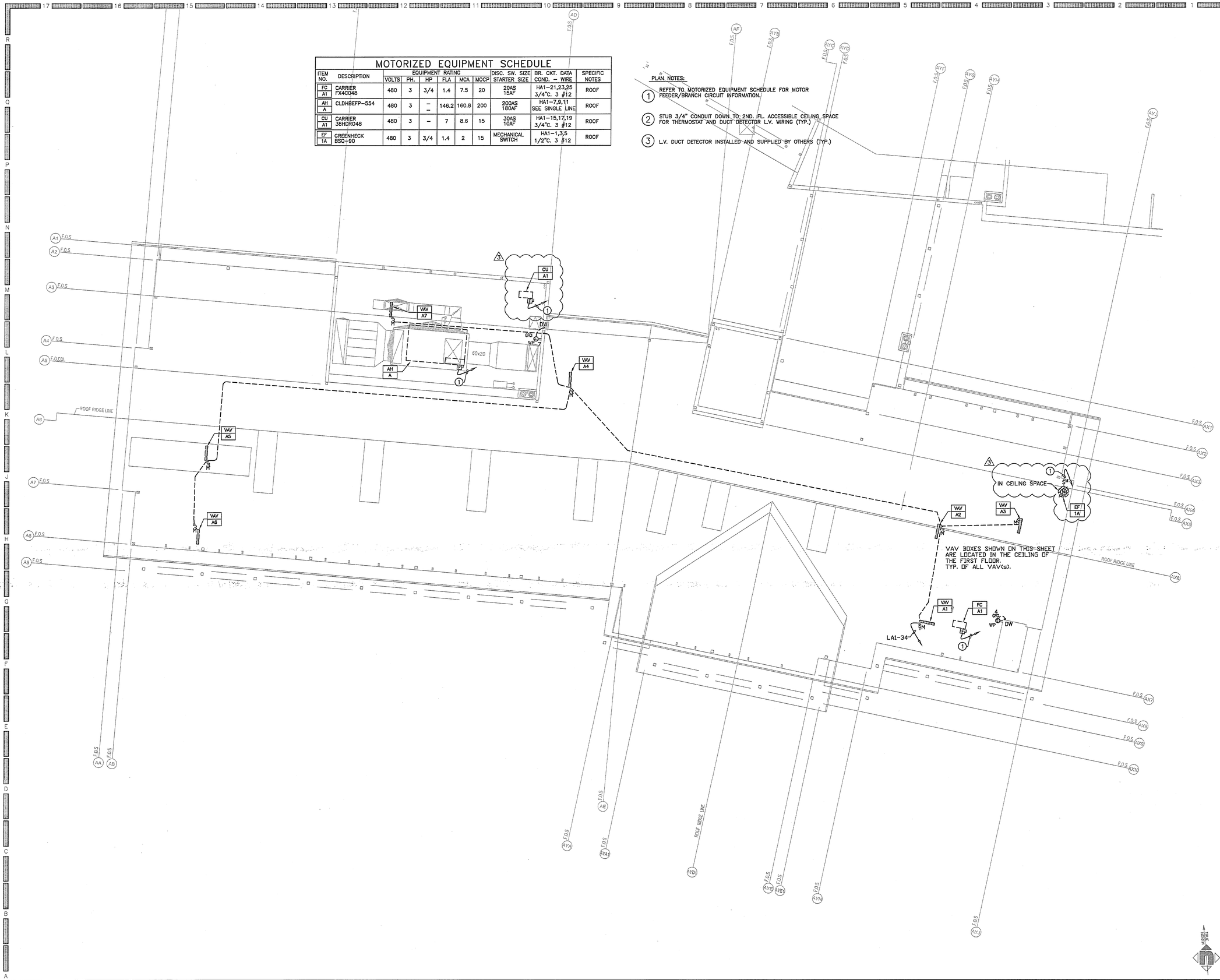
O:\466 Orange Terrace Library\E-DRAWINGS\E4.1_E4.2 BUILDING B ROOF POWER PLAN - SEGMENT A & B.dwg, 7/23/2008 12:18:37 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates

MOTORIZED EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	EQUIPMENT RATING VOLTS	PH.	HP	FLA	MCA	MOCP	DISC. SW. SIZE STARTER SIZE	BR. CKT. DATA COND. – WIRE	SPECIFIC NOTES
FC A1	CARRIER FX4CD48	480	3	3/4	1.4	7.5	20	20AS 15AF	HA1–21,23,25 3/4"C. 3 #12	ROOF
AH A	CLDHBEFP–554	480	3	– –	146.2	160.8	200	200AS 180AF	HA1–7,9,11 SEE SINGLE LINE	ROOF
CU A1	CARRIER 38HDR048	480	3	–	7	8.6	15	30AS 10AF	HA1–15,17,19 3/4"C. 3 #12	ROOF
EF 1A	GREENHECK BSQ–90	480	3	3/4	1.4	2	15	MECHANICAL SWITCH	HA1–1,3,5 1/2"C. 3 #12	ROOF

PLAN NOTES:

1. REFER TO MOTORIZED EQUIPMENT SCHEDULE FOR MOTOR FEEDER/BRANCH CIRCUIT INFORMATION.
2. STUB 3/4" CONDUIT DOWN TO 2ND. FL. ACCESSIBLE CEILING SPACE FOR THERMOSTAT AND DUCT DETECTOR L.V. WIRING (TYP.)
3. L.V. DUCT DETECTOR INSTALLED AND SUPPLIED BY OTHERS (TYP.)

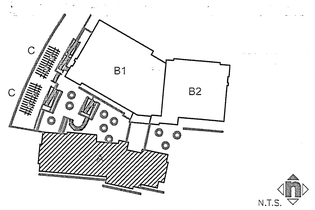


HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
27032 WALNUT AVE. TUSTIN, CA 92780
PH 714-28-1277 FAX 714-832-7032 LICENSE NO. 736183

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A.J. KIRKWOOD & ASSOC. INC.
LICENSE No. 736183
EXP. 07/19/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07–1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

BUILDING 'A' ROOF POWER PLAN

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

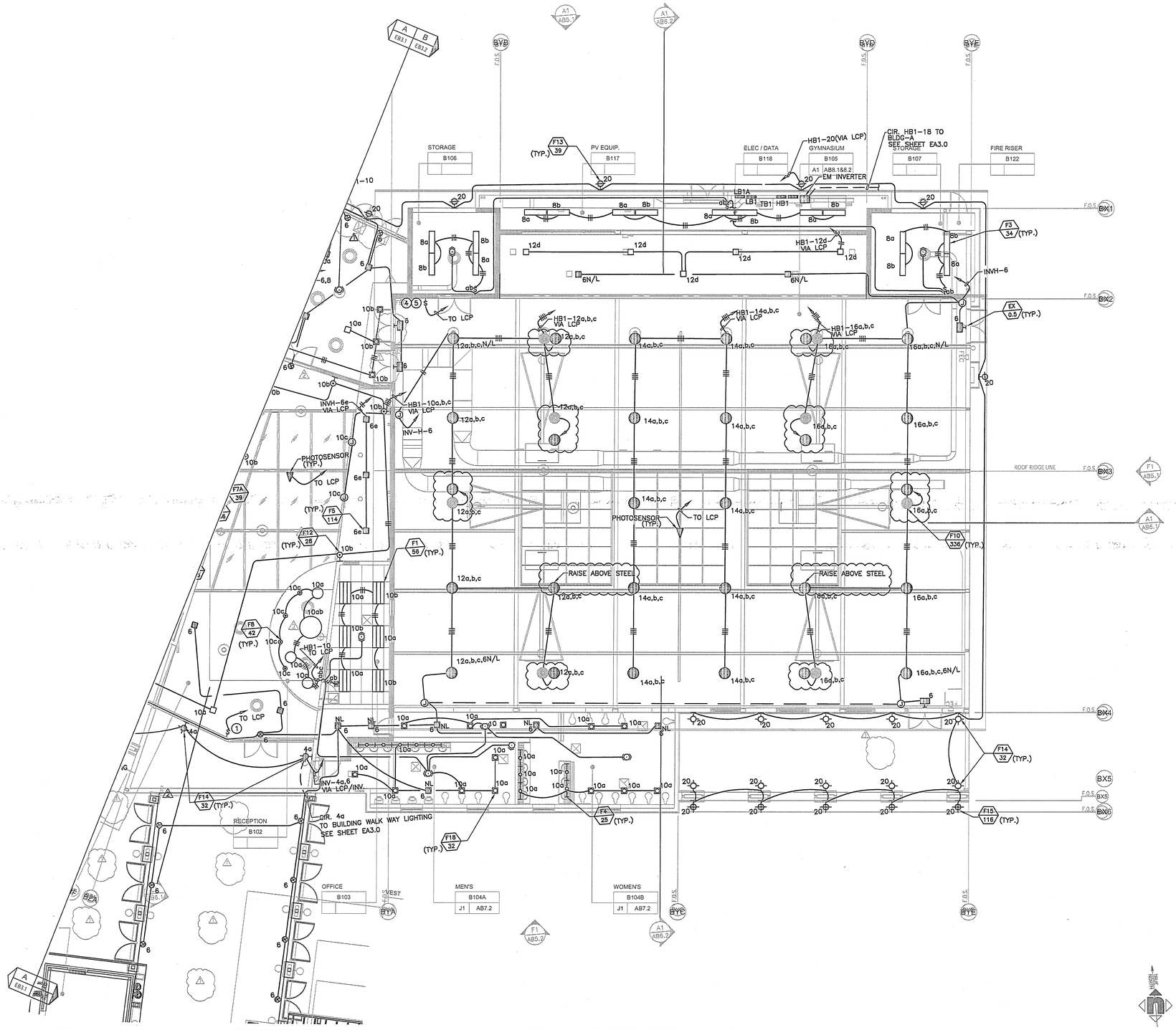
Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	EA4.0
Date: 06-22-07	Sheet 13 of ## 21

O:\466 Orange Terrace Library\E-DRAWINGS\E4.0 BUILDING A ROOF POWER PLAN.dwg, 7/23/2008 12:18:12 PM, Inset, 30x42, Copyright (c) A.J. Kirkwood and Associates

NOTES:

(4) GYM LOW VOLTAGE SWITCH WITH ZONE 3 OVERRIDE SWITCH:

(5) SWITCH a TO CONTROL 2 BALLAST FOR ALL F10 FIXTURES, EXCEPT FOR N/L FIXTURES, IN WHICH SWITCH a WILL ONLY CONTROL 1 BALLAST.



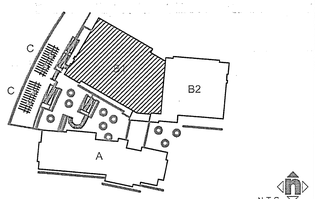
HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
aJK
CONSTRUCTION • ENGINEERING

A. J. KIRKWOOD & ASSOCIATES, INC.
9782 WALNUT AVE. FONTAL CA 92760
TEL 714-823-1277 FAX 714-823-7123 LICENSE NO. 736283

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE NO. 736283
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

BUILDING 'B' LIGHTING PLAN - SEGMENT B

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	EB3.2
Date: 06-22-07	Sheet 12 of 21

BUILDING 'B' LIGHTING PLAN - SEGMENT B | 1 | 1/8" = 1'-0"

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.dwg Jul 23,2008-12:17pm

PLEASE RECYCLE E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.DWG

O:\466 Orange Terrace Library\E-DRAWINGS\E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.dwg, 7/23/2008 12:17:31 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates

NOTES:

1. MAIN LOBBY LOW VOLTAGE SWITCH WITH ZONE 2 OVERRIDE SWITCH.

2. BANQUET ROOM LOW VOLTAGE SWITCH WITH ZONE 1 OVERRIDE SWITCH:

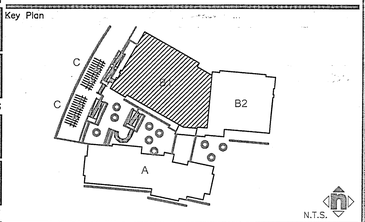
3. BANQUET ROOM LOW VOLTAGE SWITCH WITH ZONE 1 OVERRIDE SWITCH:

HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Architecture Interiors Planning
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
aJK
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2762 WALNUT AVE. TUSTIN, CA 92780
TEL 714-832-1977 FAX 714-832-7233 LICENSE NO. 736388

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE No. 736388
EXP. 01/01/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

BUILDING 'B' LIGHTING PLAN - SEGMENT A

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
EXP. 02-24-08
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch Kirkwood	EB3.1
Date: 06-22-07	Sheet 11 of 21

BUILDING 'B' LIGHTING PLAN - SEGMENT A | 1

1/8" = 1'-0"

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.dwg Jul 23,2008-12:17pm

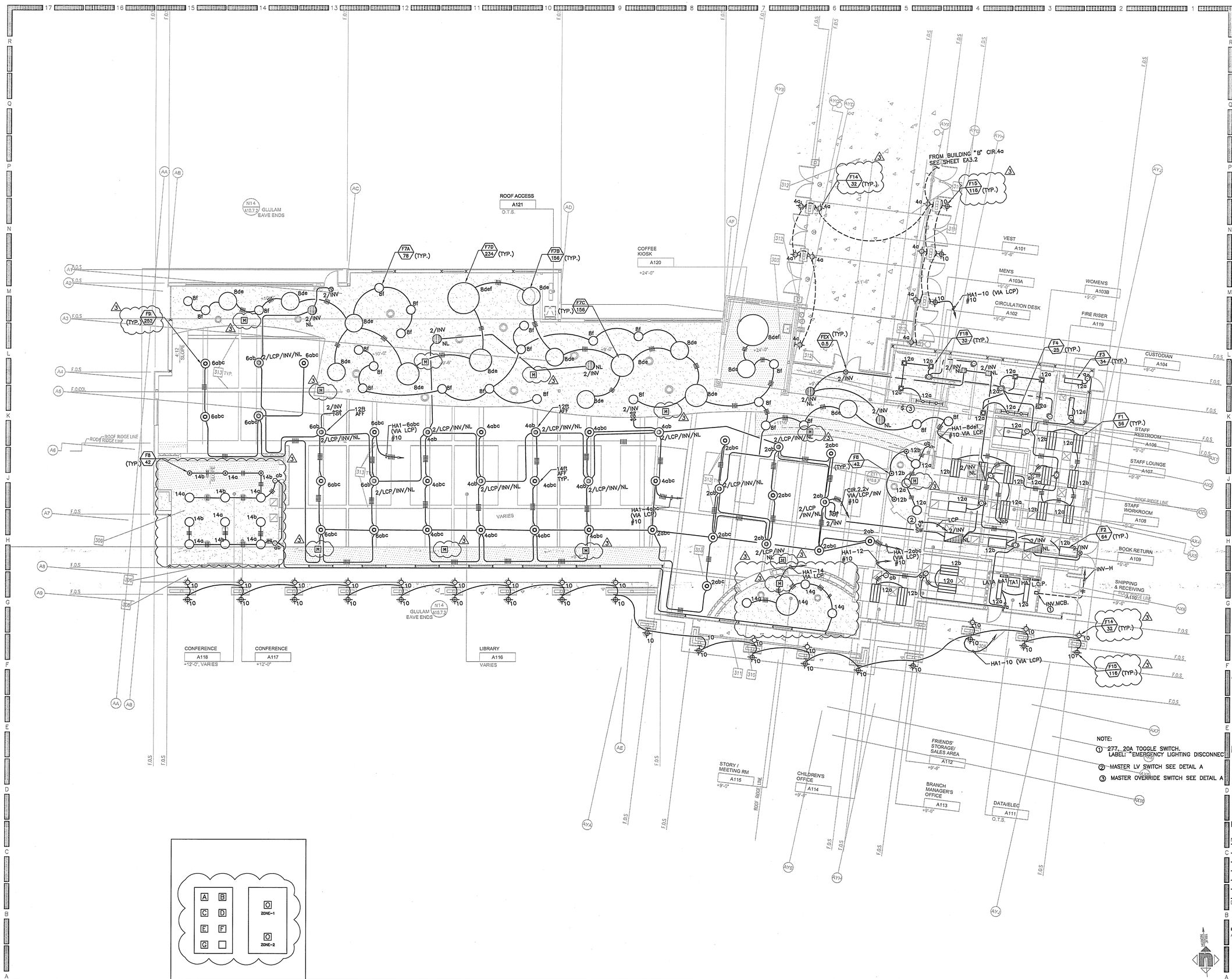
PLEASE RECYCLE E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.DWG

O:\466 Orange Terrace Library\E-DRAWINGS\E3.1_E3.2 BUILDING B LIGHTING PLAN - SEGMENT A & B.dwg, 7/23/2008 12:17:14 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates

HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Architecture Interiors Planning
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
TEL 714-832-5777 FAX 714-832-7102 LICENSE NO. 736293

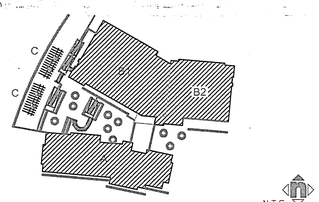
AS BUILT



DETAIL A | 2 | NTS

BUILDING 'A' LIGHTING PLAN | 1 | 1/8" = 1'-0"

Key Plan



N.T.S.

Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC., INC.
LICENSE NO. 736293
EXP. 01/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

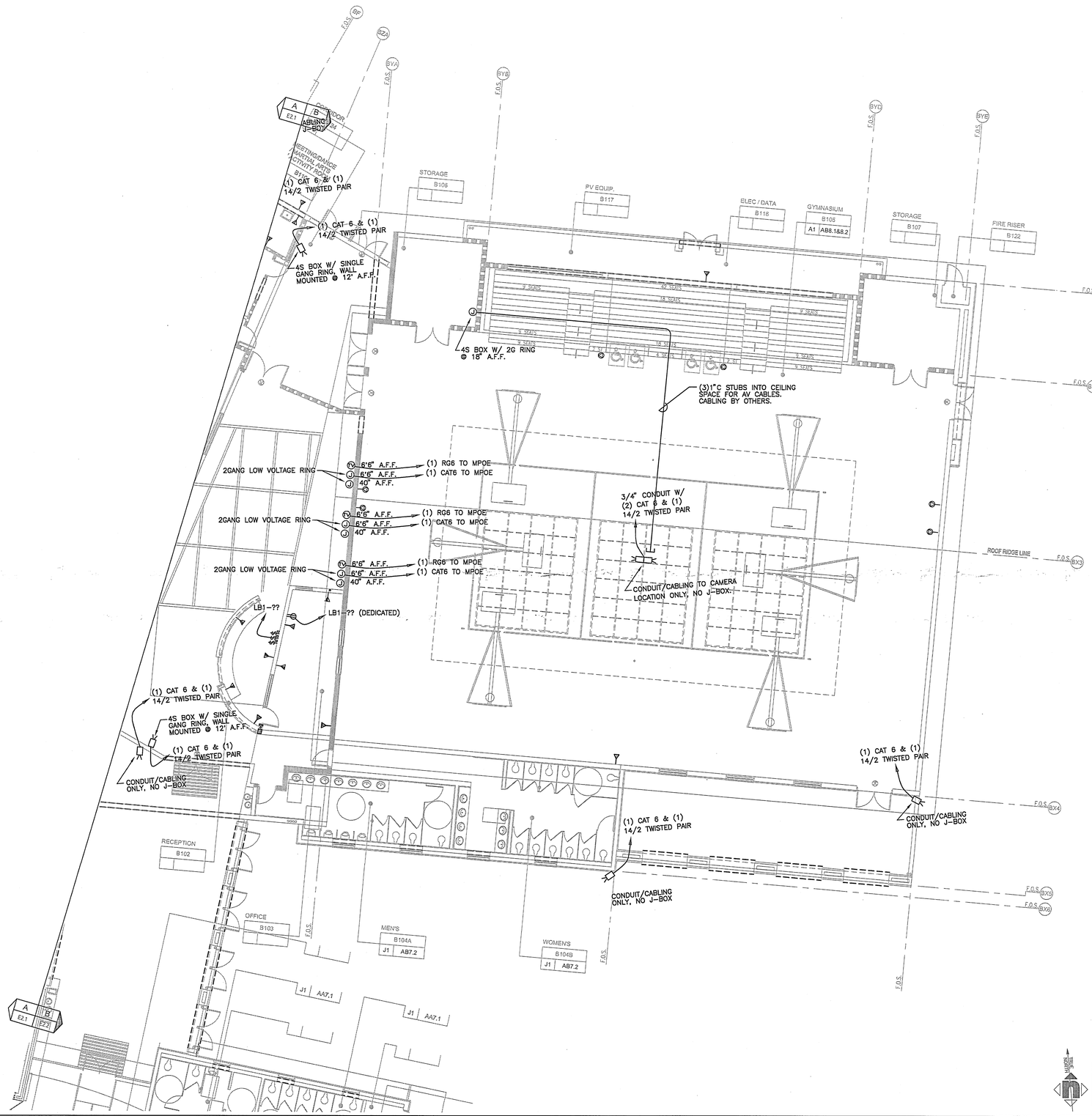
Drawing Title
BUILDING 'A' LIGHTING PLAN

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
LICENSE NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	EA3.0
Date: 06-22-07	Sheet 10 of # 20

O:\466 Orange Terrace Library\E-DRAWINGS\E3.0 BUILDING A LIGHTING.dwg, 7/23/2008 12:16:39 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates



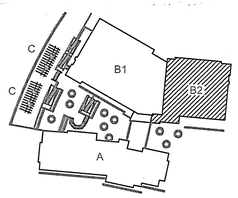
BUILDING 'B' POWER PLAN - SEGMENT B | 1 | 1/8" = 1'-0"

HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Architecture Interiors Planning
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2702 WALNUT AVE. TUSTIN, CA 92780
TEL 714-832-1777 FAX 714-832-7228 LICENSE NO. 736288

AS BUILT

Key Plan



N.T.S.

Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOCIATES, INC.
LICENSE No. 736288
EXP. 06/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

BUILDING 'B' SYSTEMS PLAN - SEGMENT B

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-10
STATE OF CALIFORNIA

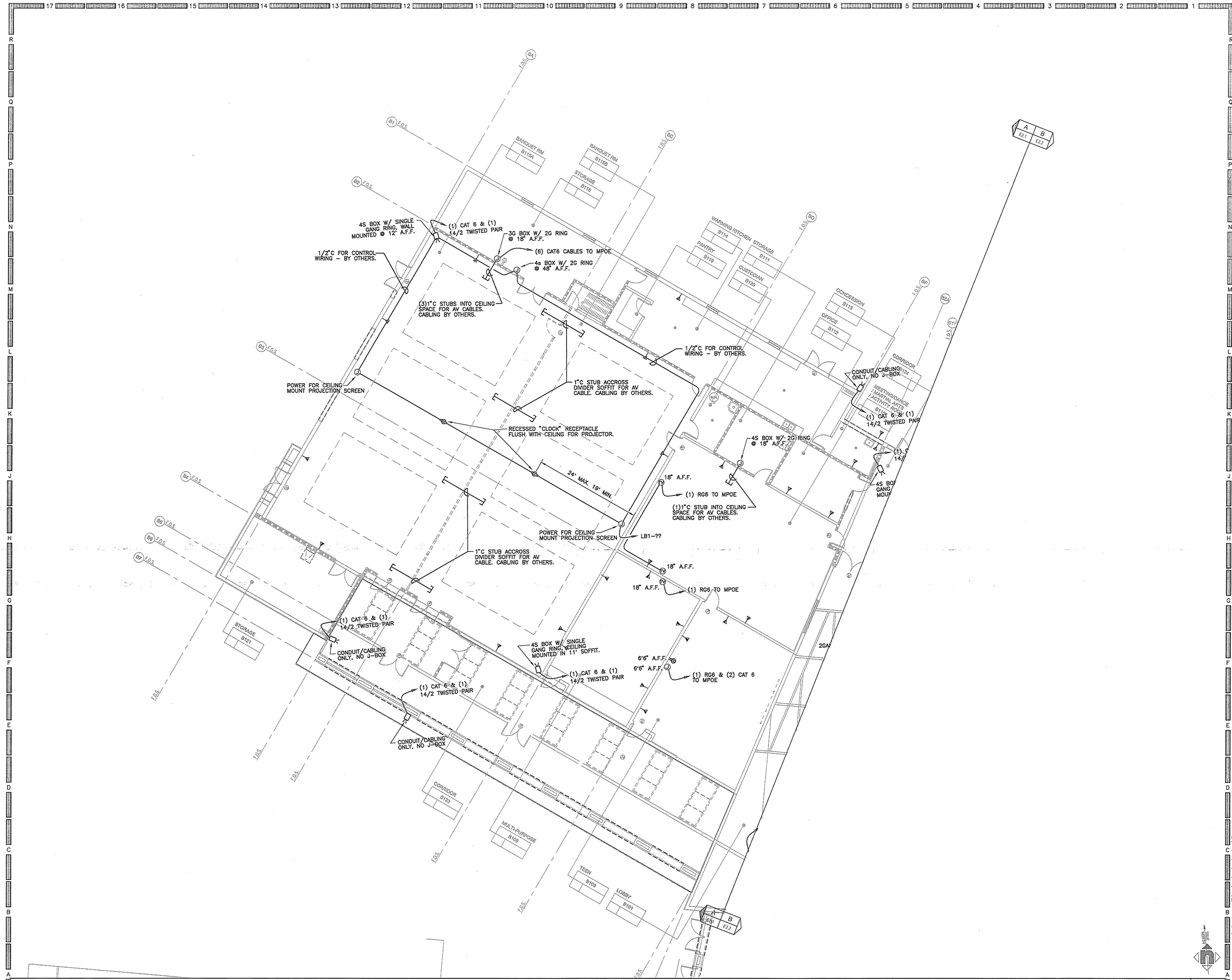
Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch Kirkwood	EB2.4
Date: 06-22-07	Sheet 9 of 33 20

PLEASE RECYCLE

E2.3_E2.4 BUILDING B SYSTEMS PLAN – SEGMENT A & B.DWG

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E2.3_E2.4 BUILDING B SYSTEMS PLAN – SEGMENT A & B.dwg Jul 23,2008-12:16pm

O:\466 Orange Terrace Library\E-DRAWINGS\E2.3_E2.4 BUILDING B SYSTEMS PLAN - SEGMENT A & B.dwg, 7/23/2008 12:16:17 PM, tnent, 36x42, Copyright (c) A.J. Kirkwood and Associates



BUILDING 'B' POWER PLAN - SEGMENT A | 1

1/8" = 1'-0"

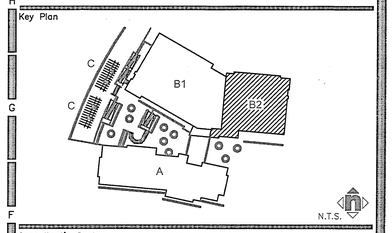
HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING

A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
TEL 714-832-2977 FAX 714-832-7020 LICENSE NO. 724633

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A.J. KIRKWOOD & ASSOC. INC.
LICENSE No. CO-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title
BUILDING 'B' SYSTEMS PLAN- SEGMENT A

Architect's Seal

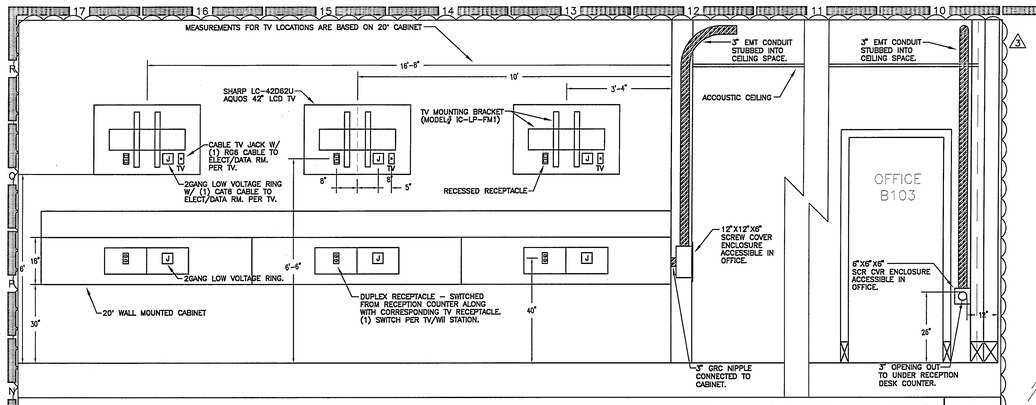
LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked: 3	Drawing No. EB2.3
Reviewed: Arch KirKwood	
Date: 06-22-07	Sheet 8 of 20

O:\466 Orange Terrace Library\E-DRAWINGS\E2.3_E2.4 BUILDING B SYSTEMS PLAN - SEGMENT A & B.dwg, 7/23/2008 12:15:51 PM, trent, 30x42, Copyright (c): A.J. Kirkwood and Associates

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E2.3_E2.4 BUILDING B SYSTEMS PLAN – SEGMENT A & B.dwg Jul 23,2008–12:16pm

PLEASE RECYCLE E2.3_E2.4 BUILDING B SYSTEMS PLAN – SEGMENT A & B.DWG



BUILDING 'B' WII WALL DETAIL | 2 | NTS

BUILDING 'B' WII WALL DETAIL | 2 | NTS

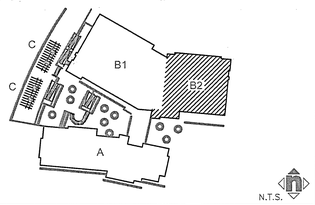
BUILDING 'B' POWER PLAN - SEGMENT B | 1 | 1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
9700 WALNUT AVE. FONTANA, CA 92335
TEL 714-428-4377 FAX 714-428-7233 License No. 736333

AS BUILT

Key Plan



N.T.S.

Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR A. J. KIRKWOOD & ASSOC. INC. LICENSE No. 736333 EXP. 12/31/08 ELECTRICAL STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

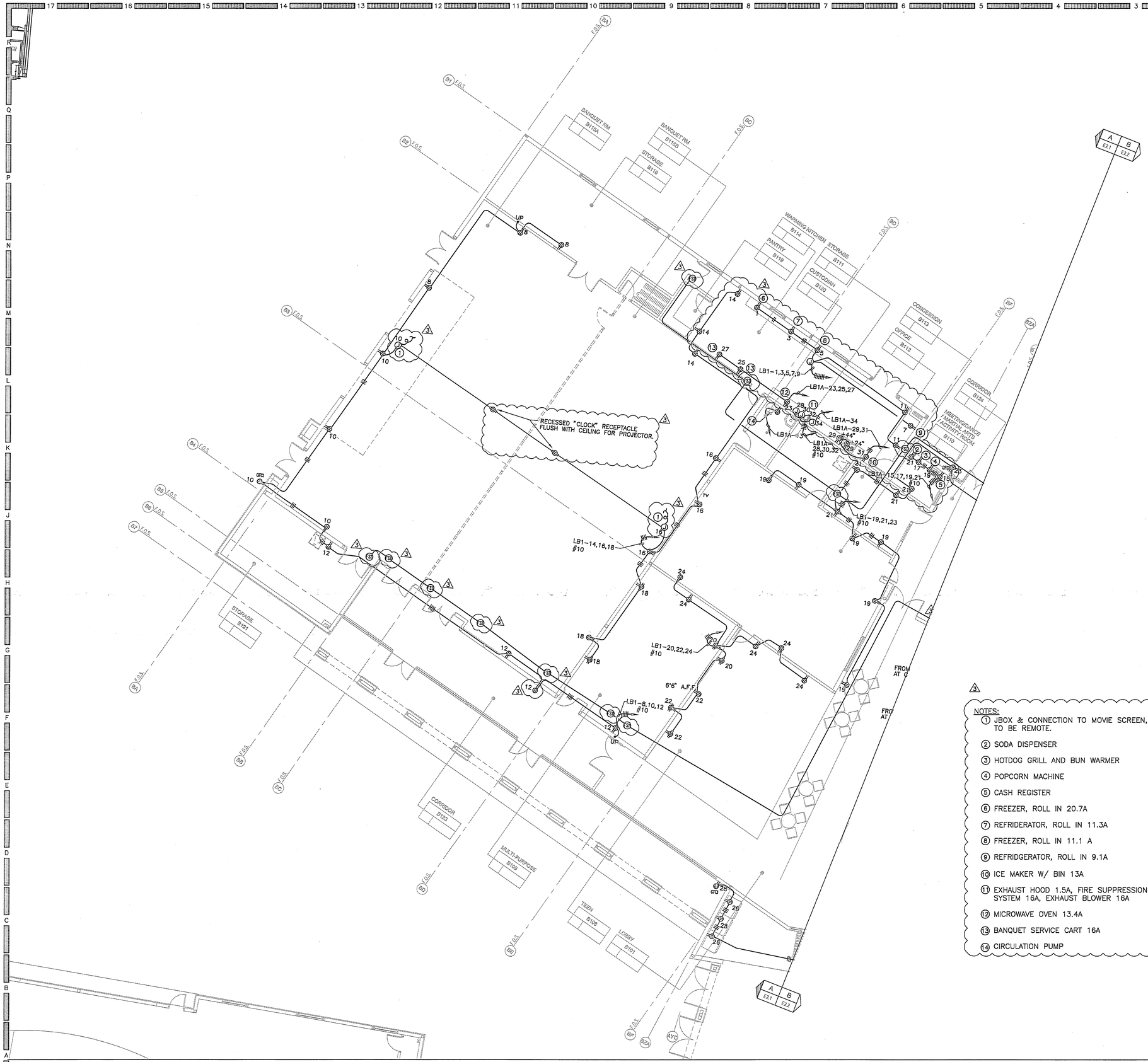
Drawing Title BUILDING 'B' POWER PLAN - SEGMENT B

Architect's Seal

LICENSED ARCHITECT CHRISTOPHER RICHARD TAYLOR LICENSE NO. C-19759 REN. 02-24-09 STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	EB2.2
Date: 06-22-07	Sheet 9 of ## 20

O:\466 Orange Terrace Library\E-DRAWINGS\E2.1_E2.2 BUILDING B POWER PLAN - SEGMENT A & B.dwg, 7/23/2008 12:16:14 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates



NOTES:

1. JBOX & CONNECTION TO MOVIE SCREEN, VERIFY LOCATION. UP/DOWN CONTROL TO BE REMOTE.
2. SODA DISPENSER
3. HOTDOG GRILL AND BUN WARMER
4. POPCORN MACHINE
5. CASH REGISTER
6. FREEZER, ROLL IN 20.7A
7. REFRIDERATOR, ROLL IN 11.3A
8. FREEZER, ROLL IN 11.1 A
9. REFRIDGERATOR, ROLL IN 9.1A
10. ICE MAKER W/ BIN 13A
11. EXHAUST HOOD 1.5A, FIRE SUPPRESSION SYSTEM 16A, REPLACEMENT AIR SYSTEM 16A, EXHAUST BLOWER 16A
12. MICROWAVE OVEN 13.4A
13. BANQUET SERVICE CART 16A
14. CIRCULATION PUMP

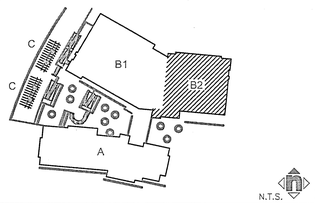
HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

ajk — Four Generations of Electrical Excellence — Construction • Engineering

A. J. KIRKWOOD & ASSOCIATES, INC.
2762 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-525-2777 Fax: 714-525-7029 License No. 724833

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A.J. KIRKWOOD & ASSOC. INC.
LICENSE No. C10-724833
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

BUILDING 'B' POWER PLAN - SEGMENT A

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No. EB2.1
Reviewed: Arch KirKwood	
Date: 06-22-07	Sheet 8 of # 20

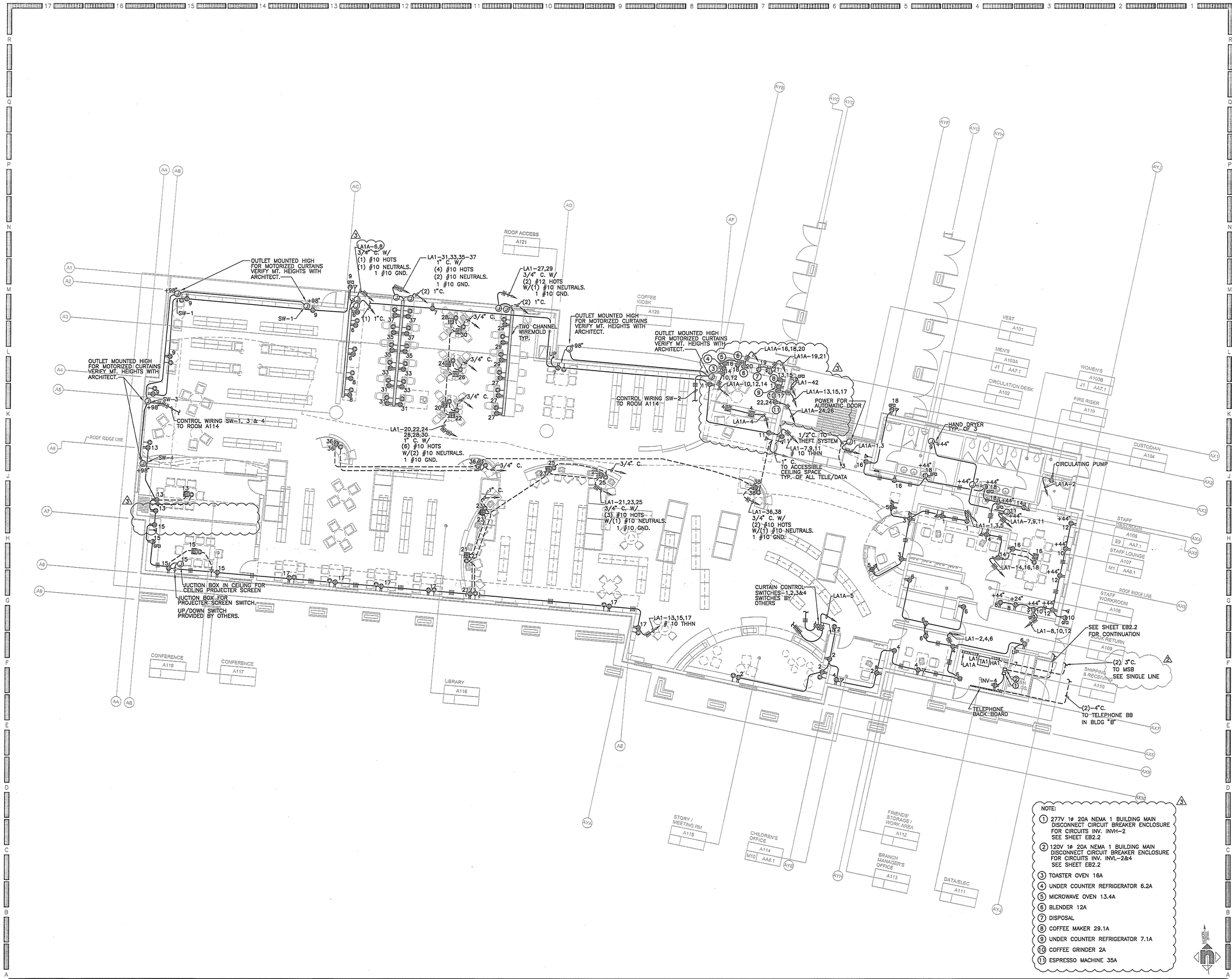
BUILDING 'B' POWER PLAN - SEGMENT A | 1

1/8" = 1'-0"

O:\466 Orange Terrace Library\E-DRAWINGS\E2.1_E2.2 BUILDING B POWER PLAN - SEGMENT A & B.dwg, 7/23/2008 12:15:12 PM, trent, 30x42, Copyright (c): A.J. Kirkwood and Associates

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E2.1_E2.2 BUILDING B POWER PLAN - SEGMENT A & B.dwg Jul 23,2008-12:15pm

PLEASE RECYCLE E2.1_E2.2 BUILDING B POWER PLAN - SEGMENT A & B.DWG



NOTE:

1. 277V 1ø 20A NEMA 1 BUILDING MAIN DISCONNECT CIRCUIT BREAKER ENCLOSURE FOR CIRCUITS INV. INVH-2 SEE SHEET EB2.2
2. 120V 1ø 20A NEMA 1 BUILDING MAIN DISCONNECT CIRCUIT BREAKER ENCLOSURE FOR CIRCUITS INV. INVL-2&4 SEE SHEET EB2.2
3. TOASTER OVEN 16A
4. UNDER COUNTER REFRIGERATOR 6.2A
5. MICROWAVE OVEN 13.4A
6. BLENDER 12A
7. DISPOSAL
8. COFFEE MAKER 29.1A
9. UNDER COUNTER REFRIGERATOR 7.1A
10. COFFEE GRINDER 2A
11. ESPRESSO MACHINE 35A

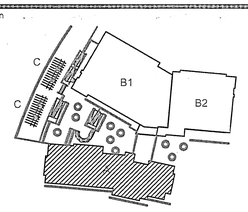
BUILDING 'A' POWER PLAN | A | 1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
27762 WALNUT AVE. TUSTIN, CA 92780
TEL 714-832-1977 FAX 714-832-7532 LICENSE NO. 736202

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE No. 736202
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER

PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

SM HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

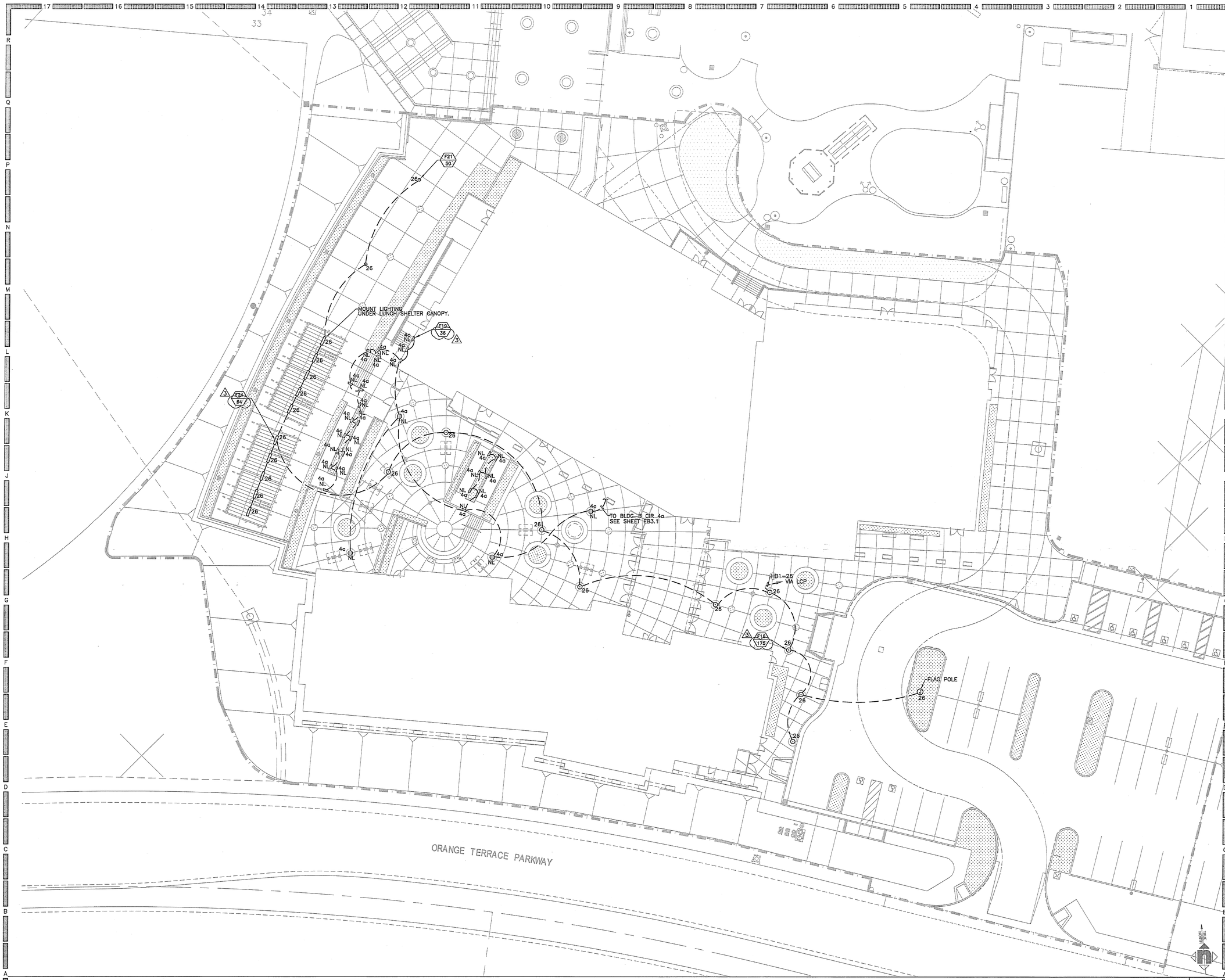
BUILDING 'A' POWER PLAN

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
EXP. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	EA2.0
Date: 06-22-07	Sheet 7 of # 20

O:\466 Orange Terrace Library\E-DRAWINGS\E2.0 BUILDING A POWER PLAN.dwg, 7/23/2008 12:14:48 PM, trent, 30x42, Copyright (c): A.J. Kirkwood and Associates



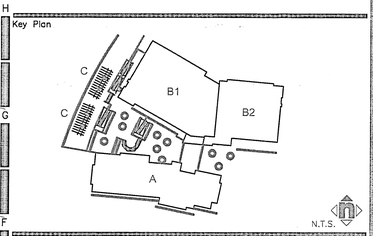
HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909.989.9979
Fax: 909.483.1400
www.hmcarchitects.com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING

A. J. KIRKWOOD & ASSOCIATES, INC.
2762 WALNUT AVE. TUSTIN, CA 92780
Tel 714-832-2777 Fax 714-832-7829 License CA 736525

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOCIATES, INC.
LICENSE No. 736525
(CO) (EXP) 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

ELECTRICAL SITE LIGHTING PLAN

Architect's Seal

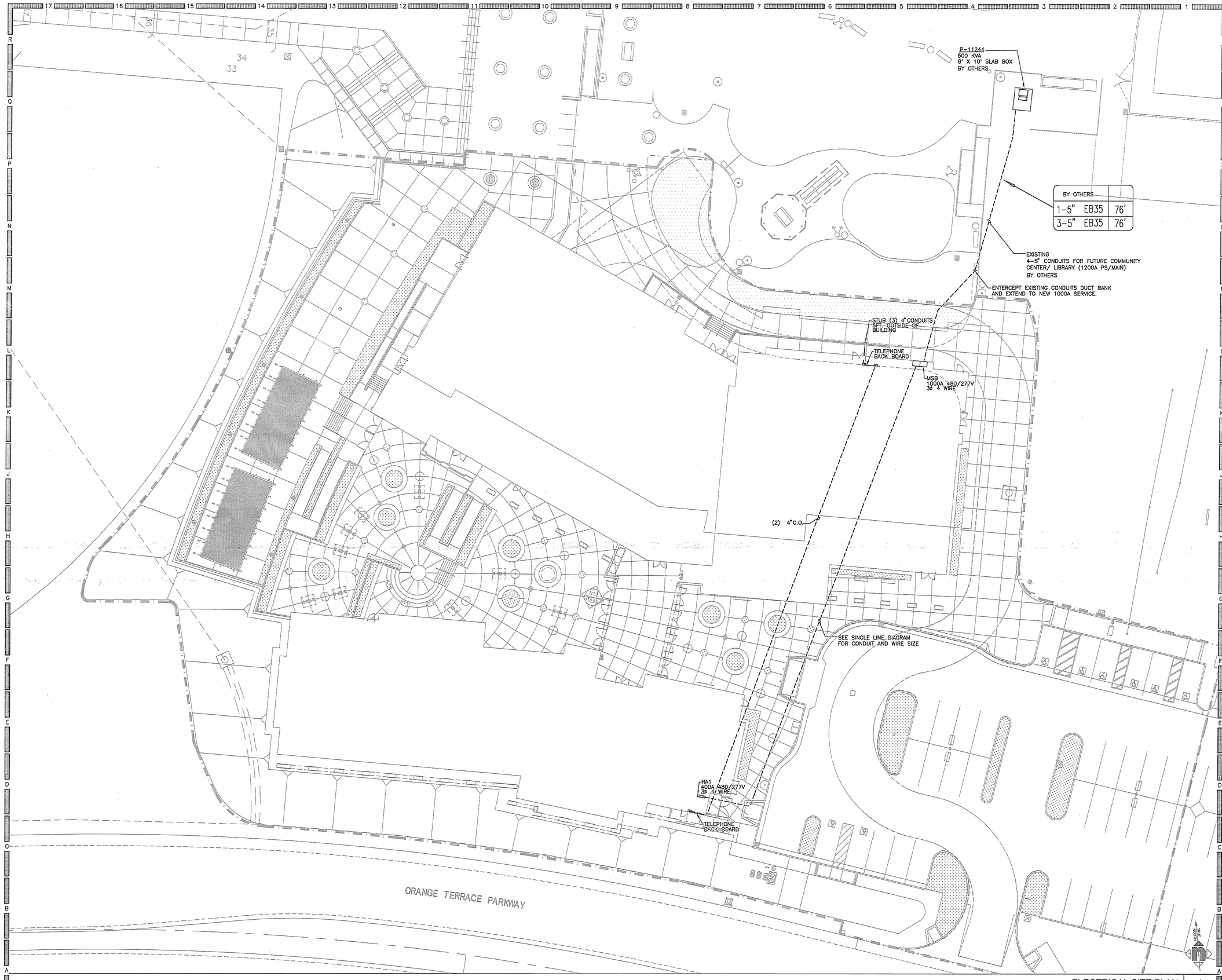
LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
LICENSE NO. C-19759
EXPIRES 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirkWood	E1.1
Date: 06-22-07	Sheet 6 of # 20

ELECTRICAL SITE PLAN 1

1/16" = 1'-0"

O:\466 Orange Terrace Library\E-DRAWINGS\E1.1 LIGHTING SITE PLAN.dwg, 7/23/2008 12:14:30 PM, trent, 36x42, Copyright (c) A.J. Kirkwood and Associates

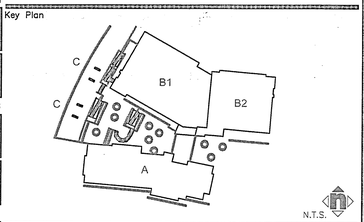


HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
27632 WALNUT AVE. TUSTIN, CA 92780
PH 714-832-1177 FAX 714-832-7129 LIC.#B 721232

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOCIATES, INC.
LICENSE NO. 820-721232
EXP. 10/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE
LIBRARY /
COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

ELECTRICAL SITE PLAN

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
LICENSE NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	E1.0
Date: 06-22-07	Sheet 6 of 11 20

ELECTRICAL SITE PLAN | 1

1/16" = 1'-0"

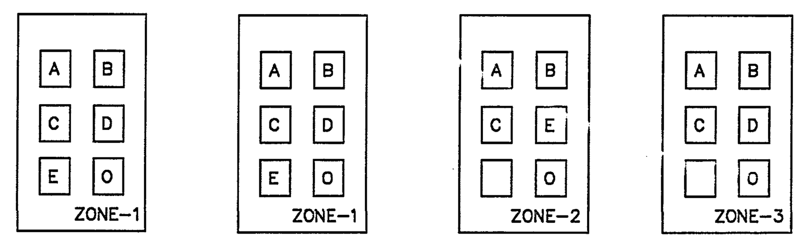
File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E1.0 OVERALL SITE PLAN.dwg Jul 23,2008-12:14pm

PLEASE RECYCLE E1.0 OVERALL SITE PLAN.DWG

O:\466 Orange Terrace Library\E-DRAWINGS\E1.0 OVERALL SITE PLAN.dwg, 7/23/2008 12:13:58 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates

17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

R Q P N M L K J H G F E D C B A

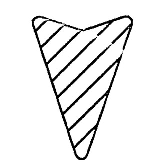


BANQUET AREA LOW-VOLTAGE SWITCHING

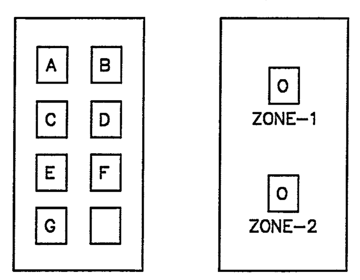
BANQUET AREA LOW-VOLTAGE SWITCHING

MAIN LOBBY LOW-VOLTAGE SWITCHING

GYM LOW-VOLTAGE SWITCHING



MAIN GLAZED LOBBY/GYM AREA LOW-VOLTAGE LIGHT SHEDDING PHOTOSENSOR



LIBRARY AREA LOW-VOLTAGE SWITCHING

MASTER LIGHTING CONTROL PANEL BUILDING A LCP

MOUNTING SURFACE PHOTOCELL YES COMPUTER SYSTEM NO NETWORK TYPE N/A

PANEL	CKT	RELAY	DESCRIPTION	LOCAL SWITCH	LV SWITCH	OVERRIDE SWITCH	ZONE NUMBER	MISCELLANEOUS
HA1	2	1	Library Area	N	Y	Y	1	To Fixture 2a Via LV Switch/Occupancy Sensor
HA1	2	2	Library Area	N	Y	Y	1	To Fixture 2b Via LV Switch/Occupancy Sensor
HA1	2	3	Library Area	N	Y	Y	1	To Fixture 2c Via LV Switch/Occupancy Sensor
HA1	4	4	Library Area	N	Y	Y	1	To Fixture 4a Via LV Switch/Occupancy Sensor
HA1	4	5	Library Area	N	Y	Y	1	To Fixture 4b Via LV Switch/Occupancy Sensor
HA1	4	6	Library Area	N	Y	Y	1	To Fixture 4c Via LV Switch/Occupancy Sensor
HA1	6	7	Library Area	N	Y	Y	1	To Fixture 6a Via LV Switch/Occupancy Sensor
HA1	6	8	Library Area	N	Y	Y	1	To Fixture 6b Via LV Switch/Occupancy Sensor
HA1	6	9	Library Area	N	Y	Y	1	To Fixture 6c Via LV Switch/Occupancy Sensor
HA1	8	10	Library Area-Hard Lid	N	Y	Y	2	To Fixture 8d Via LV Switch/Occupancy Sensor
HA1	8	11	Library Area-Hard Lid	N	Y	Y	2	To Fixture 8e Via LV Switch/Occupancy Sensor
HA1	8	12	Library Area-Hard Lid	N	Y	Y	2	To Fixture 8f Via LV Switch/Occupancy Sensor
HA1	10	13	Exterior Wall Fixtures	N	N	N	3	To Fixture 10 Via Time Clock
HA1	14	14	Reading Room	N	Y	Y	2	To Fixture 14g Via LV Switch/Occupancy Sensor
-	-	-	SPACE	-	-	-	-	-
-	-	-	SPACE	-	-	-	-	-

ZONE NUMBER	TIME ON	TIME OFF	PHOTO ON	PHOTO OFF	DESCRIPTION	ZONE NUMBER	TIME ON	TIME OFF	PHOTO ON	PHOTO OFF	DESCRIPTION
1			–	–		5	–	YES	YES	–	–
2			–	–		6	–	–	–	–	–
3	N	Y	Y	N	TO FIXTURES CIR.10	7	–	–	–	–	–
4						8	–	–	–	–	–

LIGHTING OVER RIDE SWITCH SCHEDULE

MOUNTING FLUSH LV. 2HR. OVER RIDE SWITCH WITH 20 MINUTE FLASH

PANEL#	CKT#	RELAY	DESCRIPTION	LOCAL SWITCH	O.R. SWITCH	ZONE NUMBER	MISCELLANEOUS
LCP	AS NOTED		LIBRARY ENTRY AREA	Y	Y	1	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		LIBRARY CENTER AREA	Y	Y	2	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		LIBRARY STACKED AREA	Y	Y	2	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		EXTERIOR WALL	N	N	3	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		READING ROOM	Y	Y	2	SEE FL. PLAN FOR LOCATION

LIGHTING CONTROL SYSTEM FOR BLDG-A

MASTER LIGHTING CONTROL PANEL BUILDING B LCP

MOUNTING SURFACE PHOTOCELL YES COMPUTER SYSTEM NO NETWORK TYPE N/A

PANEL	CKT	RELAY	DESCRIPTION	LOCAL SWITCH	LV SWITCH	OVERRIDE SWITCH	ZONE NUMBER	MISCELLANEOUS
HB1	2	1	Banquet Perimeter Lighting	N	Y	Y	1	To Fixture 2a Via LV Switch/Occupancy Sensor
HB1	2	2	Banquet Perimeter Lighting	N	Y	Y	1	To Fixture 2b Via LV Switch/Occupancy Sensor
HB1	2	3	Banquet Wall Sconce	N	Y	Y	1	To Fixture 2c Via LV Switch/Occupancy Sensor
HB1	2	4	Banquet Area	N	Y	Y	1	To Fixture 2d Via LV Switch/Occupancy Sensor
-	-	-	SPACE	-	-	-	-	-
HB1	4	6	Banquet Perimeter Lighting	N	Y	Y	1	To Fixture 4a Via LV Switch/Occupancy Sensor
HB1	4	7	Banquet Perimeter Lighting	N	Y	Y	1	To Fixture 4b Via LV Switch/Occupancy Sensor
HB1	4	8	Banquet Wall Sconce	N	Y	Y	1	To Fixture 4c Via LV Switch/Occupancy Sensor
HB1	4	9	Banquet Area	N	Y	Y	1	To Fixture 4d Via LV Switch/Occupancy Sensor
-	-	-	SPACE	-	-	-	-	-
HB1	10	11	Corridor B123 Lighting	N	Y	Y	2	To Fixture 10a Via Lobby Photocell and LV Switch
HB1	10	12	Main Lobby Sconce	N	Y	Y	2	To Fixture 10b Via Lobby Photocell and LV Switch
HB1	10	13	Main Lobby Future Lighting	N	Y	Y	2	To Jboxes 10c Via LV Switch
HB1	10	14	Main Lobby Reception	Y	N	Y	2	To Local Switch as noted
HB1	6	15	Teen B108	Y	N	Y	2	To Local Switch as noted
HB1	12	16	Gym Lighting	N	Y	Y	3	To Fixture 12a Via LV Switch and Gym Photocell
HB1	12	17	Gym Lighting	N	Y	Y	3	To Fixture 12b Via LV Switch
HB1	12	18	Gym Lighting	N	Y	Y	3	To Fixture 12c Via LV Switch
HB1	12	19	Gym Lighting	N	Y	Y	3	To Fixture 12d Via LV Switch
HB1	14	20	Gym Lighting	N	Y	Y	3	To Fixture 14a Via LV Switch and Gym Photocell
HB1	14	21	Gym Lighting	N	Y	Y	3	To Fixture 14b Via LV Switch
HB1	14	22	Gym Lighting	N	Y	Y	3	To Fixture 14c Via LV Switch
HB1	16	23	Gym Lighting	N	Y	Y	3	To Fixture 16a Via LV Switch and Gym Photocell
HB1	16	24	Gym Lighting	N	Y	Y	3	To Fixture 16b Via LV Switch
HB1	16	25	Gym Lighting	N	Y	Y	3	To Fixture 16c Via LV Switch
HB1	20	26	Building B Exterior Wall Ltg	N	N	N	4	To Fixture VIA Time Clock
HB1	26	27	Courtyard Lighting	N	N	N	4	To Fixture VIA Time Clock
-	-	-	SPACE	-	-	-	-	-
INVH	8	43	Banquet Emergency Lighting	N	Y	Y	1	To Emergency Fixture 8e Via LV Switch/Occupancy Sensor
INVH	10	45	Banquet Emergency Lighting	N	Y	Y	1	To Emergency Fixture 10e Via LV Switch/Occupancy Sensor
INVH	6	47	Main Lobby Wii Wall Soffit	N	Y	Y	2	To Emergency Fixture 6e Via LV Switch/Occupancy Sensor
-	-	-	SPACE	-	-	-	-	-

ZONE NUMBER	TIME ON	TIME OFF	PHOTO ON	PHOTO OFF	DESCRIPTION	ZONE NUMBER	TIME ON	TIME OFF	PHOTO ON	PHOTO OFF	DESCRIPTION
1			–	–		5	–	–	–	–	–
2	–	YES	–	YES	LOBBY LIGHTING	6	–	–	–	–	–
3	–	YES	–	YES	GYM LIGHTING	7	–	–	–	–	–
4	–	YES	YES	–	COURTYARD/WALL LTG	8	–	–	–	–	–

LIGHTING OVER RIDE SWITCH SCHEDULE

MOUNTING FLUSH LV. 2HR. OVER RIDE SWITCH WITH 20 MINUTE FLASH

PANEL#	CKT#	RELAY	DESCRIPTION	LOCAL SWITCH	O.R. SWITCH	ZONE NUMBER	MISCELLANEOUS
LCP	AS NOTED		BANQUET AREA	Y	Y	1	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		MAIN LOBBY AREA	Y	Y	2	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		MAIN GLAZED LOBBY AREA	Y	Y	2	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		BASKETBALL COURT	Y	Y	3	SEE FL. PLAN FOR LOCATION
LCP	AS NOTED		EXTERIOR WALL	N	N	4	NO O.R. SW REQUIRED
LCP	AS NOTED		EXTERIOR WALL	N	N	4	NO O.R. SW REQUIRED

LIGHTING CONTROL SYSTEM FOR BLDG-B

LIGHTING CONTROL SYSTEM SPECIFICATIONS:

1. ALL COMPONENTS OF THE LIGHTING CONTROL SYSTEM SHALL BE MANUFACTURED BY A SINGLE MANUFACTURER. THE ENTIRE SYSTEM SHALL BE COVERED BY A ONE YEAR WARRANTY.

2. THE RELAY PANELS SHALL FACTORY PRE-ASSEMBLED AND UL LISTED. PROVIDE COMPLETE WITH ALL REQUIRED CONTROL TRANSFORMERS, AND REQUIRED VOLTAGE BARRIERS. WHEN DESIGNATED AS SURFACE MOUNTING PROVIDE A SCREW-ON COVER. WHEN DESIGNATED AS FLUSH MOUNTING PROVIDE A HINGED DOOR ASSEMBLY.

3. LIGHTING CONTROL RELAYS SHALL BE FULL LOAD RELAYS SUITABLE FOR ALL TYPES OF LAMP LOADS UP TO 20 AMPERES AT 347 VAC. LOAD CONTACTS SHALL BE ABLE TO SUSTAIN 1500 AMP FAULT CURRENTS FOR UP TO 20 MILLI-SECONDS. THE RELAY SHALL BE CONTAINED IN A MOLDED CASE CONTAINING BOTH HIGH AND LOW VOLTAGE TERMINALS AND SHALL HAVE A BUILT-IN OPERATING LEVER MARKED ON / OFF FOR MANUAL SWITCHING AT THE RELAY PANEL.

   IT SHALL BE IMPOSSIBLE TO CONTINUOUSLY ENERGIZE THE RELAY COIL BY HOLDING THE LOW VOLTAGE SWITCH IN EITHER THE ON OR OFF POSITION. RELAYS SHALL BE COMPLETE WITH CONTROL DIODES AND INTERNAL CONTROL CIRCUIT ELIMINATOR CONTACTS. ELIMINATOR CONTACTS SHALL AUTOMATICALLY CONDITION THE INPUT CONTROL CIRCUIT SO AS TO REVERSE THE COIL POLARITY REQUIREMENT IMMEDIATELY AFTER AN ON / OFF CONTROL PULSE IS RECEIVED.

4. BOTH MASTER AND LOCAL SWITCHES SHALL BE COMPLETE WITH INTEGRAL LED'S INDICATING BOTH ON AND OFF POSITIONS (RED / GREEN). SWITCHING ACTION TO BE CONTROLLED BY AN INTEGRAL SCR WHICH DETERMINES THE CURRENT FLOW. SWITCHES SHALL HAVE THE CAPABILITY FOR LABELING THE CIRCUIT NAME UNDER THE PLASTIC SURFACE.

5. THE "CONTROLLER" SHALL ALLOW FOR AUXILIARY INPUT OF A MAINTAINED OR A MOMENTARY PULSE.

   THE "CONTROLLER" SHALL PROVIDE A FLICK WARN OPTION THE VARIOUS CONTROL ZONES. A LOCAL SWITCH SHALL BE CAPABLE OF OVERRIDING AN OFF SWEEP DURING THE 5 MINUTE WARNING PERIOD.

   THE PROGRAMMING OF THE "CONTROLLER" SHALL BE USER FRIENDLY WITH ALL NECESSARY INSTRUCTIONS PRINTED ON THE "CONTROLLER" LABEL. NO AUXILIARY INSTRUCTION MANUALS SHALL BE REQUIRED.

   THE MASTER RELAY PANEL SHALL CONTAIN A TIMECLOCK WITH THE FOLLOWING FEATURES: SEVEN DAY / HOLIDAY CONTROL, 8 OUTPUT CHANNELS, FOUR EVENTS PER DAY, FIVE YEAR MEMORY FOR PROGRAMMING, 24 HOUR MEMORY FOR THE CLOCK, AND OUTPUTS RATED AT 100 MILIAMPS.

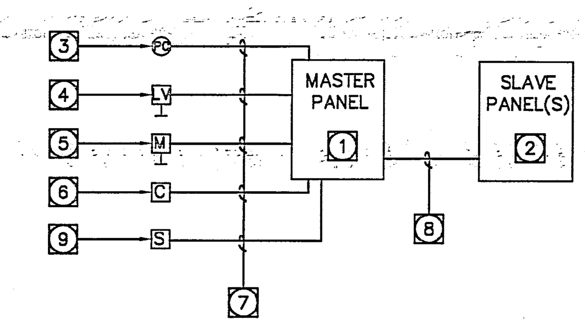
6. WHEN THE MASTER RELAY SCHEDULE INDICATES A COMPUTER SYSTEM PROVIDE ALL SOFTWARE AND HARDWARE COMPONENTS FOR A DESKTOP COMPUTER CONTROL.

7. WHEN THE MASTER RELAY SCHEDULE INDICATES A NETWORK TYPE OF COPPER, PROVIDE #18 COPPER WIRE OR LARGER AS RECOMMENDED BY THE MANUFACTURER. WHEN THE MASTER RELAY SCHEDULE INDICATES A NETWORK TYPE OF FIBER,
8. PROVIDE FIBER OPTIC CABLE AS RECOMMENDED BY THE MANUFACTURER.

   THE LOW VOLTAGE LIGHTING CONTOL SYSTEM SHALL BE PROGRAMMED / APPROVED BY A MANUFACTURERS REPRESENTATIVE.

9. THE LOW VOLTAGE LIGHTING CONTOL SYSTEM SHALL BE MANUFACTURED BY LCD, LITHONIA. WATTSTOPPER OR EQUAL SYSTEM

10.



LIGHTING CONTROL SYSTEM PLAN NOTES:

(1) MASTER LIGHTING CONTROL PANEL. SEE PLANS FOR EXACT LOCATION. REFER TO MASTER LIGHTING CONTROL PANEL SCHEDULE FOR MORE INFORMATION.

(2) SLAVE LIGHTING CONTROL PANEL(S). SEE PLANS FOR EXACT LOCATION, AND QUANTITY. REFER TO SLAVE LIGHTING CONTROL PANEL SCHEDULE(S) IF APPLICABLE

(3) PHOTOCELL MOUNTED AT EXTERIOR ROOFTOP LOCATION FACING NORTH.

(4) LOCAL SWITCHE(S) UNDER A COMMON FACEPLATE. SEE RELAY SCHEDULE(S) FOR EXACT QUANTITY. SEE PLANS FOR EXACT LOCATION(S) AND CONFIGURATION(S).

(5) MASTER OVERRRIDE SWITCHE(S) UNDER A COMMON FACEPLATE. SEE RELAY SCHEDULE(S) FOR EXACT QUANTITY. SEE PLANS FOR EXACT LOCATION(S) AND CONFIGURATION(S).

(6) LOCAL CCCUPANT SENSOR(S) SEE RELAY SEE PLANS FOR EXACT LOCATION(S) AND CONFIGURATION(S).

(7) PROVIDE 3/4"CONDUIT MINIMUM, OR LARGER AS REQUIRED WITH QUANTITY AND TYPE OF CONDUCTORS PER MANUFACTURER'S RECOMMENDATIONS.

(8) PROVIDE 3/4" CONDUIT MINIMUM, OR LARGER AS REQUIRED, WITH QUANTITY AND TYPE OF CONDUCTORS PER MANUFACTURER'S RECOMMENDATIONS FOR INTERCONNECTION MASTER AND SLAVE PANELS. REFER TO MASTER RELAY SCHEDULE FOR NETWORKING TYPE.

(8) PHOTOSENSERS SHALL BE MOUNTED ON AN INTERIOR WALL FACING OPEN AREA. AS INDICATED ON DRAWINGS

LIGHTING CONTROL SYSTEM REQUIREMENTS:

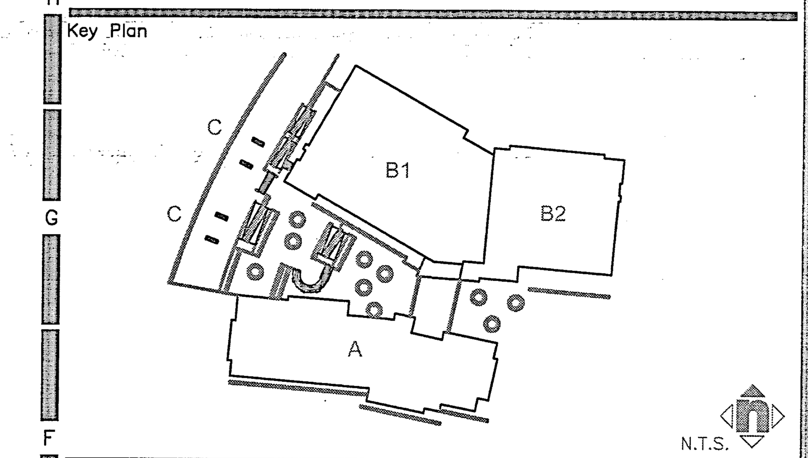
1. IT IS THE INTENT OF THE CONTRACT DOCUMENTS, WHICH ARE PRESENTED IN A DIAGRAMATIC, "DESIGN-BUILD" FORMAT, FOR THE CONTRACTOR TO DESIGN, PROVIDE AND INSTALL A COMPLETE AND FULLY FUNCTIONING, CODE APPROVED LOW VOLTAGE LIGHTING CONTROL SYSTEM.

HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909.989.9979
Fax: 909.483.1400
www.hmcarchitects.com
Architecture Interiors Planning

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 Fax: 714-505-7059 LICENSE NO. 724533

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A.J. KIRKWOOD & ASSOC. INC.
LICENSE No. C10-724533
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

(SM) HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

LIGHTING CONTROL PANEL DETAILS

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

TRUE NORTH

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	E0.5
Date: 06-22-07	Sheet 6 of ## 21

O:\466 Orange Terrace Library\E-DRAWINGS\E0.5.dwg, 7/23/2008 12:13:27 PM, trent, 30x42, Copyright (c): A.J. Kirkwood and Associates

HMC ARCHITECTS

3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 FAX 714-505-7050 LICENSE NO. 724633

3

CERTIFICATE OF COMPLIANCE (Part 1 of 2) OLTG-1-C

PROJECT NAME: ORANGE TERRACE LIBRARY		DATE: 11/26/2006
PROJECT ADDRESS: RIVERSIDE,CA		
PRINCIPAL DESIGNER - LIGHTING: Arch Kirkwood	TELEPHONE: 714-505-1977	Building Permit #
DOCUMENTATION AUTHOR: Natalie Sandoval	TELEPHONE: 714-505-1977	Checked By/Date Enforcement Agency Use

GENERAL INFORMATION

DATE OF PLANS: | OUTDOOR LIGHTING ZONE (✓ ONE) ☐ LZ1 ☐ LZ2 ☑ LZ3 ☐ LZ4

FUNCTION TYPE ☐ OUTDOOR LIGHTING ☐ OUTDOOR SIGNS ☐ INDOOR SIGNS

PHASE OF CONSTRUCTION ☑ NEW CONSTRUCTION ☑ ADDITIONS ☐ ALTERATIONS

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists outdoor lighting system specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to buidling lighting requirements.

The documentation preparer herby certifies that the documentation is accurate and complete.

DOCUMENTATION AUTHOR	SIGNATURE	DATE
Natalie Sandoval		

The Principal Lighting Designer hereby certifies that the proposed outdoor lighting and signs design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the lighting requirements contained in the applicable parts of Sections 110, 119, 130 through 132, 146, 148 & 149 of Title 24, Part 6. **Please ✓ one:**

☐ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am licensed in the State of California as a civil engineer or electrical engineer, or I am a

☑ I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation, and that I am a licensed contractor performing this work.

☐ I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professionals Code Sections 5537, 5538 and 6737.1

(These sections of the Business and Professions code are printed in full in the Nonresidential Manual.)

PRINCIPAL LIGHTING DESIGNER - NAME	SIGNATURE	DATE	LIC. #
Arch Kirkwood		7/6/2006	C10-724633

INSTRUCTIONS TO APPLICANT OUTDOOR LIGHTING COMPLIANCE & WORKSHEETS (✓ box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms please refer to the Nonresidential Manual published by the California Energy Commission.

☑ OLTG-1-C	Cerificate of Compliance. Required on all plans for all submittals for outdoor lighting. Part 2 of 2 may be incorperated in schedules on the plans
	Either LTG-1-C or OLTC-1-C may be used for signs as follows:
	1. Use LTG-1-C if the project consists solely of indoor signs
	2. Use LTG-1-C if the project consists of indoor lighting, and outdoor or indoor signs, but no other outdoor lighting
	3. Use OLTG-1-C if the project consists solely of outdoor signs
	4. Use OLTG-1-C if the project consists of outdoor lighting, and indoor or outdoor signs, but no other indoor lighting
☑ OLTG-2-C	LIGHTING COMPLIANCE SUMMARY. Applicable Parts required for all outdoor lighting allowances (Except for Signs)
☑ OLTG-3-C	AREA CALCULATIONS WORKSHEETS. Applicable Parts required for all outdoor area calculations.
☐ OLTG-4-C	SIGN LIGHTING COMPLIANCE. Required for all internally and externally illuminated signs, for both indoor and outdoor signs.

2005 Nonresidential Compliance Forms *April 2005*

CERTIFICATE OF COMPLIANCE (Part 2 of 4) LTG-1-C

PROJECT NAME: ORANGE TERRACE LIBRARY DATE: 11/26/2006

Lighting Schedules on Plans Show that Outdoor Lighting Meets the Allowed Lighting Power

✓
- ☑ Lighting power allowances for general site illumination on OLTG-2-C Part 1 of 4
- ☐ Not Applicable
- ☐ Lighting power allowances for local ordinances for security multipliers on OLTG-2-C Part 1 of 4
- ☑ Not Applicable
- ☐ Lighting power allowances for specific applications, other than vehicle service stations with canopies on OLTG-2-C Part 3 of 4
- ☑ Not Applicable
- ☐ Lighting power allowances for vehicle service station canopies on OLTG-2-C Part 4 of 4
- ☑ Not Applicable
- ☐ Sign lighting compliance on OLTG-4-C
- ☑ Not Applicable

Mandatory Measures on Plans Show that Outdoor Lighting Meets Outdoor Lighting Controls and Equipme

Indicate location on plans of Note Block for Mandatory Measure

✓
- ☐ Installed lighting power has been determined in accordance with § 130(c) 1
- ☑ Not Applicable
- ☑ All permanently installed luminares with lamps rated over 100 watts either have a lamp efficacy of at least 60 lumens per watt or are controlled by a motion sensor § 132(a)
- ☐ Not Applicable
- ☐ All Luminares with lamps raged greater than 175 watts in hardscape areas, including parking lots, building entrances, canopies, and all outdoor sales areas meet the Cutoff Requirements of § 132(b)
- ☑ Not Applicable
- ☑ All permanently installed outdoor lighting meets the Control Requirements of § 132(c) 1
- ☐ Not Applicable
- ☐ Building facades, parking lots, garages, canopies, and outdoor sales areas meet the Multi-Level Lighting Requirements of § 132(c)2
- ☑ Not Applicable

MANDATORY AUTOMATIC CONTOLS

CONTROL LOCATION	CONTROL IDENTIFICATION	CONTROL TYPE (Auto Time Switch, Potosensor, etc.)	AREA CONTROLLED	NOTE TO FIELD
1st Floor	Time Clock	Time Clock w / Photocell	All outdoor lighting	

2005 Nonresidential Compliance Forms

LIGHTING COMPLIANCE SUMMARY (Part 1 of 4) OLTG-2-C

Project Name: ORANGE TERRACE LIBRARY Date: 11/26/2006

LIGHTING POWER ALLOWANCES-GENERAL SITE ILLUMINATION-(Table 147-A)

	Alloted Watts			Luminaire			Lamps/Ballasts				Installed Watts			
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Lighting Applications Category (Table147A)	Area (ft²) or Length (LF)	Alloted LPD W/ft² or W/LF	Alloted Watts (BxC)	Code for Luminaire Type	Description	Cutoff Designation	Lamp Type	Number of Lamps per Luminaire	Watts per Lamp	Number of Ballast per Luminaire	Watts per Luminaire	✓ If CEC Default	Number of Liminaires	Installed Watts (LxN)
Hardscape for pedestrian	38737.55	0.17	6585.384								0	☐		0
use, including, plazas,			0	F13	Wall Sconce		FL	1	39	1	39	☑	17	663
sidewalks, walkways			0	F15	Wall Sconce-Dn Lights		FL	2	42	1	84	☐	35	2940
and bikeways			0	F16	Post Top		MH	1	175	1	175	☐	13	2275
Building Entrances	4665	0.7	3265.5	F19	Step Lights		FL	2	18	1	36	☑	25	900
			0	F21	Recess Bollard		MH	1	50	1	50	☐	2	100
			0	F14	Wall Sconce		FL	1	32	1	32	☑	9	288
			0								0	☐		0
			0								0	☐		0
			0								0	☐		0
			0								0	☐		0
			0								0	☑		0
			0								0	☑		0
			0								0	☐		0
			0								0	☐		0
			0								0	☐		0
		Total Allotted Watts	9850.884							Total Installed Watts				7166

2005 Nonresidential Compliance Forms *April 2005*

LIGHTING COMPLIANCE SUMMARY (Part 3 of 4) OLTG-2-C

Project Name: ORANGE TERRACE LIBRARY Date: 11/26/2006

LIGHTING POWER ALLOWANCES for Specific Applications (TABLE 147-B)-Other Than Vehicle Service Station without Canopies

	Alloted Watts			Luminaire			Lamps/Ballasts				Installed Watts				
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Lighting Application (Table 147-B)	Area (ft²) or Length (LF)	Allotted LPD W/ft² or W/LF	Alloted Watts (BxC)	Code for Luminaire Type	Description	Cutoff Designation	Lamp Type	Number of Lamps per Luminaire	Watts per Lamp	Number of Ballast per Luminaire	Watts per Luminaire	✓ If CEC Default	Number of Liminaires	Design Watts (LxN)	Allowed Watts
Non-Sales Canopies	6413	0.5	3206.5	F14	Wall Sconce		FL	1	32	1	32	☐	31	992	3206.5
			0	F15	Wall Sconce-DN Lights		FL	2	42	1	84	☐	0	0	0
			0	F24	Lunch Canopy Ltg		FL	1	50	1	50	☐	14	700	0
			0	F18	Down Light		FL	1	32	1	32	☐	1	32	0
Building Façade	7816	0.35	2735.6	F15	Wall Sconce-Uplights		FL	1	32	1	32	☐	35	1120	2735.6
			0								0	☐		0	0
			0								0	☐		0	0
			0								0	☐		0	0
			0								0	☐		0	0
			0								0	☐		0	0
			0								0	☐		0	0
			0								0	☐		0	0
			0								0	☐		0	0
			0								0	☐		0	0
			0								0	☐		0	0
			0								0	☐		0	0
													Total	2844	5942.1

2005 Nonresidential Compliance Forms *September 2005*

AS BUILT

ILLUMINATED AREA CALCULATION WORKSHEET (Part 1 of 5) OLTG-3-C

Project Name: ORANGE TERRACE LIBRARY Date: 11/26/2006

Hardscape-Method (i)

A. Hardscape for automotive vehicular use, including parking lots, driveways and site roads

A	B	C	D	E	F	G	H
		Areas (ft²) to Subtract from within Illuminated Area					
List Specific Application (Table 147-A)	Actual Paved Area plus 5' perimeter of adjacent unpaved land. Includes planters and landscaped areas less than 10' wide that are enclosed by hardscape on at least 3 sides	Areas between poles or luminaires that are greater than 6 mounting height distance (if Applicable)	Overlapping Areas of Another Application or Luminare	Building Areas	Areas Obstructed By Sign or Other Structure	Sub Total of areas to Subtract (C+D+E+F)	Illuminated Area (B-G)
						0	0
						0	0
						0	0
						0	0
						0	0

B. Hardscape for pedestrian use, including plazas, sidewalks, walkways and bikeways

A	B	C	D	E	F	G	H
		Areas (ft²) to Subtract from within Illuminated Area					
List Specific Application (Table 147-A)	Actual Paved Area plus 5' of unpaved land on either side of path travel. Shall includes all contiguous paved area before including adjacent grounds.	Areas between poles or luminaires that are greater than 6 mounting height distance (if Applicable)	Overlapping Areas of Another Application or Luminare	Building Areas	Areas Obstructed By Sign or Other Structure	Sub Total of areas to Subtract (C+D+E+F)	Illuminated Area (B-G)
Pedestrian Use	38737.55					0	38737.55
						0	0
						0	0
						0	0
						0	0

Checklist

- ☑ § 147(c)1B-Each portion of all illuminated areas has been assigned only one lighting application, and the applications are consistent with the actual use of the areas.
- ☑ § 147(c)1A- General illumination areas include only those illuminated areas that are in the bounds of the application and are within a square pattern around a luminaire that is six times the luminaire mounting height, with the luminare in the middle of the pattern, less any areas that are within buildings, under canopies, beyond property lines, or obstructed by signs or other structures.

2005 Nonresidential Compliance Forms *April 2005*

ILLUMINATED AREA CALCULATION WORKSHEET (Part 2 of 5) OLTG-3-C

Project Name: ORANGE TERRACE LIBRARY Date: 11/26/2006

Hardscape-Method (ii)

A. Hardscape for driveways, site roads, sidewalks, walkways and bikeways-

A	B
List Specific Application (Table 147-A)	Length of 25' wide path incorporating as much of the paved area as possible.

Checklist

- ☑ § 147(c)1B-Each portion of all illuminated areas has been assigned only one lighting application, and the applications are consistent with the actual use of the areas.
- ☑ § 147(c)1B Method ii- General illumination areas for site roadway, driveway, sidewalk, walkway, or bikeway includes only those illuminated areas that are in the bounds of the Application and includes a 25 foot wide area running along the axis of path of travel and includes as much of the paved areas as possible.

B. Building Entrances without Canopies

A	B	C
Width of Door plus 3 feet	Smaller of 18 feet of distance to the edge of the property line	Area (AxB)(ft²)
90	18	1620
72	18	1296
72	18	1296
30	18	540
		0
		0
		0
		0
		0

Checklist

- ☑ § 147(c)1B-Each portion of all illuminated areas has been assigned only one lighting application, and the applications are consistent with the actual use of the areas.
- ☑ § 147(c)1A- General illumination areas include only those illuminated areas that are in the bounds of the application and are within a square pattern around a luminaire that is six times the luminaire mounting height, with the luminare in the middle of the pattern, less any areas that are within buildings, under canopies, beyond property lines, or obstructed by signs or other structures.

2005 Nonresidential Compliance Forms *April 2005*

ILLUMINATED AREA CALCULATION WORKSHEET (Part 3 of 5) OLTG-3-C

Project Name: ORANGE TERRACE LIBRARY Date: 11/26/2006

A. Outdoor Sales Lot Frontage and Sales Lot Area

A	B	C	D	E	F	G	H
	If an Outdoor Sales Frontage Allotment was used, subtract that area from the Gross illuminated Area						
Gross Illuminated Area (ft²)	Mounting height of Sales Frontage Luminaires (feet)	3XB	Distance (In plan view) from frontage luminaire to front edge of Sales Lot	**Sales Lot Frontage** Length (feet)	Sales Frontage Area (C-D)xE (ft²)	Overlapping Areas of Another Application	**Sales Lot Area** A-F-G
		0			0		0
		0			0		0
		0			0		0
		0			0		0
		0			0		0

- ☐ § 147(c)1B-Each portion of all illuminated areas has been assigned only one lighting application, and the applications are consistent with the actual use of the areas.
- ☐ § 147(c)1B - Measured in plan view, only illuminated sections of outdoor sales frontage areas that are immediately adjacent to the principal viewing location and unobstructed viewing length, and are within a 3 mounting heights of the frontage have been used. Luminaires qualifying for this allowance are located in plan view between the principal viewing location and teh frontage outdoor sales.

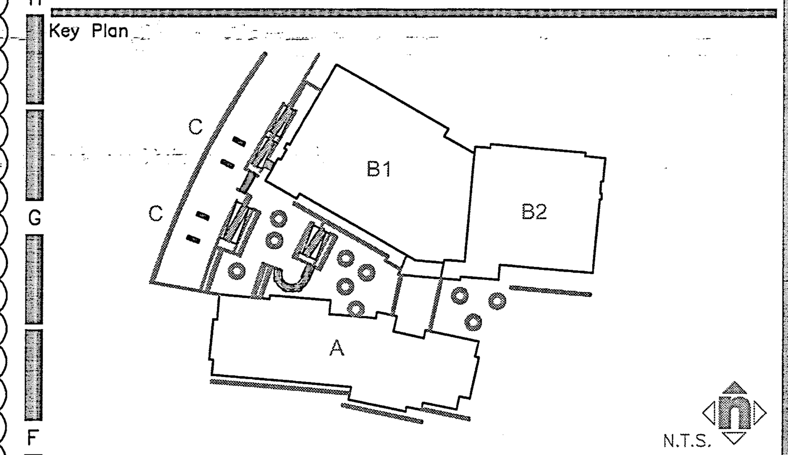
B. Building Façade Area

A	B	C	D	E	F	G	H
				Areas (ft²) to Subtract from the Gross Illuminated Area Do not double count any areas.			
Designated Name and Orientation	Length	Height	Gross Area (BxC)	Areas Covered by signs	Illumination is Obstructed by Other Objects and Area Not Illuminated	Sub Total (E+F)	Net Area Available for Façade Lighting (D-G)
Building A Canopy	235	12	2820			0	2820
Canopy between buildings	150	16	2400			0	2400
Building B Canopy	186	14	2604			0	2604
			0			0	0
			0			0	0

- ☑ § 147(c)1B-Each portion of all illuminated areas has been assigned only one lighting application, and the applications are consistent with the actual use of the areas.
- ☑ § 147(c)1B - Only facades areas that are illuminated without obstruction or interference, by one or more luminaires have been used.

2005 Nonresidential Compliance Forms *April 2005*

Key Plan



Consultant's Seal
LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE No. C10-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

(SM) HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

TITLE 24 DOCUMENTS–OUTDOOR

Architect's Seal
LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

TRUE NORTH

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	E0.4
Date: 06-22-07	Sheet 5 of ## 20

O:\466 Orange Terrace Library\E-DRAWINGS\E0.4.dwg, 7/23/2008 12:13:11 PM, trent, 30x42, Copyright (c): A.J. Kirkwood and Associates

CERTIFICATE OF COMPLIANCE (Part 1 of 4) LTG-1-C

PROJECT NAME: ORANGE TERRACE LIBRARY		DATE: 2/22/2007
PROJECT ADDRESS: RIVERSIDE,CA		
PRINCIPAL DESIGNER - LIGHTING: Arch Kirkwood	TELEPHONE: 714-505-1977	Building Permit #
DOCUMENTATION AUTHOR: NATALIE SANDOVAL	TELEPHONE: 714-505-1977	Checked By/Date Enforcement Agency Use

GENERAL INFORMATION

DATE OF PLANS: | BUILDING CONDITIONED FLOOR AREA: 38,700 | CLIMATE ZONE: 9

BUILDING TYPE ☑ NONRESIDENTIAL ☐ HIGH RISE RESIDENTIAL ☐ HOTEL/MOTEL GUEST

☑ CONDITIONED SPACES ☐ UNCONDITIONED SPACES ☐ INDOOR/OUTDOOR SIGNS

PHASE OF CONSTRUCTION ☑ NEW ☐ ADDITION ☐ ALTERATION

METHOD OF COMPLIANCE

☐ PERFORMANCE ☐ COMPLETE BLDG. ☑ AREA CATEGORY ☐ TAILORED ☐ COMMON LIGHTING

STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to buidling lighting requirements.

The documentation preparer herby certifies that the documentation is accurate and complete.

DOCUMENTATION AUTHOR	SIGNATURE	DATE
NATALIE SANDOVAL		2/22/2007

The Principal Lighting Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the lighting requirements contained in the applicable parts of Sections 110, 119, 130 through 132, 146, 148 & 149 of Title 24, Part 6.

☐ The plans & specifications meet the requirements of Part 6 (Sections 10-103a) The installation certificates meet the requirements of Part 6 (10-103a 3).

☐ The operation & maintenance information meet the requirements of Part 6 (10-103a).
Please check one: (These sections of the Business and Professions Code are printed in full in the Nonresidential Manual.)

☐ I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am licensed in the State of California as a civil engineer or electrical engineer, or I am

☑ I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by Section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation, and that I am a licensed contractor performing this work.

☐ I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professionals Code Sections 5537, 5538 and 6737.1

PRINCIPAL LIGHTING DESIGNER - NAME	SIGNATURE	DATE	LIC. #
Arch Kirkwood		7/6/2006	C10-724633

LIGHTING MANDATORY MEASURES

☑ Indicate location on plans of Note Block for Mandatory Measures E0.3

LIGHTING COMPLIANCE FORMS & WORKSHEETS (check box if worksheet is included)

☑	LTG-1-C, Parts 1 of 4 and 2 of 4	Cerificate of Compliance. Part 1 of 4 and 2 of 4 are required for all submittals
☑	LTG-1-C, Part 3 of 4	Cerificate of Compliance. Part 3 of 4 submittal is required only if Control Credits are claimed
☑	LTG-1-C, Part 4 of 4	Cerificate of Compliance. Part 4 of 4 submittal is required when lighting controls are installed
☑	LTG-2-C	Interior Lighting Schedule
☐	LTG-3-C	Portable Lighting Worksheet
☑	LTG-4-C	Lighting Controls Credit Worksheet
☑	LTG-5-C	Interior Lighting Power Allowance
☐	LTG-6-C	Tailored Method Worksheet
☐	LTG-7-C	Room Cavity Ratio Worksheet
☐	LTG-8-C	Common Lighting Systems Method Worksheet
☐	LTG-9-C	Line Voltage Track Lighting Worksheet
☐	OLTG-4-C	Signs(See OLTG-4-C Sign Worksheet in Chapter 6, Outdoor Lighting and Signs Chapter)

2005 Nonresidential Compliance Forms *April 2005*

CERTIFICATE OF COMPLIANCE (Part 2 of 4) LTG-1-C

PROJECT NAME: ORANGE TERRACE LIBRARY DATE: 2/22/2007

INSTALLED INTERIOR LIGHTING POWER FOR CONDITIONED AND UNCONDITIONED SPACES

		INSTALLED WATTS
INSTALLED LIGHTING, CONDITIONED SPACES (From LTG-2-C)		42,151
PORTABLE LIGHTING (From LTG-3-C)	+	0
LIGHTING CONTROL CREDIT, CONDITIONED SPACES (From LTG-4-C)	-	4887.124
CONDITIONED SPACE ADJUSTED INSTALLED LIGHTING POWER	=	37264.076
INSTALLED LIGHTING, UNCONDITIONED SPACES (From LTG-2-C)		
LIGHTING CONTROL CREDIT, UNCONDITIONED SPACES (From LTG-4-C)	-	0
UNCONDITIONED SPACE ADJUSTED INSTALLED LIGHTING POWER	=	0

ALLOWED INTERIOR LIGHTING POWER FOR CONDITIONED SPACES

✓ % UNDER ALLOWED 25.12%

☐ COMPLETE BUILDING METHOD (from LTG-5-C)

☑ AREA CATEGORY METHOD (from LTG-5-C)

☐ TAILORED METHOD (from LTG-5-C)

ALLOWED LIGHTING POWER — ALLOWED WATTS: 49766.5

ALTERNATE COMPLIANCE

✓

☑ PERFORMANCE METHOD

☐ COMMON LIGHTING SYSTEM (from LTG-8-C)

ALLOWED INTERIOR LIGHTING POWER FOR UNCONDITIONED SPACES (from LTG-5-C) 0 Watts

MANDATORY LIGHTING MEASURES FOR INTERIOR LIGHTING AND DAYLIT AREAS

MANDATORY INTERIOR AND DAYLIGHTING AUTOMATIC CONTOLS

CONTROL LOCATION (Room #, Area #, or Description)	CONTROL IDENTIFICATION	CONTROL TYPE (Auto Time Switch, Dimming, Potosensor, etc.)	SPACE CONTROLLED Lists the location of controlled lights	✓ If Control is for Daylighting	NOTE TO FIELD
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	

2005 Nonresidential Compliance Forms *April 2005*

CERTIFICATE OF COMPLIANCE (Part 3 of 4) LTG-1-C

PROJECT NAME: ORANGE TERRACE LIBRARY DATE: 2/22/2007

CONTROLS FOR CREDIT IN CONDITIONED AND UNCONDITIONED SPACES

CONTROL LOCATION (Room # or DWA #)	CONTROL IDENTIFICATION	CONTROL TYPE (Occ Sensor, Daylight, Dimming, etc)	LUMINAIRES CONTROLLED TYPE	# OF LUMINAIRES	NOTE TO FIELD
A118/117	OS	OCC SENSOR	FLOUR.	12	
A114	OS	OCC SENSOR	FLOUR.	2	
A113	OS	OCC SENSOR	FLOUR.	2	
A110	OS	OCC SENSOR	FLOUR.	1	
A109	OS	OCC SENSOR	FLOUR.	1	
A106	OS	OCC SENSOR	FLOUR.	1	
A104	OS	OCC SENSOR	FLOUR.	1	
A119	OS	OCC SENSOR	FLOUR.	1	
A103	OS	OCC SENSOR	FLOUR.	6	
A105	OS	OCC SENSOR	FLOUR.	5	
A111	OS	OCC SENSOR	FLOUR.	2	
A108	OS	OCC SENSOR	FLOUR.	3	
A116	OS	OCC SENSOR AND LCP	FLOUR.	72	
B109	OS	OCC SENSOR	FLOUR.	11	
B110	OS	OCC SENSOR	FLOUR.	1	
B119	OS	OCC SENSOR	FLOUR.	1	
B120	OS	OCC SENSOR	FLOUR.	1	
B111	OS	OCC SENSOR	FLOUR.	2	
B112	OS	OCC SENSOR	FLOUR.	4	
B113	OS	OCC SENSOR	FLOUR.	1	
B106	OS	OCC SENSOR	FLOUR.	4	
B123/101	PHOTOCELL	DAYLIGHT AND LCP	FLOUR.	14	
B105	PHOTOCELL	DAYLIGHT AND LCP	FLOUR.	35	
B103	OS	OCC SENSOR	FLOUR.	6	
B107	OS	OCC SENSOR	FLOUR.	4	
B115A/B	OS	OCC SENSOR AND LCP	FLOUR.	86	

2005 Nonresidential Compliance Forms *April 2005*

INTERIOR LIGHTING SCHEDULE (Part 1 of 2) LTG-2-C

PROJECT NAME: ORANGE TERRACE LIBRARY DATE: 2/22/2007

INSTALLED LIGHTING POWER FOR CONDITIONED SPACES

LUMINAIRE A NAME	B TYPE DESCRIPTION	LAMPS/BALLASTS C LAMP TYPE	D Number of Lamps per Luminaire	E Watts per Lamp	F Number of Ballasts per Luminaire	INSTALLED WATTS G Watts per Luminaire	H If CEC Default ☑	I Number of Luminaires	J Installed Watts (GxI)
F1	2x4 FIXTURE	FLUOR.	2	28	1	56	☑	56	3136
F2	2x4 FIXTURE	FLUOR.	2	32	1	64	☑	17	1088
F3	1X4 FIXTURE	FLUOR.	2	17	1	34	☑	31	1054
F4	STRIP FIXTURE	FLUOR.	1	25	1	25	☑	14	350
F5	DOWN LIGHT FIXTURE	FLUOR.	2	57	1	114	☑	33	3762
F6	DOWN LIGHT FIXTURE	FLUOR.	1	42	1	42	☑	56	2352
F7A	ROUND DOWN LIGHT FIXTURE	FLUOR.	2	39	1	78	☑	57	4446
F7B	ROUND DOWN LIGHT FIXTURE	FLUOR.	4	39	2	156	☑	14	2184
F7C	ROUND DOWN LIGHT FIXTURE	FLUOR.	4	39	2	156	☑	7	1092
F7D	ROUND DOWN LIGHT FIXTURE	FLUOR.	6	39	3	234	☑	2	468
F8	PENDENT FIXTURE	FLUOR.	1	42	1	42	☑	10	420
F9	PENDENT FIXTURE	FLUOR.	6	42	3	252	☑	37	9324
F10	HI BAY FIXTURE	M.H.	8	42	1	336	☐	30	10080
F11	WALL SCONCE FIXTURE	FLUOR.	1	24	1	24	☑	14	336
F12	WALL SCONCE FIXTURE	FLUOR.	1	24	1	24	☑	5	120
F13	SEE EXTEROR SHEETS					0	☐		0
F14	SEE EXTEROR SHEETS					0	☐		0
F15	SEE EXTEROR SHEETS					0	☐		0
F16	SEE EXTEROR SHEETS					0	☐		0
F17	PENDENT FIXTURE	FLUOR.	2	42	1	84	☑	8	672
F18	DOWN LIGHT FIXTURE	FLUOR.	1	32	1	32	☑	30	960
F19	SEE EXTEROR SHEETS					0	☐		0
F20	STRIP FIXTURE	FLUOR.	1	0.8		0.8	☑	384	307.2
F21	SEE EXTEROR SHEETS					0	☐		0
						0	☐		0

PAGE TOTAL	42,151.2
BUILDING TOTAL	42,151.2
PORTABLE LIGHTING (From LTG-3-C)	+0.0
CONTROL CREDIT (From LTG-4-C)	-4887.1
ADJUSTED ACTUAL WATTS	=37264.1

2005 Nonresidential Compliance Form *April 2005*

LIGHTING CONTROLS CREDIT WORKSHEET (PART 1 OF 2) LTG-4-C

CONTROL CREDITS FOR CONDITIONED SPACES

PROJECT NAME: ORANGE TERRACE LIBRARY DATE: 2/22/2007

A ROOM #, ZONE ID CONDITIONED AREAS	B LIGHTING CONTROL DESCRIPTION	C PLAN REFEFERENCE	D ROOM AREA (ft²)	DAYLIGHTING E WINDOW WALL RATIO¹	F GLAZING VLT	G SKYLIGHT EFFECTIVE APERTURE¹	H WATTS OF CONTROL LIGHTING	I LIGHTING ADJUSTMENT FACTOR²	J CONTROL CREDIT WATTS (H x I)
A118/117	OS	EA3.0	685				828	0.2	165.6
A114	OS	EA3.0	171.14				112	0.2	22.4
A113	OS	EA3.0	173.26				112	0.2	22.4
A110	OS	EA3.0	221.53				192	0.2	38.4
A109	OS	EA3.0	84.36				64	0.2	12.8
A106	OS	EA3.0	70.95				64	0.2	12.8
A104	OS	EA3.0	56.1				34	0.2	6.8
A119	OS	EA3.0	47.94				34	0.2	6.8
A103	OS	EA3.0	240.5				178	0.2	35.6
A105	OS	EA3.0	248.18				210	0.2	42
A111	OS	EA3.0	102.35				68	0.2	13.6
A108	OS	EA3.0	249.24				224	0.2	44.8
A116	OS	EA3.0	6347.86				12978	0.15	1946.7
									0
B109	OS	EB3.1	749				616	0.2	123.2
B110	OS	EB3.1	1326.94				1008	0.2	201.6
B119	OS	EB3.1	66.38				64	0.2	12.8
B120	OS	EB3.1	93.3				34	0.2	6.8
B111	OS	EB3.1	172.13				224	0.2	44.8
B112	OS	EB3.1	214.74				224	0.2	44.8
B113	OS	EB3.1	103.83				34	0.2	6.8
B106	OS	EB3.2	249.6				136	0.2	27.2
B123/101	PHOTOCELL	EB3.1	876.49		10%	0.00364	804	0.1764	141.8256
B105	PHOTOCELL	EB3.2	8828.36		10%	0.00371	4704	0.1371	644.9184
B103	OS	EB3.2	246.72				336	0.2	67.2
B107	OS	EB3.2	279.36				136	0.2	27.2
B115A/B	OS	EB3.1	5620				5836.4	0.2	1167.28

1) FROM EQUATION 146-A — PAGE TOTAL: → 4887.124

2) FROM TABLE 146-A — BUILDING TOTAL: → 4887.124

Enter on LTG--2-C LIGHTING CONTROL CREDITS

2005 Nonresidential Compliance Form *April 2005*

INTERIOR LIGHTING POWER ALLOWANCE LTG-5-C

PROJECT NAME: ORANGE TERRACE LIBRARY DATE: 2/22/2007

COMPLETE BUILDING METHOD - CONDITIONED SPACES

BUILDING CATEGORY (From § 146 Table 146-C)	WATTS PER (ft²)	COMPLETE BLDG. AREA	ALLOWED WATTS
			0

AREA CATEGORY METHOD - CONDITIONED SPACES

A AREA CATEGORY (From § 146 Table 146-C)	B WATTS PER (ft²)	C AREA (ft²)	D ALLOWED WATTS
LIBRARY READING	1.2	2808.7	3,370.4
LIBRARY STACKS	1.5	6357.2	9,535.8
CONVENTION, CONFERENCE, MULTIPURPOSE & MEETING CENTERS	1.4	17598.4	24,637.8
OFFICE	1.2	1371.1	1,645.3
CORRIDORS, RESTROOMS, STAIRS & SUPPORT AREAS	0.6	3321.0	1,992.6
ELECT/MECH ROOMS	0.7	151.7	106.2
LOUNGE	1.1	384.6	423.1
GENERAL COMMERCIAL AND INDUSTRIAL WORK-LOW BAY	1.0	333.7	333.7
DINING	1.1	331.2	364.3
COMMERCIAL AND INDUSTIRAL STORAGE	0.6	1873.3	1,124.0
KITCHEN, FOOD PREP	1.6	834.2	1,334.7
FINANCIAL TRANSACTIONS	1.2	103.8	124.6
MAIN ENTRY LOBBY	1.5	3182.7	4,774.1
		38651.6	49,766.5
	TOTALS	AREA	WATTS

TAILORED METHOD- CONDITIONED SPACES

TOTAL ALLOWED WATTS (From LTG-6-C(conditioned set))

UNCONDITIONED SPACES

A Complete Building and Area Category Methods Category (From § 146 Table 146-B & C)	B WATTS PER (ft²)	C AREA (ft²)	D ALLOWED WATTS
UNUSED SPACE	0	90.0	0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
		90	0.0
	TOTALS	AREA	WATTS

TAILORED METHOD- UNCONDITIONED SPACES

TOTAL UNCONDITIONED SPACES ALLOWED WATTS (From LTG-6-C(unconditioned set))

2005 Nonresidential Compliance Form *April 2005*

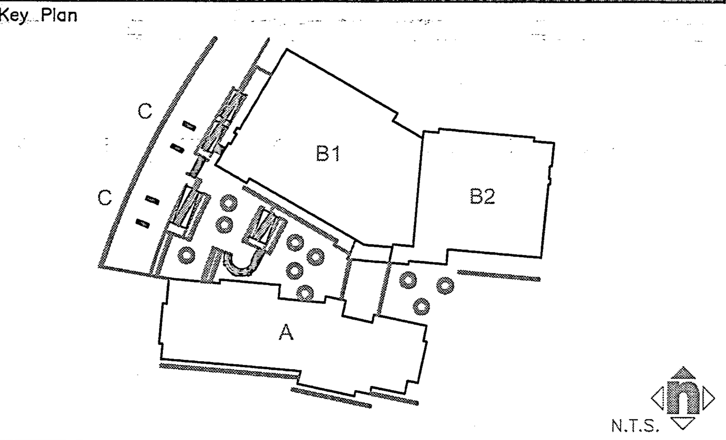
HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE — ajk — CONSTRUCTION • ENGINEERING

A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780

AS BUILT

Key Plan



Consultant's Seal: LICENSED ELECTRICAL CONTRACTOR — A.J. KIRKWOOD & ASSOC. INC. — LICENSE No. C10-724633 — EXP. 07/31/08 — ELECTRICAL — STATE OF CALIFORNIA

Agency Approval

Project Title

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07-1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

CITY OF RIVERSIDE

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

TITLE 24 DOCUMENTS-INDOOR

Architect's Seal: LICENSED ARCHITECT — CHRISTOPHER RICHARD TAYLOR — NO. C-19759 — REN. 02-24-09 — STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	E0.3
Date: 06-22-07	Sheet 4 of ## 20

TRUE NORTH

O:\466 Orange Terrace Library\E-DRAWINGS\E0.3.dwg, 7/23/2008 12:12:46 PM, trent, 30x42, Copyright (c): A.J. Kirkwood and Associates

17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

PANEL HB1

MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	277/480	MAIN	M.L.O.				
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	3	BUS	200A				
FEED THRU	NO	I/G BUS	NO	WIRE	4	A.I.C.	SERIES				

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
PUMP 1	1330								20/3	1	2	20/1					52	2142			LTS RM 115A
"		1330							"	3	4	20/1					48		2006		LTS RM 115B
"			1330						"	5	6	20/1					44			1624	LTS RM 108, 109, 110
PUMP 2	1330								20/3	7	8	20/1					45	1518			LTS RM 111, 112, 114, 116
"		1330							"	9	10	20/1					49		4344		LTS 101, 102, 103, 104
"			1330						"	11	12	20/1					12			3360	GYM LTS
EF 2B	443								20/3	13	14	20/1					10	3276			GYM LTS
"		443							"	15	16	20/1					10		3360		GYM LTS
"			443						"	17	18	70/1					97			11691	INVERTER BLDG EM LTS
CU-B2	1940			1					20/3	19	20	20/1					42	2073			OUTSIDE WALL LTS
"		1940		1					"	21	22										
"			1940	1					"	23	24	20/1									
										25	26	20/1					44	2503			COURTYARD LTS
										27	28										
										29	30										
EF-3B	443								20/3	31	32										
-		443							-	33	34										
-			443						-	35	36										
EMON DMON METER	300								20/3	37	38	90/3						23347			PNL LB1
-		300							-	39	40	–							23347		"
-			300						-	41	42	–								23347	"

A= 40646 B= 38844.05 C= 45809
TOTAL VA= 125299 W/LCL= 136229 AMPS= 164 TOTAL LCL= 43717 X .25 = 10929
HIGH PHASE VA= 45809 W/LCL= 50463 HIGH PHASE AMPS= 182.2 HIGH PHASE LCL 18615 X .25 = 4654

PANEL HA1

MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	277/480	MAIN	400A
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	3	BUS	400A
FEED THRU	NO	I/G BUS	NO	WIRE	4	A.I.C.	SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
EF-1A	443							1	15/3	1	2	20/1					15	3040			GENERAL LTS A116
"		443							"	3	4	20/1					14		3528		"
"			443						"	5	6	20/1					14			3192	"
SPARE									20/1	7	8	20/1					26	4286			LOW LEVEL LTS A116
SPARE									20/1	9	10	20/1					40		2884		OUTSIDE COLUMNS
SPARE									20/1	11	12	20/1					15			1740	REST RM & OFFICES
SPACE										13	14	20/1					16	1218			RM A117/118/115
CU-A1		1940							15/3	15	16	20/1	1						500		LCP
--			1940						--	17	18										SPARE
--	1940								--	19	20										SPARE
SPARE									20/3	21	22										SPARE
--									--	23	24										SPARE
--									--	25	26										SPARE
SPARE									20/1	27	28										SPARE
SPARE									20/1	29	30										SPARE
SPARE									20/1	31	32										SPARE
SPARE									20/1	33	34										SPARE
SPARE									20/1	35	36										SPARE
SPACE										37	38	90/3						21522			XFRMR T1A
SPACE										39	40	-							21522		"
SPACE										41	42	-								21522	"
AIR HANDLER A-1									-	-	-	200/3	1					40515			AIR HANDLER A-1
SUBFEED BREAKER									-	-	-	-							40515		SUBFEED BREAKER
-									-	-	-	-								40515	-

PANEL INV-L

MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	208	MAIN	M.L.O.
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	2	BUS	40A
FEED THRU	NO	I/G BUS	NO	WIRE	2	A.I.C.	SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
										1	2	20/1		2				1500			BUILGING B TELE/BB
										3	4	20/1		2				1500			BUILGING A TELE/BB
										5	6										
										7	8										

A= 3000 B= 0 C= 0
TOTAL VA= 3000 W/LCL= 3000 AMPS= 25 TOTAL LCL= 0 X .25 = 0
HIGH PHASE VA= 3000 W/LCL= 3000 HIGH PHASE AMPS= 25.0 HIGH PHASE LCL 0 X .25 = 0

PANEL LB1

MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	120/208	MAIN	200A
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	3	BUS	200A
FEED THRU	YES	I/G BUS	NO	WIRE	4	A.I.C.	SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
FREEZER, ROLL IN	2484					1			25/1	1	2	20/1		2				1200			EQUPMENT ROOM
FRIDGE, ROLL IN		1356				1			20/1	3	4	20/1		1					600		EQUPMENT ROOM
FREEZER, ROLL IN			1332			1			20/1	5	6	20/1		2						1200	EQUPMENT ROOM
FRIDGE, ROLL IN	1092					1			20/1	7	8	20/1				4		720			B115A
WII WALL POWER		1440					6		20/1	9	10	20/1				4			720		B115A
									20/1	11	12	20/1				6				1080	B 108, 109-115B
FSD	500								20/1	13	14	20/1				3		540			B114
COMPUTER		500					1		20/1	15	16	20/1				3			540		B 110-115B
SPACE									20/1	17	18	20/1				5				900	B 109-115B
ROOM B110 & B112	1080				6				20/1	19	20	20/1				4		720			B 108, 109
OFFICE 112		900			5				20/1	21	22	20/1				4			720		B 108, 109
CONCESSION/LOBBY			1080		6				20/1	23	24	20/1				5				900	B 108, 109, 110
SPACE								1	20/1	25	26	20/1		2				1200			VENDING MACHINES
INVL		3000						1	40/1	27	28	20/1		2					880		VENDING MACHINES
GYM CURTAIN			1680					1	20/1	29	30	20/1		1						1200	DRINKING FOUNTAIN
Auto Flush/Sink	70							1	20/1	31	32	20/1				6		1080			RECEPTION DESK
SPARE								1	20/1	33	34	20/1				5			900		OFFICE
SPARE								1	20/1	35	36	20/1				6				1080	GYM
SPACE										37	38	20/1				3		540			RESTROOM RECP.
SPACE										39	40	20/1	1						1464		HAND DRYER
SPACE										41	42	20/1	1							1464	HAND DRYER

A= 11226 B= 13020 C= 11916
TOTAL VA= 36162 W/LCL= 36162 AMPS= 100 TOTAL LCL= 0 X .25 = 0
HIGH PHASE VA= 13020 W/LCL= 13020 HIGH PHASE AMPS= 109 HIGH PHASE LCL= 0 X .25 = 0

NOTE: THE TOTAL VA FOR THIS PANEL INCLUDES LOADS FROM OTHER PANELS DOWNSTREAM ON FEEDER. SEE SINGLELINE

CONVENIENCE RECEPTACLE DEMAND PER NEC 220-13:		
First 10 KVA at 100%	10000	VA
Remaining KVA at 50%	1750	VA
Non-receptacle load	22662	VA
Total	70042	VA = 195 A AT 120/208V-3PH-4W

PANEL LA1

MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	120/208	MAIN	200
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	3	BUS	200A
FEED THRU	YES	I/G BUS	NO	WIRE	4	A.I.C.	SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
ROOM A 108	540				3				20/1	1	2	20/1				6		1080			ROOM A 114
ROOM A 102		540			3				20/1	3	4	20/1				6					SPARE
ROOM A 102			720		4				20/1	5	6	20/1									SPARE
ROOM A 116	540						3		20/1	7	8	20/1									SPARE
ROOM A 116		900			5				20/1	9	10	20/1									SPARE
ROOM A 120			540		3				20/1	11	12	20/1									SPARE
ROOM A 118	1080				6				20/1	13	14	20/1				4		720			ROOM A 108
ROOM A 117		1080			5			1	20/1	15	16	20/1				4			720		ROOM A 101
ROOM A 116			1080		6				20/1	17	18	20/1				4				720	ROOM A 103,105 & 106
SPARE									20/1	19	20	20/1				2		1500			ELEC. PORTAL RECP.
FLR BOXES CHLDRNS		540			3				20/1	21	22	20/1				2			1500		ELEC. PORTAL RECP.
FLR BOXES CHLDRNS			720		4				20/1	23	24	20/1				2				1500	ELEC. PORTAL RECP.
FLR BOXES CHLDRNS	360				2				20/1	25	26	20/1				2		1500			ELEC. PORTAL RECP.
WIREMOLD		1500			3				20/1	27	28	20/1				2			1500		ELEC. PORTAL RECP.
WIREMOLD			1500		3				20/1	29	30	20/1				2				1500	ELEC. PORTAL RECP.
WIREMOLD	1500				3				20/1	31	32										SPACE
WIREMOLD		1500			3				20/1	33	34	20/1	7						280		VAV BOXES
WIREMOLD			1500		3				20/1	35	36	20/1				3				540	HELP DESK RECP.
WIREMOLD	1500				3				20/1	37	38	20/1				3		540			HELP DESK RECP.
SPACE										39	40										SPACE
SPACE										41	42	20/1	1				1			1200	DRINKING FOUNTAIN

A= 10860 B= 10060 C= 11520
TOTAL VA= 32440 W/LCL= 32740 AMPS= 91 TOTAL LCL= 1200 X .25 = 300
HIGH PHASE VA= 11520 W/LCL= 11820 HIGH PHASE AMPS= 99 HIGH PHASE LCL= 1200 X .25 = 300

NOTE: THE TOTAL VA FOR THIS PANEL INCLUDES LOADS FROM OTHER PANELS DOWNSTREAM ON FEEDER. SEE SINGLELINE DIAGRAM FOR MORE INFORMATION.

CONVENIENCE RECEPTACLE DEMAND PER NEC 220-13:		
First 10 KVA at 100%	10000	VA
Remaining KVA at 50%	10210	VA
Non-receptacle load	2320	VA
Total	64566	VA = 179 A AT 120/208V-3PH-4W

PANEL INV-H

MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	277	MAIN	M.L.O.
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	1	BUS	50A
FEED THRU	NO	I/G BUS	NO	WIRE	2	A.I.C.	SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
											2	20/1					21	2852			BLDG- A EM LIGHTING
											4	20/1					38	2680			COURTYARD EM LTG
											6	20/1					34	2319			BLDG- B EM LIGHTING
											8	20/1					10	751			EM LGHTS RM 115A
											10	20/1					10	751			EM LGHTS RM 115B

A= 9353 B= 0 C= 0
TOTAL VA= 9353 W/LCL= 11691 AMPS= 42 TOTAL LCL= 9353 X .25 = 2338
HIGH PHASE VA= 9353 W/LCL= 11691 HIGH PHASE AMPS= 42.2 HIGH PHASE LCL 9353 X .25 = 2338

PANEL LB1A

MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	120/208	MAIN	M.L.O.
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	3	BUS	200A
FEED THRU	NO	I/G BUS	NO	WIRE	4	A.I.C.	SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
FC-B2	1082			1				1	20/2	1	2	15/1	1					648			B-1
"		1082		1					-	3	4	20/1	1						500		LCP
SPACE										5	6	20/1	2	2						1000	SCOREBORAD
SPARE									20/1	7	8	20/3	1					264			TEL. BLEACHERS
VAV BOXES		240						1	20/1	9	10	–							264		– –
VAV BOXES			200					1	20/1	11	12	–								264	– –
CIRCULATION PUMP	1200						1		20/1	13	14	20/1	1					1656			BACKSTOP #1
DEDICATED RECEPT		180					1		20/1	15	16	20/1	1						1656		BACKSTOP #2
HTDG GRILL/BUN WRMR			1140				1		20/1	17	18	20/1	1							1656	BACKSTOP #3
POPCORN MACHINE	1200						1		20/1	19	20	20/1	1					1656			BACKSTOP #4
CASH REG/SODA DISP		1044					2		20/1	21	22	20/1	1						1656		BACKSTOP #5
MICROWAVE			1606				1		20/1	23	24	20/1	1							1656	BACKSTOP #6
BANQUET CART	1920						1		20/1	25	26	20/1	1					270			IRR CONTROLLER
BANQUET CART		1920					1		20/1	27	28	20/1			1				180		EXHAUST HOOD
KITCHEN GFI/DISPOSAL			860		1				20/1	29	30	20/1			1					1920	FIRE SUPPRESSION
ICE MAKER W/ BIN	1560								20/1	31	32	20/1			1			1920			RPLCMNT AIR SYSTM
SPACE										33	34	20/1			1				1920		EXHAUST BLOWER
CONFERENCE RM LED			615	1					20/1	35	36										SPACE
SPACE										37	38										SPACE
SPACE										39	40										SPACE
SPACE										41	42										SPACE

A= 13376 B= 10642 C= 10917
TOTAL VA= 34935 W/LCL= 35630 AMPS= 99 TOTAL LCL= 2779 X .25 = 695
HIGH PHASE VA= 13376 W/LCL= 13647 HIGH PHASE AMPS= 114 HIGH PHASE LCL= 1082 X .25 = 271

PANEL LA1A

MOUNTING	SURFACE	DOUBLE LUG	NO	VOLTS	120/208	MAIN	200A
NEMA 3R	NO	200% NEUTRAL	NO	PHASE	3	BUS	200A
FEED THRU	NO	I/G BUS	NO	WIRE	4	A.I.C.	SERIES

LOCATION	A	B	C	LTG	CONV	KIT	RECP	MISC	BKR	CIRC	CIRC	BKR	MISC	RECP	KIT	CONV	LTG	A	B	C	LOCATION
ENTRY AUTO DOOR	1560							1	20/1	1	2	20/1		1				1200			CIRCULATION PUMP
BOOK THEFT DEV.		150						1	20/1	3	4	20/1		2					1020		CASH REG-BKRY CAB
CURTAIN POWER			1500					4	20/1	5	6	20/1				2				1000	PRINT EQUIP
HAND DRYERS	1464							1	20/1	7	8	20/1				3		1500			PRINT EQUIP
HAND DRYERS		1464						1	20/1	9	10	20/2			1				1664		TOASTER CONVEYOR
HAND DRYERS			1464					1	20/1	11	12	-								1664	-
COFFEE MAKER	3026						1		40/2	13	14	20/1			1			744			FRIDGE
-		3026							-	15	16	20/1		1					1608		MICROWAVE
FRIDGE-COFFEE GRNDR			1092				1		20/1	17	18	20/1		1						1440	BLENDER
DISPOSAL	500					1			20/1	19	20	20/1		1				1440			BLENDER
KIOSK GFI		540					1		20/1	21	22	40/2			1				3640		ESPRESSO MACHINE
WATER HEATER			984			1			20/1	23	24	-								3640	-
FC-A1	1082			1					20/2	25	26	20/1	1					1000			WI-FI
-		1082		1					-	27	28	20/1	1						1000		WI-FI
SPACE										29	30										SPACE
SPACE										31	32										SPACE
SPACE										33	34										SPACE
SPACE										35	36										SPACE
SPACE										37	38										SPACE
SPACE										39	40										SPACE
SPACE										41	42										SPACE

A= 13516 B= 15194 C= 12784
TOTAL VA= 41495 W/LCL= 42036 AMPS= 117 TOTAL LCL= 2164 X .25 = 541
HIGH PHASE VA= 15194 W/LCL= 15465 HIGH PHASE AMPS= 129 HIGH PHASE LCL= 1082 X .25 = 271

PANEL SCHEDULE INDEX

	HB1	HA1
INV-H	LB1	LA1
INV-L	LB1A	LA1A

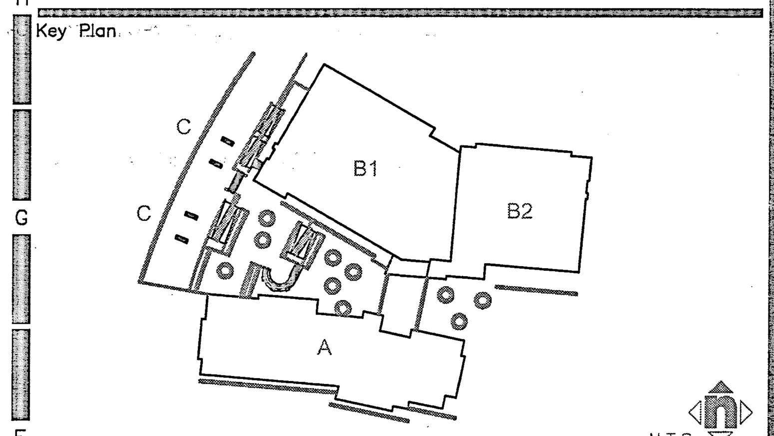
TRUE NORTH

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

FOUR GENERATIONS OF ELECTRICAL EXCELLENCE
ajk
CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
Tel: 714-505-1977 FAX 714-505-7080 LICENSE NO. 724333

AS BUILT

Key Plan



Consultant's Seal
LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE No. C10-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title
CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07–1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

SM HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title

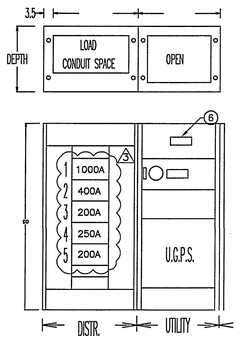
PANEL SCHEDULES

Architect's Seal
LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
NO. C–19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	E0.2
Date: 06-22-07	Sheet 3 of ## 20

TRANSFORMER SCHEDULE													
XFRMR	KVA	VOLTAGE	IMPEDANCE	GROUND	MTD.	LET THRU	K-RATING	NOTES	DIMENSIONS H	W	D	WGT
T1A, T1B	75	480V, 3 PHASE, 3W (PRI) 120/208V, 3 PHASE, 4W (SEC)	3.7%	1/2" C., 1 #2 GND COLD WATER/B.STEEL	FLOOR	5.630	N/A	DRY TYP.	39"	26"	19"	480

2 TRANSFORMER SCHEDULE



DEPTH CHART

400/600/800/1000 = 20D
1200/1600/2000 = 28D
2500/3000/4000 = 36D

U.G.P.S. WIDTH

400/600/800 = 30W
1000/1200 = 38W
1600/2000/2500 = 42W
3000/4000 = 52W

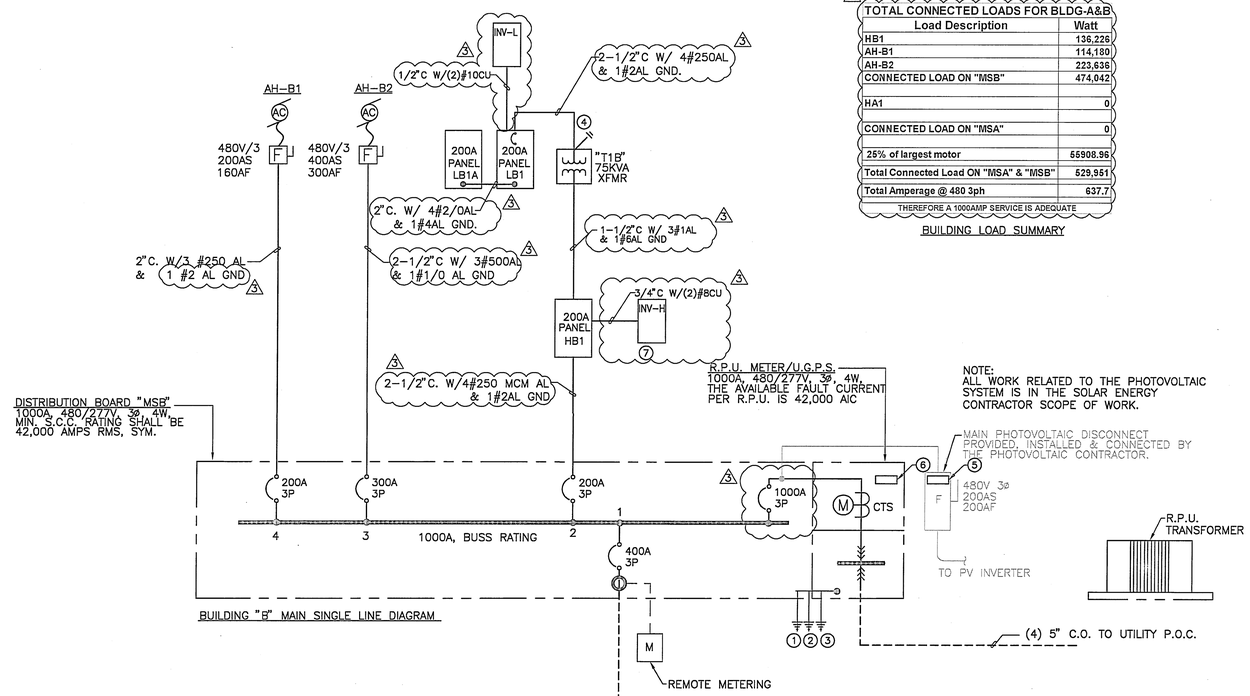
C.T. SECTION WIDTH

400 THRU 3000A = 38W
3001 THRU 4000A = 52W

MAIN SWITCH BOARD "B" ELEVATION NEMA 1

BLDG–B

1ST FLOOR MAIN ELECTRICAL ROOM



BUILDING "B" MAIN SINGLE LINE DIAGRAM

TOTAL CONNECTED LOADS FOR BLDG-A&B	
Load Description	Watt
HB1	136,226
AH-B1	114,180
AH-B2	223,636
CONNECTED LOAD ON "MSB"	474,042
HA1	0
CONNECTED LOAD ON "MSA"	0
25% of largest motor	55908.96
Total Connected Load ON "MSA" & "MSB"	529,951
Total Amperage @ 480 3ph	637.7
THEREFORE A 1000AMP SERVICE IS ADEQUATE	

BUILDING LOAD SUMMARY

NOTE:
ALL WORK RELATED TO THE PHOTOVOLTAIC SYSTEM IS IN THE SOLAR ENERGY CONTRACTOR SCOPE OF WORK.

MAIN PHOTOVOLTAIC DISCONNECT PROVIDED, INSTALLED & CONNECTED BY THE PHOTOVOLTAIC CONTRACTOR.

NOTES:

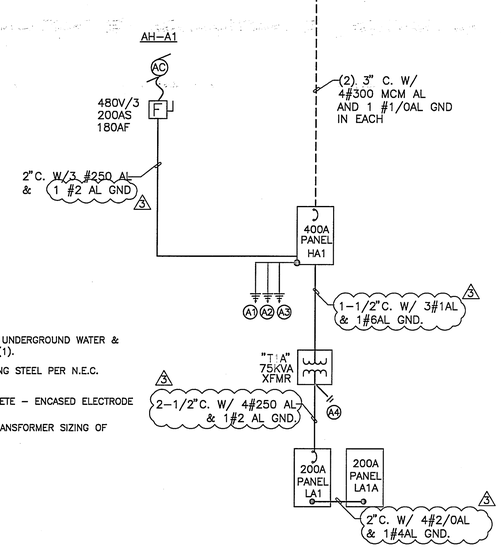
ELECTRICAL METER AND SWITCHGEAR ROOM DOORS SHALL HAVE SCHLAGE LOCK, KEYED TO RIVERSIDE PUBLIC UTILITIES MASTER KEY OR SHALL HAVE DOUBLE HASP.

ELECTRICAL METERS SHALL BE MOUNTED BETWEEN 48" AND 75" ABOVE FINISHED FLOOR. WORKING SPACE NEAR THE METER PANEL IS REQUIRED PER 1999 NEC 110–26.

THE ELECTRICAL ROOM DOOR SHALL EXTEND TO OR ABOVE THE FULL HEIGHT OF THE SWITCHGEAR.

THE MAIN ELECTRIC PANEL AND SWITCHBOARDS SHALL CONFORM TO THE EUSERC/OF RIVERSIDE REQUIREMENTS.
PRIOR TO MANUFACTURING, THE MAIN ELECTRIC PANEL SWITCHGEAR DRAWINGS SHALL BE APPROVED BY THE CITY OF RIVERSIDE, PUBLIC UTILITIES ELECTRIC DIVISION.
SEND SEVEN (7) ORIGINAL APPROVAL DRAWINGS TO:

UTILITY INSPECTOR, ELECTRIC ENGINEERING
3901 ORANGE STREET, RIVERSIDE CA 92522



A1 — 1 #1/0 CU GROUND IN 1" CO TO METAL UNDERGROUND WATER & GAS PIPE PER N.E.C. SECTION 250–52(A)(1).

A2 — 1 #1/0 CU GROUND IN 1" CO TO BUILDING STEEL PER N.E.C. SECTION 250–52(A)(2).

A3 — 1 #1/0 CU GROUND IN 1" CO TO CONCRETE – ENCASED ELECTRODE PER N.E.C. SECTION 250–52(A)(3).

A4 — SEE TRANSFORMER SCHEDULE FOR ALL TRANSFORMER SIZING OF SECONDARY GROUNDING ON THIS PAGE.

BLDG–A

1ST FLOOR MAIN ELECTRICAL ROOM

1 — 1 #3/0 CU GROUND IN 1" CO TO METAL UNDERGROUND WATER & GAS PIPE PER N.E.C. SECTION 250–52(A)(1).

2 — 1 #3/0 CU GROUND IN 1" CO TO BUILDING STEEL PER N.E.C. SECTION 250–52(A)(2).

3 — 1 #3/0 CU GROUND IN 1" CO TO CONCRETE – ENCASED ELECTRODE PER N.E.C. SECTION 250–52(A)(3).

4 — SEE TRANSFORMER SCHEDULE FOR ALL TRANSFORMER SIZING OF SECONDARY GROUNDING ON THIS PAGE.

5 — NAME PLATE: PHOTOVOLTAIC DISCONNECT (1/4"HIGH RED LETTERS)

6 — NAME PLATE: CAUTION (1" HIGH RED LETTERS) TURN OFF PHOTOVOLTAIC DISCONNECT BEFORE ENTERING SWITCHBOARD (1/4" HIGH RED LETTERS)

7 — 12.5KW, 277V INPUT & 277V OUTPUT INVERTER.

UTILITIES CONTACT INFORMATION:
RIVERSIDE PUBLIC UTILITY

ADDRESS:
3901 ORANGE STREET
RIVERSIDE, CA 92501

R.P.U. PLANNER:
JULIAN CARDENAS
(951) 826–5937

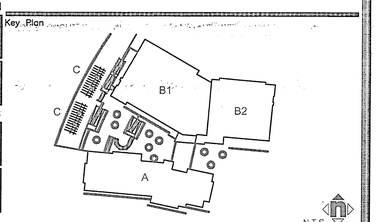
1 SINGLE LINE DIAGRAM

HMC ARCHITECTS
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com
Architecture Interiors Planning

A. J. KIRKWOOD & ASSOCIATES, INC.
2752 WALNUT AVE. TUSTIN, CA 92780
TEL 714-832-5797 FAX 714-832-7023 LICENSE NO. 736388

AS BUILT

Key Plan



Consultant's Seal

LICENSED ELECTRICAL CONTRACTOR
A. J. KIRKWOOD & ASSOC. INC.
LICENSE No. 736388
EXP. 06/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE LIBRARY / COMMUNITY CENTER
PLAN CHECK NO. 07–1397

20010 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

SM HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
1	Building Department Resubmittal	05/22/07
2	Building Department Resubmittal / QA QC Review	06/22/07
3	LEED CHANGES	03/19/08

Drawing Title
ELECTRICAL SINGLE LINE DIAGRAM

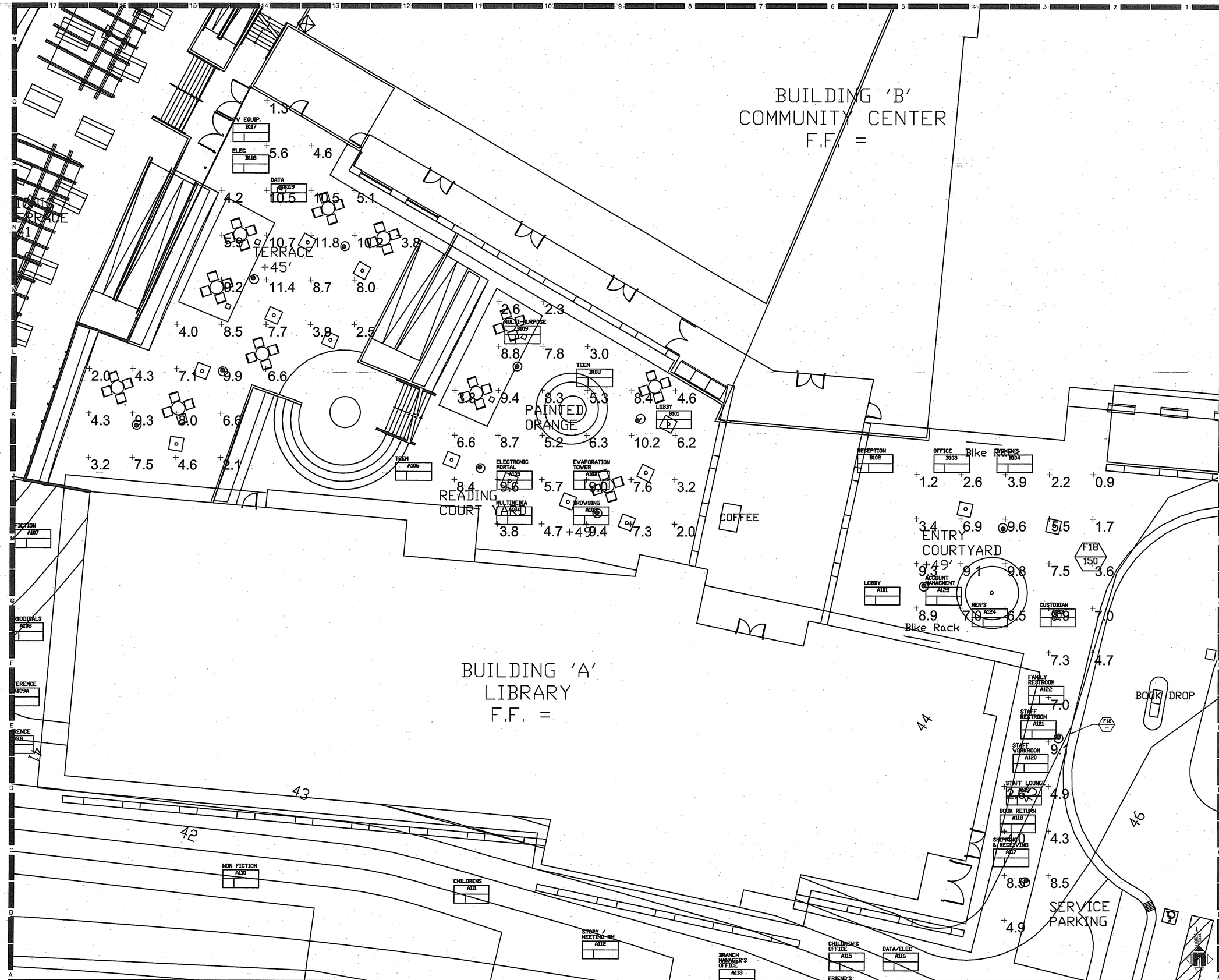
Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
LIC. NO. C–19759
REN. 02–24–09
STATE OF CALIFORNIA

Designed: Natalie Sandoval	Project No. 2340001
Drawn: Natalie Sandoval	Scale: AS NOTED
Checked:	Drawing No.
Reviewed: Arch KirKwood	E0.1
Date: 06-22-07	Sheet 2 of 11 20

TRUE NORTH

O:\466 Orange Terrace Library\E-DRAWINGS\E0.1.dwg, 7/23/2008 12:11:31 PM, trent, 30x42, Copyright (c) A.J. Kirkwood and Associates



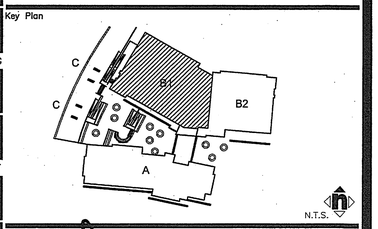
BUILDING 'A&B' PHOTOMETRIC ENTRY COUIRT YARD STUDY | 1 | 1/8" = 1'-0"

HMC ARCHITECTS
Architecture Interiors Planning
3546 CONCOURS STREET
ONTARIO, CALIFORNIA 91764
Telephone: 909 . 989 . 9979
Fax: 909 . 483 . 1400
www. hmcarchitects .com

ajk CONSTRUCTION • ENGINEERING
A. J. KIRKWOOD & ASSOCIATES, INC.

AS BUILT

Key Plan



Consultants

LICENSED ELECTRICAL CONTRACTOR
LICENSE No. 010-724633
EXP. 07/31/08
ELECTRICAL
STATE OF CALIFORNIA

Agency Approval

Project Title

CITY OF RIVERSIDE

ORANGE TERRACE
LIBRARY /
COMMUNITY CENTER

CITY OF RIVERSIDE DEVELOPMENT DEPARTMENT
3900 MAIN STREET, 5TH FLOOR
RIVERSIDE, CA 92522

HMC ARCHITECTS

No.	Revisions/Submissions	Date:
	Design Development Submittal	12/18/06
	Building Department Submittal	03/29/07
	Building Department Resubmittal	05/17/07

Drawing Title

BUILDING 'A&B' COURT YARD
PHOTOMETRIC

Architect's Seal

LICENSED ARCHITECT
CHRISTOPHER RICHARD TAYLOR
LICENSE NO. C-19759
REN. 02-24-09
STATE OF CALIFORNIA

Designed:		Project No.	2340001
Drawn:		Scale:	AS NOTED
Checked:		Drawing No.	E5.5
Reviewed:			
Date:	05-17-07	Sheet 21 of 21	

File Name: O:\466 Orange Terrace Library\E-DRAWINGS\E5.3_E5.4 BUILDING A PHOTOMETRIC STUDY - SEGMENT A & B.dwg May 17,2007-8:04am

PLEASE RECYCLE E5.3_E5.4 BUILDING A PHOTOMETRIC STUDY - SEGMENT A & B.DWG